Preliminary Investment Grade Energy Audit

Prepared for

The City of Bristol, Connecticut

August 7, 2015



AMERESCO
Green • Clean • Sustainable

Prepared for

The City of Bristol, Connecticut

August 7, 2015

Preliminary Investment Grade Energy Audit

Presented by
Ameresco Inc.
111 Speen Street, Suite 410
Framingham, MA 01701
T: (508) 661.2200 • F: (508) 661.2201

This Audit contains data and information that has been submitted in response to a request for proposal or similar solicitation and is provided in confidence. The contents include proprietary information and trade secrets that belong to Ameresco, Inc., ("Confidential Information") and is disclosed to the recipient only for purposes of evaluation. In the event Ameresco is awarded a contract or purchase order as a result of or in connection with the submission of this Audit, Customer shall have a limited right as set forth in the governing contract or purchase order to disclose the data herein, but only to the extent expressly allowed. This restriction does not limit the Customer's right to use or disclose data obtained without restriction from any source, including the proposer.

Table of Contents

EXECUTIVE SUMMARY

SECTION 1: BASELINE

SECTION 2: EXISTING CONDITIONS

SECTION 3: ENERGY SAVINGS MEASURES

SECTION 4: FINANCIAL RESULTS / RECOMMENDATIONS

SECTION 5: PRELIMINARY IMPLEMENTATION SCHEDULE

SECTION 6: PRELIMINARY COMMISSIONING PLAN

SECTION 7: MEASUREMENT & VERIFICATION PLAN

"Page content is subject to Confidentiality Restrictions"

This page is intentionally left blank.

Executive Summary

Ameresco is pleased to offer this Preliminary Investment Grade Energy Audit (IGEA) that was produced in close partnership with various City staff, technical advisors, and community volunteers. The following executive summary is intended to provide a high level overview on the results of the IGEA process and fundamentally describe the project to be constructed. Additional information and specific project details are contained within the individual sections of the IGEA.

The Preliminary Site Assessment entailed the survey of approximately 1,800,000 sqft of municipal facilities, inclusive of over eighty (80) facilities, traffic lights, parks, support buildings, and pump stations. Over $30M of energy savings measures (ESMs) are identified, evaluated, and presented herein for consideration. Moreover, the PSA chronicles thirty-eight (38) distinct potential energy savings measures across the facility portfolio with estimated energy consumption, implementation cost, energy savings, prescriptive rebate / incentives, and payback threshold values calculated for each individual activity chronicled.

The IGEA report was based on this larger audit and was narrowed following feedback and direction received by the City and their representatives. The IGEA chronicles the selected eighteen (18) desired ESMs and their associated details. The schematic scopes of work, the solicited sub-contractor costs, energy savings, and estimated utility incentives are all commensurate with the requirements of an IGEA. In addition, Ameresco provided a summary technical description of potential wholesale HVAC solutions for the Southside Elementary School as requested. This summary is provided as a stand-alone report for the City's consideration.

Ameresco, following the direction of City staff, developed a preliminary selection of comprehensive energy conservation measures and financial incentives that combined will fund over $12.6M of needed capital improvements and energy conservation measures.

"Page content is subject to Confidentiality Restrictions"

The following table presents the costs and savings for the preliminarily selected scope. Please refer to Section 4 for details surrounding the financial variables related to this preliminarily selected scope. For details regarding the full scope of work developed for this IGEA, please refer to the tables included in Section 3. The detailed measure write-ups in Section 3 provide details about all ESMs that were developed for this IGEA.

ESM #	ESM Name	Annual kW	Total kWh	Natural Gas (CCF)	#2 Fuel Oil (Gallons)	Max Daily Demand (Natural Gas) (CCF (Demand))	Energy Savings	O&M Savings	Total Project Savings	Total Project Costs	SPB
1A	Lighting System Improvements - Interior - LED	7,665	1,600,577	(16,681)	(11,636)	-	$ 252,871	$ 31,391	$ 284,263	$ 3,415,928	12.02
2	Lighting System Improvements - Exterior	-	521,666	-	-	-	$ 60,386	$ 380	$ 60,765	$ 517,044	8.51
3A	Lighting Controls - LED	-	75,083	(1,471)	(152)	-	$ 8,501	$ -	$ 8,501	$ 92,395	10.87
4	Energy Management System Upgrade/Expansion	-	108,455	8,735	2,252	8	$ 20,844	$ -	$ 20,844	$ 586,097	28.12
6	Demand Control Ventilation	-	100,672	2,922	2,122	-	$ 22,045	$ -	$ 22,045	$ 104,142	4.72
12	Variable Frequency Drives	-	54,906	-	-	-	$ 5,834	$ -	$ 5,834	$ 40,724	6.98
13	Transformer Replacement	457	333,583	-	-	-	$ 44,465	$ -	$ 44,465	$ 594,173	13.36
14	Steam Trap Replacement	-	-	4,520	4,498	-	$ 14,887	$ -	$ 14,887	$ 358,582	24.09
15	Pipe & Jacket Insulation	-	-	5,540	1,301	-	$ 6,664	$ -	$ 6,664	$ 60,231	9.04
18	Window Replacements	-	639	-	2,800	-	$ 7,770	$ -	$ 7,770	$ 1,055,119	135.79
21	Boiler Replacement	-	-	(6,179)	5,347	(56)	$ 10,273	$ (3,386)	$ 6,887	$ 127,061	18.45
23	Steam to Hot Water Conversion	-	8,143	(59,818)	49,115	(568)	$ 99,097	$ (6,772)	$ 92,325	$ 1,308,149	14.17
26	Condensing Unit Replacement	7	6,809	-	-	-	$ 719	$ -	$ 719	$ 87,351	121.54
27	AHU Replacement	-	620	405	-	-	$ 306	$ -	$ 306	$ 109,897	358.99
28	Induction Unit Replacement	-	-	-	1,014	-	$ 2,789	$ -	$ 2,789	$ 1,368,294	490.67
33	WPCP - Aeration Control Improvement	-	92,252	-	-	-	$ 7,734	$ -	$ 7,734	$ 80,955	10.47
34	WPCP - Install High Speed Turbo Blower	225	53,637	-	-	-	$ 8,289	$ -	$ 8,289	$ 223,549	26.97
38	Street Lighting	-	1,640,892	-	-	-	$ 165,331	$ 78,987	$ 244,317	$ 2,324,854	9.52
	Investment Grade Energy Audit Fee									$ 150,000	
		8,354	**4,597,934**	**(62,028)**	**56,661**	**(615)**	**$ 738,805**	**$ 100,599**	**$ 839,404**	**$ 12,604,546**	**15.02**

"Page content is subject to Confidentiality Restrictions"

The following proforma reflects the preliminarily selected scope. Please refer to Section 4 for details surrounding the financial variables related to this preliminarily selected scope.

City of Bristol - Pro-Forma

Initial Project Costs:		
Investment Grade Energy Audit	$	150,000
Implementation costs	$	12,454,546
Total Initial Project Costs	**$**	**12,604,546**
Estimated Incentives	**$**	**1,613,866**
Net Project Costs after rebates	**$**	**10,990,680**

Financial Assumptions	
Term of Project {yrs}	15.0 yrs
Term of Financing {yrs}	15.0 yrs
Estimated Financing Rate	2.85%
Payments per year (frequency)	4
Discount Rate	2.85%
Average Energy escalation rate {annual}	3.00%
Project Simple Payback	13.09

Pro-forma			***Year***										
		Initial Values	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
1	Annual energy costs without improvements	$ 4,189,070	$ 4,314,742	$ 4,444,184	$ 4,577,510	$ 4,714,835	$ 4,856,280	$ 5,001,969	$ 5,152,028	$ 5,306,588	$ 5,465,786	$ 5,629,760
2	Annual energy costs with improvements	$ 3,450,265	$ 3,553,773	$ 3,660,386	$ 3,770,198	$ 3,883,304	$ 3,999,803	$ 4,119,797	$ 4,243,391	$ 4,370,692	$ 4,501,813	$ 4,636,868
3	Annual energy cost savings (1-2)	$ 738,805	$ 760,969	$ 783,798	$ 807,312	$ 831,531	$ 856,477	$ 882,172	$ 908,637	$ 935,896	$ 963,973	$ 992,892
4	O&M Savings	$ 100,599	$ 103,617	$ 106,726	$ 109,928	$ 113,225	$ 116,622	$ 120,121	$ 123,725	$ 127,436	$ 131,259	$ 135,197
5	Total Project Savings	$ 839,404	$ 864,586	$ 890,524	$ 917,240	$ 944,757	$ 973,100	$ 1,002,293	$ 1,032,361	$ 1,063,332	$ 1,095,232	$ 1,128,089
6	Payments for financing equipment		$ 772,157	$ 795,429	$ 819,400	$ 844,090	$ 869,521	$ 895,714	$ 922,694	$ 950,483	$ 979,105	$ 1,008,586
7	Payments for Ongoing Services	$ 59,363	$ 88,831	$ 91,496	$ 94,241	$ 97,068	$ 99,980	$ 102,980	$ 106,069	$ 109,251	$ 112,529	$ 115,905
8	Net annual benefits		$ 3,598	$ 3,598	$ 3,598	$ 3,598	$ 3,598	$ 3,598	$ 3,598	$ 3,598	$ 3,598	$ 3,598
9	Cumulative cash flow	**$ 53,977**	$ 3,598	$ 7,197	$ 10,795	$ 14,394	$ 17,992	$ 21,591	$ 25,189	$ 28,787	$ 32,386	$ 35,984
10	**Net Present Value of cash flow**	**$ 43,428**										
11	Interest Rate	2.85%										
12	Discount Rate	2.85%										

Line #	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**Totals**
1	$ 5,798,652	$ 5,972,612	$ 6,151,790	$ 6,336,344	$ 6,526,434						$ 80,249,515
2	$ 4,775,974	$ 4,919,253	$ 5,066,830	$ 5,218,835	$ 5,375,400						$ 66,096,316
3	$ 1,022,679	$ 1,053,359	$ 1,084,960	$ 1,117,509	$ 1,151,034						$ 14,153,199
4	$ 139,253	$ 143,431	$ 147,734	$ 152,166	$ 156,731						$ 1,927,170
5	$ 1,161,932	$ 1,196,790	$ 1,232,694	$ 1,269,674	$ 1,307,765						$ 16,080,369
6	$ 1,038,952	$ 1,070,228	$ 1,102,443	$ 1,135,624	$ 1,169,801						$ 14,374,227
7	$ 119,382	$ 122,963	$ 126,652	$ 130,452	$ 134,365						$ 1,652,165
8	$ 3,598	$ 3,598	$ 3,598	$ 3,598	$ 3,598						$ 53,977
9	$ 39,583	$ 43,181	$ 46,780	$ 50,378	$ 53,977						
10											
11											
12											

Notes:
1 This Proforma Cash Flow reflects an estimated financing rate of 2.85%. The actual rate will increase or decrease based on market conditions and customer credit rating at the time of funding.
2 Savings are based on current utility rate structures and usage information provided for purposes of this project.

"Page content is subject to Confidentiality Restrictions"

The following table presents the costs and savings for the preliminarily selected scope by individual building. Please refer to Section 4 for details surrounding the financial variables related to this preliminarily selected scope. For details regarding the full scope of work developed for this IGEA, please refer to the tables included in Section 3. The detailed measure write-ups in Section 3 provide details about all ESMs that were developed for this IGEA.

Building	Annual kW	Total kWh	Natural Gas (CCF)	#2 Fuel Oil (Gallons)	Max Daily Demand (Natural Gas) (CCF (Demand))	Energy Savings	O&M Savings	Total Project Savings	Total Project Costs	SPB
Bristol Central High School	1,144	378,461	-	3,154	-	$ 94,460	$ 3,436	$ 97,895	$ 849,288	8.68
Bristol Eastern High School	930	381,962	5,979	-	-	$ 58,733	$ 3,393	$ 62,127	$ 932,574	15.01
Chippens Hill Middle School	760	295,024	(3,035)	-	-	$ 44,668	$ 3,323	$ 47,992	$ 575,654	11.99
Northeast Middle School	250	67,301	-	(937)	-	$ 9,210	$ 1,240	$ 10,449	$ 161,882	15.49
West Bristol K8 School	483	87,298	-	-	-	$ 17,168	$ 2,538	$ 19,706	$ 220,164	11.17
Green-Hills K8 School	225	36,474	-	-	-	$ 7,560	$ 1,737	$ 9,297	$ 123,947	13.33
Ellen P. Hubbell Elementary School	249	82,027	-	(973)	-	$ 10,620	$ 1,419	$ 12,040	$ 180,456	14.99
Stafford Elementary School	244	61,828	-	(764)	-	$ 8,360	$ 1,066	$ 9,427	$ 126,984	13.47
Ivy Drive Elementary School	224	43,409	(822)	-	-	$ 6,886	$ 966	$ 7,851	$ 143,863	18.32
Edgewood Elementary School	188	50,668	-	(665)	-	$ 7,025	$ 893	$ 7,919	$ 93,711	11.83
Mountain View Elementary School	176	49,678	(625)	-	-	$ 8,013	$ 965	$ 8,978	$ 122,010	13.59
South Side Elementary School	299	98,683	(459)	-	-	$ 16,439	$ 1,125	$ 17,564	$ 186,147	10.60
Board of Education Administration Building & Warehouse	173	37,849	(643)	-	-	$ 6,828	$ 477	$ 7,305	$ 49,966	6.84
City Hall & Annex	530	266,199	(22,080)	20,906	(225)	$ 75,182	$ (1,964)	$ 73,218	$ 3,424,303	46.77
Water Main Office & Garage	38	15,773	-	(116)	-	$ 1,747	$ 123	$ 1,870	$ 22,479	12.02
Water Filtration Plant & High Service Pump Station	125	36,819	-	(263)	-	$ 4,152	$ 582	$ 4,734	$ 64,865	13.70
#1 Well House	2	641	-	-	-	$ 86	$ 7	$ 92	$ 531	5.74
#2 Well House	4	1,167	-	-	-	$ 133	$ 18	$ 152	$ 3,580	23.62
Chemical Control, Generator & #3-5 Well Houses	19	1,220	-	-	-	$ 257	$ 27	$ 284	$ 2,243	7.91
Chemical Control - Mechanic St	2	191	-	-	-	$ 37	$ 7	$ 44	$ 1,030	23.39
Pump Control - Peck Lane	2	820	-	-	-	$ 114	$ 14	$ 128	$ 1,812	14.18
Pump Control & Generator - Hill St.	26	1,080	-	(19)	-	$ 534	$ 19	$ 553	$ 382	0.69
Pump and Control - Wolcott St	3	895	-	-	-	$ 126	$ 15	$ 141	$ 1,977	14.02
Police Court & Parking Garage	506	242,797	(37,007)	30,968	(343)	$ 91,398	$ (997)	$ 90,401	$ 1,075,982	11.90
Rockwell Park & Pavilion	9	390	-	(6)	-	$ 183	$ 32	$ 214	$ 2,258	10.53
Muzzy Field	40	5,499	-	-	-	$ 1,240	$ 96	$ 1,336	$ 20,656	15.46
Ski Lodge	4	815	-	-	-	$ 142	$ 13	$ 156	$ 1,894	12.16
Page Park Pavilion	8	5,359	-	(13)	-	$ 570	$ 29	$ 599	$ 3,461	5.78
Dennis Malone Aquatic Center	75	36,773	(701)	-	-	$ 4,164	$ 136	$ 4,300	$ 110,945	25.80
Fire Head Quarters	89	17,931	(6,179)	5,109	(56)	$ 12,830	$ (3,226)	$ 9,604	$ 154,018	16.04
Engine 2	13	3,145	-	(21)	-	$ 458	$ 60	$ 517	$ 6,441	12.45
Engine 3	9	7,784	(20)	-	-	$ 822	$ 43	$ 865	$ 4,791	5.54
Engine 5	10	6,009	-	(16)	-	$ 649	$ 46	$ 695	$ 4,788	6.88
Beals Senior Center	307	81,386	5,103	-	-	$ 14,684	$ 1,002	$ 15,686	$ 151,547	9.66
Main Library	433	165,918	(1,708)	-	-	$ 19,976	$ 1,551	$ 21,528	$ 289,455	13.45
Manross Library	74	48,353	870	-	8	$ 6,079	$ 256	$ 6,335	$ 333,622	52.67
Youth Services Building	34	11,745	-	325	-	$ 3,079	$ 255	$ 3,334	$ 49,979	14.99
Animal Control	11	1,118	(10)	-	-	$ 345	$ 42	$ 387	$ 4,606	11.90
Hill Street	-	560	-	-	-	$ 48	$ 0	$ 48	$ 419	8.74
City Yard	193	72,275	(455)	-	-	$ 9,516	$ 315	$ 9,831	$ 122,719	12.48
Transfer Stations - Lake Ave	31	9,441	-	-	-	$ 1,389	$ 29	$ 1,418	$ 11,586	8.17
Water Pollution Control Park	366	229,927	(236)	-	-	$ 25,301	$ 313	$ 25,613	$ 460,439	17.98
Remote Pumping Stations	35	6,729	-	-	-	$ 1,237	$ 99	$ 1,336	$ 13,518	10.12
Street Lighting	-	1,640,892	-	-	-	$ 165,331	$ 78,987	$ 244,317	$ 2,324,854	9.52
Pool	14	4,346	-	(10)	-	$ 685	$ 90	$ 775	$ 13,217	17.06
Investment Grade Energy Audit									$ 150,000	
	8,354	**4,597,934**	**(62,028)**	**56,661**	**(615)**	**$ 738,805**	**$ 100,599**	**$ 839,404**	**$ 12,604,546**	**15.02**

"Page content is subject to Confidentiality Restrictions"

The following ESM Matrix is reflective of a recommended comprehensive project based on customer input.

City of Bristol Energy Savings Measures (ESMs)	Lighting System Improvements - Interior	Lighting System Improvements - Interior - LED	Lighting System Improvements - Exterior	Lighting Controls	Lighting Controls - LED	Energy Management System Upgrade/Expansion	Demand Control Ventilation	Variable Frequency Drives	Transformer Replacement	Steam Trap Replacement	Pipe & Jacket Insulation	Window Replacements	Boiler Replacement	Steam to Hot Water Conversion	Condensing Unit Replacement	AHU Replacement	Induction Unit Replacement	Induction Unit Refurbishment	WPCP - Aeration Control Improvement	WPCP - Install High Speed Turbo Blower	Street Lighting	
Facility	**1**	**1A**	**2**	**3**	**3A**	**4**	**6**	**12**	**13**	**14**	**15**	**18**	**21**	**23**	**26**	**27**	**28**	**28A**	**33**	**34**	**38**	
Bristol Central High School		X	X		X		X		X	X	X											
Bristol Eastern High School		X	X		X		X		X	X	X											
Chippens Hill Middle School		X	X		X		X	X			X											
Northeast Middle School		X	X																			
West Bristol K8 School		X																				
Green-Hills K8 School		X																				
Ellen P. Hubbell Elementary School		X	X																			
Stafford Elementary School		X	X																			
Ivy Drive Elementary School		X	X																			
Edgewood Elementary School		X	X																			
Mountain View Elementary School		X	X																			
South Side Elementary School		X	X		X		X															
Board of Education Administration Building & Warehouse		X	X																			
City Hall & Annex		X	X			X	X	X	X			X		X			X					
Water Main Office & Garage		X	X																			
Water Filtration Plant & High Service Pump Station		X	X																			
#1 Well House		X	X																			
#2 Well House		X	X																			
Chemical Control, Generator & #3-5 Well Houses		X	X																			
Chemical Control - Mechanic St		X	X																			
Pump Control - Peck Lane		X	X																			
Pump Control & Generator - Hill St.		X																				
Pump and Control - Wolcott St		X	X																			
Police Court & Parking Garage		X	X			X	X		X					X								
Rockwell Park & Pavilion		X																				
Bathhouse			X																			
Muzzy Field		X	X																			
Ski Lodge		X	X																			
Page Park Pavilion		X	X																			
Dennis Malone Aquatic Center		X	X			X																
Fire Head Quarters		X	X										X									
Engine 2		X	X																			
Engine 3		X	X																			
Engine 5		X	X																			
Beals Senior Center		X	X		X	X																
Main Library		X	X		X	X			X													
Manross Library		X	X			X									X	X						
Youth Services Building		X	X			X																
Animal Control		X	X																			
Hill Street			X																			
City Yard		X	X						X													
Transfer Stations - Lake Ave		X	X																			
Water Pollution Control Park		X	X						X										X	X		
Remote Pumping Stations		X	X																			
Street Lighting																					X	
Pool		X	X																			

Summary of Desired ESMs

ESM 1 – Interior Lighting System Improvements - This measure calls for replacing or upgrading 18,477 existing fixtures (Base T8 option), and 18,518 existing fixtures (LED T8 option) and will enhance the quality, consistency, and color rendering of the City's lighting system. Ameresco will standardize the lighting system where practical, reducing the number of different products the City must purchase, stock and maintain.

There are two options for interior lighting that the City can choose between.

- **The "Base" Option** provides for most fixtures replaced or retrofitted with 4' T8 lamps will receive Linear Fluorescent 28 watt T8 lamps and instant-start ballasts. This premium combination yields maximum energy savings without sacrificing light output or quality. These 28 watt T8 lamps consume less energy while matching the light output of standard T8's. The 28 watt T8 lamp also maintains light output better than T12 and typical T8 lamps. Fluorescent 28 watt T8 lamps offer 40,000 hour rated life with 5 year warranty.

- **The "LED T8" Option** provides for most fixtures replaced or retrofitted with 4' T8 lamps will receive LED T8 lamps and instant-start ballasts. This premium combination yields maximum energy savings without sacrificing light output or quality just like the fluorescent T8's. In addition, these LED T8 lamps offer longer rated lifetimes and an additional year of warranty when paired with new ballasts. LED T8 lamps offer 50,000 hour rated life with 6 year warranty.

Ballast outputs were tailored to deliver optimum light levels in each room. The new lighting system is designed to maintain lighting levels, while meeting IESNA standards in affected areas. All recommendations were made with the intent to optimize energy savings without compromising the quality and the level of light output.

Again, the project replaces or upgrades 18,477 existing fixtures (Base option), and 18,518 existing fixtures (LED T8 option). We consider two adjoining fixtures sharing a ballast to be a single fixture. This method provides a more precise assessment of energy consumption and material inventory, but sometimes results in a lower apparent fixture count.

ESM 2 – Exterior Lighting System Improvements - This measure calls for replacing or upgrading a total of 1,129 exterior lighting fixtures as described below:

- 365 existing fixtures shall be replaced with a new LED wall-pack;
- 154 existing fixtures will receive a customized LED conversion kit for recessed cans which is designed to increase fixture efficiency, save substantial energy, and greatly extend service intervals;
- 151 existing fixtures shall be replaced with a new LED flood;
- 148 existing fixtures shall be replaced with a new LED shoebox;
- 123 existing fixtures will receive LED lamps and electronic ballasts;
- 82 existing fixtures shall be replaced with a new LED canopies;

"Page content is subject to Confidentiality Restrictions"

- 69 existing fixtures will receive screw-based LED lamps. They are highly efficient, and with lifetimes up to 50,000 hours, maintenance intervals are greatly extended;
- 25 existing fixtures shall be replaced with new LED drums;
- 10 existing fixtures will receive a customized LED conversion kit for exterior area fixtures which is designed to increase fixture efficiency, save substantial energy, and greatly extend service intervals; and
- 2 existing fixtures shall be replaced with new vaportights.

ESM 3 – Lighting Controls - Project wide, Ameresco will install 1,399 local lighting controls employing a variety of strategies, each of which was customized to the unique space. We selected appropriate areas that contain several controllable fixtures, which have intermittent occupancy, and where a safety hazard will not be created if the sensor inadvertently turns the lights off. Applicable areas include classrooms, offices, baths, the cafeteria, and the library.

> Please Note: For the two lighting options presented in ESM 1, (the base option and the LED option), the proposed lighting controls scope will remain the same, however the energy savings would be slightly less with the LED option due to the LEDs using less power and therefore less wattage to control.

Bathrooms or other areas without direct line-of-sight to the sensor, will receive dual-technology sensors that "listen" for activity in addition to "looking" for motion.

The high-bays in gyms will have motion sensors, allowing each one to operate independently for maximum savings and flexibility. The photocell option can also prevent fixtures from operating when ample daylight is available, if desired.

For some mechanical spaces, programmable timers will be installed. Staff will simply push the button to receive a preset amount of time. They can see the time running as it counts down on the display. Before the time runs out, the lights will flash, indicating that the occupant has a few minutes before the timer automatically turns off the lights.

ESM 4 – Energy Management System Upgrade - Ameresco proposes to update the existing EMS systems installed in the City Hall, Police Court Building, Dennis Malone Aquatic Center, Beals Senior Center, Main Library, Manross Library, and Youth Services Building. Ameresco will also install new programmable thermostats at the City Hall Annex maintenance garage.

The proposed EMS would be "open protocol" and "interoperable" with other manufacturer's products. This feature would allow products from any vendor to be installed as the system is maintained or expanded in the future. The recommended EMS would be accessible from any Internet-enabled personal computer with web browsing software and would provide reduced energy consumption, increase system reliability and improve occupant comfort for the City. The proposed EMS will provide dynamic systems control and utility consumption reporting capabilities for the entire City.

"Page content is subject to Confidentiality Restrictions"

Under the proposed EMS, Ameresco would install a new open protocol TridiumAX based EMS and new Direct Digital Control (DDC) actuators that would replace existing pneumatic controls for the air handling units and other control valves, as well as exhaust fans and circulator pumps. All existing pneumatic controls will be removed at the City Hall, Police Court building and Manross Library.

Ameresco will provide all software and licenses to the City so they have complete ownership of the software and hardware. This will empower the City to shop around operation and maintenance of the new system as well as expansion of the system in the future. The proposed Tridium system makes this possible. Ameresco proposes to network the new EMS using the School's and City's existing wide-area networks (WAN). New control system interface equipment will be connected to the existing communications infrastructure. An Internet interface built into the new EMS will allow an authorized and authenticated operator to access EMS information through standard web browser software from any computer connected to the WAN.

This measure will generate energy savings by enabling more sophisticated and aggressive energy management strategies to be used in the spaces served, including night setback, optimal start-stop, static pressure reset, and improved zone control. Due to lack of effective night setback strategies, the energy savings for this measure will be substantial. The DDC system upgrade will also incorporate several new control strategies which, when incorporated into the new, more robust, control system, will yield much greater energy savings and operational improvements. Some of these strategies include Demand Controlled Ventilation (DCV), chilled water reset, Variable Air Volume (VAV) system static pressure reset, modulating outdoor air dampers for morning warm-up and cool-down modes, and boiler sequencing controls.

ESM 6 – Demand Control Ventilation - Ameresco identified energy saving opportunities in a number of the School and City buildings through the installation of demand control ventilation (DCV) controls. DCV controls modulate the amount of outdoor air supplied to a space to maintain a required ventilation rate (CFM/person) based on the actual occupancy at that time. This strategy saves energy by reducing the amount of outdoor air that is conditioned during low occupancy periods. The sixteen (16) AHU's identified for this measure are listed in the table below. New CO2 sensors will be installed in the appropriate return air ductwork for each unit. All outdoor air damper actuators will be tested for proper operation (modulating). New CO2 sensors will monitor CO2 levels in the spaces and control ventilation rates for each occupied space according to ASHRAE Standard 62 requirements. The sensors will be wired back to existing AHU controllers. The existing controls will be modified and programmed to control the outdoor air dampers via CO2 levels. The new sensors will have the capability to override the outdoor air dampers based on a CO2 control algorithm. New variable frequency drives (VFDs) will be installed on a number of supply and exhaust fans. The new VFDs will provide electrical energy savings and permit ventilation flowrates to be varied based on the occupancy and control set points.

Ameresco proposes to reduce ventilation flow rates during periods of low occupancy. Flowrate overrides will occur as needed to maintain zone temperature set points. The system will be controlled by the EMS.

ESM 12 – Variable Frequency Drives - Ameresco proposes to install variable frequency drives for the existing fan motors serving AHU-1 at the City Hall and the two (2) space heating pumps serving the Chippens Middle School. The VFDs will be integrated to the new EMS system. The installation

"Page content is subject to Confidentiality Restrictions"

of VFDs and controls will allow for modulating with varying load more efficiently than the existing methods of control, which will reduce electrical energy and improve system efficiency.

ESM 13 – High Efficiency Transformers - Ameresco proposes to replace a number of existing step-down transformers with new energy-efficient transformers at the Central High School, Eastern High School, City Hall, Police Court, Main Library, City Yard and Water Pollution Control Park. All of the transformers are dry-type indoor transformers that step-down 480 volt power to 208Y/120 volt power. Ameresco proposes to replace these transformers with new premium efficiency units that will reduce the electric losses and lower the cooling load of some of the equipment rooms.

ESM 14 – Steam Trap Replacement - Ameresco proposes to replace steam traps at the Central High School and Eastern High School. The proposed replacement and/or repair of steam traps will improve the overall steam use and heating system efficiencies. Steam distribution is accomplished at low pressure with thermal energy wasted due to failing traps. Properly functioning steam traps pass air and drain condensate formed in the steam distribution system and prevent live steam from exiting. This measure will address approximately 588 existing steam traps, and the improvement will result in energy and maintenance cost savings for the City.

It is proposed that all existing orifice style traps at the two High schools be replaced with thermostatic traps.

Ameresco did not observe any major issues that would merit a significant allowance for piping repair. A small budget was included to make repairs to pipe and/or valves within twelve (12) inches of the steam traps. Major repairs to the existing steam and condensate piping are excluded from the scope.

Excluded from the scope of work is any asbestos abatement and repair of existing steam/condensate piping. Based on visual inspections, asbestos surrounding the steam traps was not present.

During construction a complete steam trap survey will be conducted including testing of each trap at Eastern High School to be eligible for the 50% incentive offered by Eversource. Central High School is heated by oil so there would not be an incentive from Eversource.

ESM 15 – Pipe & Jacket Insulation - Ameresco proposes to install a combined total of approximately 1,204 linear feet of insulation as detailed in the tables above. The proposed insulation will be a fibrous glass type with a factory applied fire retardant vapor barrier jacket. The insulation will have a K-factor of at least 0.27 at 75°F mean temperature. Typical manufacturers include Owens-Corning, Certain Teed, Manville or Knauf. Heating system efficiency will improve as less heat is lost to the unoccupied and unconditioned mechanical spaces.

ESM 18 – Window Replacements - Ameresco proposes to replace the existing single-glazed windows at City Hall. The windows at City Hall have aluminum frames that are not thermally broken. The windows identified in this measure have poor insulating properties and add to occupant discomfort in

"Page content is subject to Confidentiality Restrictions"

addition to the building heating and cooling loads. Ameresco will replace these windows with new, double-glazed units having aluminum frames with thermal breaks, low-E coatings, and argon fill. The colors will match the existing design and will improve comfort as well as save heating and cooling energy.

ESM 21 – Boiler Replacements - Ameresco proposes to replace the oil-fired hot water boiler serving the Fire Headquarters with a new high efficiency gas-fired equivalent boiler. Ameresco proposes as an option for the Police Court Building to replace the existing oil-fired steam boilers with new gas-fired equivalent steam boilers. A new natural gas service will be provided by Eversource to serve the new boilers. As part of the measure, the existing underground oil tanks will be removed along with all other fuel oil auxiliaries. The proposed measure will provide the buildings with higher efficiency systems as well as a less expensive fuel source for space heating and domestic hot water.

During the preliminary energy audit Ameresco identified additional boiler replacement measures which were not selected by the City.

ESM 23 – Steam to Hot Water Conversion - Ameresco proposes to convert the heating systems serving the City Hall and Police Court building from steam to hot water. At City Hall, the existing Columbia boilers will be converted from oil-fired boilers producing steam to gas-fired boilers producing hot water. The steam heating coils serving the existing air handling units will be replaced with hot water coils, sized to provide the same heating capacity. In addition the existing electric hot water storage heater providing domestic hot water (DHW) to City Hall will be replaced with a new gas-fired high efficiency storage heater.

The existing oil-fired steam boilers at the Police Court building will be replaced with new high-efficiency gas-fired hot water boilers. The steam heating coils serving the existing air handling units will be replaced with hot water coils, sized to provide the same heating capacity. New natural gas service will be provided by Eversource to serve the new boilers. As part of this measure, the existing underground oil tank at the Police Court will be removed along with all other fuel oil auxiliaries.

This measure will generate energy savings by enabling the Police Court building to utilize higher efficiency hot water boilers. Condensing hot water boilers can achieve up to 99% thermal efficiency compared to about 82% for newer Steam boilers. There will also be savings at the City Hall and Police Court by reducing distribution losses since steam boilers operate at a higher temperature and are more susceptible to heat loss. Failed steam traps are also a cause of system inefficiency. Steam is allowed to blow by failed traps and can unintentionally be distributed through condensate return lines causing overheating and occupant discomfort.

The proposed measure will provide the building with a higher efficiency system as well as a less expensive fuel source for space heating and domestic hot water.

ESM 26 – Condensing Unit Replacement - Ameresco proposes to replace the existing outdoor condensing unit serving the Manross Library with a new condensing unit. The unit is nearing the end

"Page content is subject to Confidentiality Restrictions"

of its useful life, and numerous service and repairs have been made to maintain the unit. The new unit will help improve reliability and alleviate expensive repairs as well as improving efficiency.

ESM 27 – AHU Replacement - Ameresco proposes to replace the two (2) existing air handling units (AHU's) serving Manross Library. These upgrades will provide new reliable equipment that will save energy and lower operating and maintenance costs. The existing units will be removed and replaced with new units sized to match the existing. The new units will be tied into the new EMS, which will eliminate the existing pneumatic controls. The controls along with new dampers and valve controls will be able to more accurately control discharge temperatures, which will increase occupant comfort and provide energy savings.

ESM 28 – Induction Unit Replacement – Ameresco proposes to replace the existing perimeter induction air terminal units at City Hall with new units equivalent in size and style. As part of the replacement, Ameresco will install new DDC dual temperature control valves on each unit that will be tied into the proposed energy management system. Replacing the existing induction units with new ones will help improve space temperature control, and will add to the reliability of the system and decrease maintenance requirements for the City.

While the energy savings from this measure are minimal and are not sufficient to warrant the measure by itself, combining it with the savings from other measures, allows for the inclusion of the installation of new induction units in the project. Installing new induction units under a performance contract releases capital improvement funds for other projects throughout the City.

ESM 28A – Induction Unit Refurbishment – As an alternate to ESM 28, Ameresco proposes to refurbish the majority of existing perimeter induction air terminal units at City Hall and replace twenty (20) of the worst shape units with new units equivalent in size and style. As part of the Refurbishment, Ameresco will replace each enclosure with new enclosures and install new DDC dual temperature control valves on each unit that will be tied into the proposed energy management system. Refurbishing the existing induction units as opposed to replacing all of them will improve each unit's functionality while costing less than a full replacement of all 195 units.

ESM 33 – WPCP Aeration Tank Blower Control Improvement - Ameresco proposes to improve the existing aeration control system at the Water Pollution Control Park by updating the existing aeration control software and switching the system from manual control to automatic control. The new system will provide better control of the dissolved oxygen (DO) levels in the tanks, reducing the required motor amperage from the air blowers, saving energy. Specifically, Ameresco proposes to upgrade the Bristol WPCP aeration control system. The existing Automation Direct PLC, I/O modules and OPTO-22 I/O modules will be replaced with Allen-Bradley CompactLogix PLC or approved equal and I/O module hardware. The new PLC and I/O will be installed into the existing control panel. SCADA program modifications will be implemented (existing GE iFix). The new control system will be set for automatic DO control, adjusting each tanks valves based on DO levels of 2.2 ± 0.2ppm.

"Page content is subject to Confidentiality Restrictions"

ESM 34 – WPCP - Install High Speed Turbo Blower - Ameresco proposes to replace one (1) 350 HP blower serving the aeration tanks at the Water Pollution Control Park (WPCP) with a new High Speed Turbo Blower (HSTB). The new blower will not only replace an old blower near the end of its useful life, but will provide a much more efficient and reliable unit.

ESM 38 – Street Lighting - Ameresco has developed a Street Lighting system to benefit the residents of Bristol, CT. This ESM replaces or upgrades 5,535 exterior fixtures and will enhance the quality of the City's street lighting. During design and implementation we will work with public safety officials and other stakeholders to verify appropriate wattages for critical areas.

We believe the new LED system will provide improved visibility when compared to the existing streetlight system. However, compliance with any recommended practice, standard, or code is neither assumed nor guaranteed.

These LED fixtures include the "field adjustable option" which allows for customization to local field conditions. Existing streetlight infrastructure is rarely uniform- therefore the ability to increase or decrease light output as needed during installation is a valuable benefit, ensuring a successful project. For example, during installation many customers decide that, due to the improved visual perception of a "white" light source, even lower wattage settings are possible and desirable.

The recommended LED systems will operate in the color temperature range of 4000K which will produce a white light as opposed to the existing HPS systems that produce a yellow colored light. The vast majority of people agree that "white" light improves visibility and aesthetics compared to "yellow" light. Additionally, the fixtures will include a good quality photocell. Though slightly more expensive than other photocells, we seek to avoid premature failures which cause street lights to operate during the daytime.

"Page content is subject to Confidentiality Restrictions"

Section 1: Baseline

Overview

Ameresco performed a Preliminary Investment Grade Energy Audit (IGEA) for the City of Bristol, Connecticut. The buildings are comprised of schools, fire stations, a police court building, libraries, public works buildings, Senior Center, Youth Services building, Animal shelter, Pump Stations, Water Pollution Control Park, and Parks buildings, and Aquatic Center.

Prior to the IGEA, Ameresco performed a Preliminary Site Assessment (PSA) for the City of Bristol on over eighty (60) facilities throughout the City, including thirteen (13) school buildings, fifteen (15) City run facilities, Water Department buildings, and seven (7) Parks sites. Ameresco also audited a number of water and sewer pump stations and reviewed the City's street lighting. The total area of building space audited was approximately 1,888,621 square feet based on the City's provided Sq.ft. Estimates, or 1,839,617 based on Ameresco's total calculated areas. After review of the facilities with City personnel, the list was narrowed down removing Memorial Blvd School, the Recreation Building, and the Community Services Building, from the list of sites to include in the IGEA phase. The area of building space included in the IGEA phase is approximately 1,745,705 square feet.

As part of the IGEA, Ameresco developed a baseline model for each facility. The baseline developed for each building is based on the average of fiscal years 2014 and 2015 (FY14-FY15) utility data for electricity, natural gas, and #2 oil. Each of the fiscal years were weather adjusted to correlate to TMY3 (typical meteorological year) weather data for Hartford CT prior to averaging the two. The total baseline utility usage is approximately 20,730,818 kWh of electricity, 430,983 CCF of natural gas, and 281,111 gallons of #2 oil. The average total utility cost for this time period was approximately $4,344,389.

The baseline utility cost shown in the proforma located in Section 4 is based on current utility rates and does not include customer charges. Further, many of the tariffs the buildings receive natural gas under include block rate structures. These structures charge different rates depending on how much is used. Ameresco is only including rates that reflect blocks that will be affected by the Energy Saving Measures (ESMs). These rates are shown in Section 7 in the Utility Rate Table. The baseline utility cost shown in the proforma located in Section 4 is the product of the baseline utility energy units multiplied by the utility rates shown in Section 7.

"Page content is subject to Confidentiality Restrictions"

Table 1 gives the square footage for each facility analyzed, along with the energy performance of each building, in terms of fossil fuel and electricity usage per square foot. Energy performance is the ratio of yearly energy use by square footage and is a good indicator of how well a building performs. The energy performance of each of the municipal and school buildings was calculated from the utility information provided by City personnel and directly from the utility companies.

The total mbtu/gsf represents the total energy usage for the entire facility on a square foot basis. The total energy usage for the entire facility on a square foot basis is the addition of both electrical and fossil fuel performance (mbtu/gsf) if applicable. In the buildings evaluated the primary source for space heating is either natural gas or #2 oil. Electric heating is used at a few locations like pump stations. Electric cooling is utilized to varying degree in most municipal and school buildings, either via central chillers, packaged rooftop units or local space coolers.

Table 1: List of Audited Buildings and Energy Performance

Facility Name	Calculated Gross Square Feet (g.s.f)	Fuel MBTU / g.s.f.	Electric kWh / g.s.f.	Total EUI MBTU / g.s.f.
Bristol Central High School	217,027	53	5.0	70
Bristol Eastern High School	210,403	55	5.6	75
Chippens Hill Middle School	166,855	33	4.9	50
Northeast Middle School	72,731	70	5.1	87
West Bristol K8 School	124,678	3	11.6	43
Green-Hills K8 School	134,056	4	0.0	4
Ellen P. Hubbell Elementary School	60,070	54	4.6	70
Stafford Elementary School	56,076	97	4.3	111
Ivy Drive Elementary School	60,914	54	7.4	80
Edgewood Elementary School	41,888	30	3.4	41
Mountain View Elementary School	56,522	40	5.5	59
South Side Elementary School	64,590	73	5.9	93
Board of Education Administration Building & Warehouse	37,872	39	6.9	62
City Hall & Annex	60,053	48	13.8	95
Water Main Office & Garage	10,753	63	6.0	84
Water Filtration Plant & High Service Pump Station	29,776	73	44.0	223
#1 Well House	257	0	146.8	501
#2 Well House	257	0	979.9	3,345
Chemical Control, Generator & #3-5 Well Houses	1,673	0	298.8	1,020
Chemical Control - Mechanic St	912	0	0.1	0
Pump Control - Peck Lane	865	0	117.7	402
Pump Control & Generator - Hill St.	2,400	83	35.8	205
Pump and Control - Wolcott St	610	0	60.4	206
Police Court & Parking Garage	83,343	54	13.5	100
Rockwell Park & Pavilion	5,302	103	4.1	117
Bathhouse	2,574	0	0.0	0
Muzzy Field	1,104	3	38.0	133
Ski Lodge	655	0	27.3	93
Page Park Pavilion	2,938	174	1.1	178
Dennis Malone Aquatic Center	14,484	170	25.3	257
Fire Head Quarters	12,084	63	9.6	96
Engine 2	4,016	100	9.7	134
Engine 3	3,268	109	8.0	136

"Page content is subject to Confidentiality Restrictions"

Facility Name	Calculated Gross Square Feet (g.s.f)	Fuel MBTU / g.s.f.	Electric kWh / g.s.f.	Total EUI MBTU / g.s.f.
Engine 5	3,587	81	9.6	113
Beals Senior Center	55,866	57	7.2	82
Main Library	55,468	22	11.1	60
Manross Library	17,237	46	8.2	74
Youth Services Building	12,816	32	3.1	43
Animal Control	2,126	134	4.6	150
Hill Street	4,904	0	0.1	0
City Yard	22,629	74	5.8	93
Transfer Stations - Lake Ave	2,763	0	8.1	28
Water Pollution Control Park	13,751	236	259.8	1,123
Remote Pumping Stations (13)	6,751	0	183.8	627
Street Lighting	NA	NA	NA	NA
Pool	6,200	35	6.8	58
Totals	**1,745,705**			

Using information from the energy performance table along with investigating the existing conditions of equipment and systems, Ameresco has identified several key opportunities to reduce utility costs for each facility. Many of those savings opportunities have been captured in the ESMs and are detailed in Section 3.

Baseline Information

The baseline utility data for this Preliminary Investment Grade Energy Audit is based on the Fiscal 2014 and Fiscal 2015 energy data (July 2013 through June 2015). Annual heating degree days (HDD) for fiscal 2014 and 2015 were 2% and 6% greater than the thirty year average, respectively, which required weather adjustments in order to match 30-year average weather conditions for Bristol, Connecticut. The two adjusted fiscal years were averaged together for the established baseline. For annual energy usage see the table at the end of this section.

Utilities are supplied through a number of different providers. At present, Eversource provides delivery services while Constellation, Liberty Power, TransCanada, and Eversource provide commodity (supply) for electricity. Natural Gas is delivered and supplied by Eversource.

Table 2: Annual Energy Use by Facility

Facility Name	Natural Gas (CCF)	#2 Fuel Oil (Gallons)	Energy Consumption (kWh)
Bristol Central High School	4,091	79,341	1,082,160
Bristol Eastern High School	113,754	0	1,185,120
Chippens Hill Middle School	54,319	0	809,700
Northeast Middle School	0	36,687	368,340
West Bristol K8 School	4,092	0	1,450,800
Green-Hills K8 School	5,108	-	*
Ellen P. Hubbell Elementary School	0	23,439	278,400
Stafford Elementary School	606	38,723	240,061
Ivy Drive Elementary School	32,229	0	453,150
Edgewood Elementary School	0	8,976	144,000
Mountain View Elementary School	22,068	0	312,640
South Side Elementary School	45,951	0	380,160

"Page content is subject to Confidentiality Restrictions"

Facility Name	Natural Gas (CCF)	#2 Fuel Oil (Gallons)	Energy Consumption (kWh)
Board of Education Administration Building & Warehouse	14,333	0	260,480
City Hall & Annex	1,933	19,472	827,712
Water Main Office & Garage	4,060	1,875	64,943
Water Filtration Plant & High Service Pump Station	0	15,613	1,310,016
#1 Well House	0	0	37,760
#2 Well House	0	0	252,121
Chemical Control, Generator & #3-5 Well Houses	0	0	499,760
Chemical Control - Mechanic St	0	0	67
Pump Control - Peck Lane	0	0	101,805
Pump Control & Generator - Hill St.	0	1,435	86,000
Pump and Control - Wolcott St	0	0	36,862
Police Court & Parking Garage	0	32,428	1,126,080
Rockwell Park & Pavilion	0	3,945	21,970
Bathhouse	**	**	**
Muzzy Field	35	0	41,908
Ski Lodge	0	0	17,912
Page Park Pavilion	0	3,683	3,335
Dennis Malone Aquatic Center	24,052	0	366,880
Fire Head Quarters	0	5,477	115,540
Engine 2	0	2,903	39,146
Engine 3	3,470	0	26,302
Engine 5	0	2,089	34,289
Beals Senior Center	31,151	0	400,050
Main Library	11,916	0	616,957
Manross Library	7,730	0	140,700
Youth Services Building	0	3,001	39,991
Animal Control	2,784	0	9,729
Hill Street	0	0	392
City Yard	15,622	457	131,931
Transfer Stations - Lake Ave	0	0	22,348
Water Pollution Control Park	31,679	0	3,573,000
Remote Pumping Stations	0	0	1,240,524
Street Lighting	0	0	2,537,578
Pool	0	1,568	42,203
Totals	**430,983**	**281,111**	**20,730,818**

***** Electric bill for Green-Hills School is manually billed each month by Eversource and is not published online. Ameresco has not yet received the usage from these manual bills from Eversource.
** Bathhouse utility account info was not supplied to Ameresco, so data could not be acquired.

Each ESM presented in this audit was explicitly "baselined" by a "temperature bin" analysis for temperature variant loads and by a fixed baseline for constant loads. Straightforward electrical saving ESMs such as lighting retrofits and motor replacements were analyzed by a combination of known operating hours, field measurements and engineering calculations. The baseline operating hours for each location or a portion thereof was determined from information from the City and review of metered data acquired during the IGEA. Energy cost savings for each ESM was calculated with the energy rates outlined in this section.

"Page content is subject to Confidentiality Restrictions"

Electricity

The energy savings analyses for proposed retrofits use the following electric rate schedules to calculate dollar savings. Buildings listed under rates R30-School, R37-School, R40-School, R41 and R56-School currently receive electric supply from Constellation Energy Services at a rate of $0.0953/kWh. Buildings listed under rate R30-EVER currently receive electric supply from Eversource at a rate of $0.12139/kWh. Buildings listed under rates R30-Lib, R37-Lib, R56-Lib receive electric supply from Liberty Power at a rate of $0.07587/kWh. Eversource electricity delivery is charged to the City according to ten delivery rates. Electric rates are displayed in Table 3.

Table 3: Electric Rates (including supply and delivery)

Electricity Charges	On-Peak (kWh)	Off-Peak (kWh)	Electric Demand (kW)
Rate 001	$0.19328	$0.19328	-
R-27 (Muzzy Field)	$0.0381	$0.0142	$15.54
R30-Small General (School)	$0.1043	$0.1043	$19.02
R30-Small General (Lib)	$0.0849	$0.0849	$19.02
R30-Small General (EVER)	$0.1304	$0.1304	$19.02
35-Intermediate General Service	$0.0845	$0.0845	$8.26
37-Intermediate Time-Of-Day General (School)	$0.1300	$0.1087	$11.10
37-Intermediate Time-Of-Day General (Lib)	$0.1106	$0.0893	$11.10
40-Small Church and School (School)	$0.1692	$0.1692	-
41-Large Church and School	$0.1825	$0.1511	$16.34
56-Intermediate Time-Of-Day (School)	$0.1056	$0.1032	$16.47
56-Intermediate Time-Of-Day (Lib)	$0.0861	$0.0838	$16.47
Rate 116 – Street Lighting	$0.10068	$0.10068	-
Rate 117 – Street Lighting	$0.10054	$0.10054	-

Table 4: Electric Rates by Building

Facility Name	001	R-27	R30-School	R30-Lib	R30-EVER	R35	R37-School	R37-Lib	R40-School	R41	R56-School	R56-Lib
Bristol Central High School										X		
Bristol Eastern High School											X	
Chippens Hill Middle School							X					
Northeast Middle School			X									
West Bristol K8 School											X	
Green-Hills K8 School											X	
Ellen P. Hubbell Elementary School			X									
Stafford Elementary School									X			
Ivy Drive Elementary School									X			
Edgewood Elementary School			X									
Mountain View Elementary School									X			
South Side Elementary School									X			
Board of Education Administration Building & Warehouse			X									
City Hall & Annex								X				
Water Main Office & Garage				X								

"Page content is subject to Confidentiality Restrictions"

Facility Name	001	R-27	R30-School	R30-Lib	R30-EVER	R35	R37-School	R37-Lib	R40-School	R41	R56-School	R56-Lib
Water Filtration Plant & High Service Pump Station								X				
#1 Well House				X								
#2 Well House						X						
Chemical Control, Generator & #3-5 Well Houses						X						
Chemical Control - Mechanic St	X											
Pump Control - Peck Lane				X								
Pump Control & Generator - Hill St.				X								
Pump and Control - Wolcott St				X								
Police Court & Parking Garage								X				
Rockwell Park & Pavilion Bathhouse				X								
Muzzy Field		X										
Ski Lodge				X								
Page Park Pavilion				X								
Dennis Malone Aquatic Center				X								
Fire Head Quarters				X								
Engine 2				X								
Engine 3				X								
Engine 5				X								
Beals Senior Center								X				
Main Library								X				
Manross Library				X								
Youth Services Building					X							
Animal Control					X							
Hill Street				X								
City Yard				X								
Transfer Stations - Lake Ave				X								
Water Pollution Control Park												X
Remote Pumping Stations				X								X
Street Lighting – R116,117												

Natural Gas

The energy savings analyses for proposed retrofits use the following natural gas rate schedules to calculate dollar savings. The City receives gas supply service from Eversource at commercial adjustable rates. We calculated these rates using known monthly published commercial adjustable rates from the most recent 12 months, and averaging these rates based on a HDD profile. The resulting supply rates are as follows:

- Small Service Supply Rate - $0.5908/CCF.
- Medium Service Supply Rate - $0.5498/CCF.
- Large Service Supply Rate - $0.5019/CCF.

"Page content is subject to Confidentiality Restrictions"

Eversource delivery rates utilize a usage block rate structure where over a monthly usage threshold of 200 CCF for small service, 1,000 CCF for medium service, and 2,500 CCF for large service, the rate is reduced. Ameresco assumed all of the savings would occur in the reduced rate threshold each month.

For the three sites where oil-to-gas conversions are proposed, the 'new service' rate was applied (R20E, R30E). A blended rate was calculated for each site based on an estimated monthly usage using a HDD profile.

Table 5 displays the total (supply & delivery) natural gas rates used for $ savings, and Table 6 displays the rates applied to each site.

Table 5: Gas Rates (includes Supply and Delivery)

Natural Gas Charges	Total ($/CCF)
R10 – Small General Service	$0.8423
R20 – Medium General Service	$0.6264
R30 – Large General Service	$0.5571
R20E – Medium General Service	$0.7001
R30E - CH – Large General Service	$0.5953
R30E – Pol - Large General Service	$0.5831

Table 6: Gas Rates by Building

Facility Name	R10	R20	R30	R20E	R30E - CH	R30E - Pol
Bristol Central High School		X				
Bristol Eastern High School			X			
Chippens Hill Middle School			X			
Northeast Middle School						
Green-Hills K8 School		X				
Ellen P. Hubbell Elementary School						
Stafford Elementary School						
Ivy Drive Elementary School			X			
Edgewood Elementary School						
Mountain View Elementary School		X				
South Side Elementary School			X			
Board of Education Administration Building & Warehouse		X				
City Hall & Annex					X	
Water Main Office & Garage						
Water Filtration Plant & High Service Pump Station						
Pump Control & Generator - Hill St.						
Police Court & Parking Garage						X
Rockwell Park & Pavilion						
Muzzy Field	X					
Page Park Pavilion						
Dennis Malone Aquatic Center			X			
Fire Head Quarters				X		
Engine 2						
Engine 3	X					
Engine 5						
Beals Senior Center			X			
Main Library		X				
Manross Library		X				
Youth Services Building						

"Page content is subject to Confidentiality Restrictions"

Facility Name	R10	R20	R30	R20E	R30E - CH	R30E - Pol
Animal Control	X					
City Yard		X				
Water Pollution Control Park			X			

Fuel Oil

#2 fuel oil is delivered by East River Energy. For calculation purposes, the cost per gallon of $2.75 was used, which was calculated based on the average $/gallon for #2 oil of the most recent year for the Hartford CT area.

End-Use Breakdown

A baseline model was developed for each audited building. Fiscal year 2014 and 2015 utility data as previously described was used to calibrate the model(s). The energy end-use breakdown for natural gas, #2 oil and electricity was calculated from inventoried equipment ratings, local bin weather data, operational characteristics obtained from personnel, and building envelope characteristics. Where equipment data could not be obtained, engineering experience and judgment was used. The major fuel heating end-uses found in the municipal and school buildings audited includes space heating, (which consist of mechanical ventilation, conduction, and infiltration), domestic hot water usage, and cooking. Electrical usage includes lighting, space cooling, HVAC fan/pumps, kitchen equipment, and office equipment. The remaining energy was placed in the category of "miscellaneous loads" and includes other plug loads.

"Page content is subject to Confidentiality Restrictions"

Baseline Summary Information

"Page content is subject to Confidentiality Restrictions"

This page is intentionally left blank.

City of Bristol, CT

Utility Data Summary

Weather Adjusted Average - Fiscal 2014 &2015

			Cost		*Annual Electric*									*Annual Fossil Fuel*					*Performance*			*Water & Sewer*			
Facility Name	**ID**	**GSF Area (SF)**	**Annual Cost ($)**	**Unit Cost ($/SF)**	**Demand (kW)**	**Energy Consump (Peak kWh)**	**Energy Consump (Off-Peak kWh)**	**Demand Cost $**	**Peak Energy Cost $**	**Off-Peak Energy Cost $**	**Total Cost**	**W/Sqft**	**kWh/Sqft**	**Natural Gas (CCF)**	**Natural Gas Cost $**	**#2 Oil (Gallons)**	**#2 Oil Cost $**	**Total MMbtu**	**kWh/Sqft**	**Fossil Fuel (Mbtu/Sqft)**	**Annual EUI (Mbtu/Sqft)**	**Water (CF)**	**Water Cost $**	**Sewer (CF)**	**Sewer Cost $**
Bristol Central High School	Central_High	217,027	$443,939	$2.05	5,294.5	1,082,160	0	$0	$185,984	$0	$185,984	2.0	5.0	4,091	$3,568	79,341	$245,308	11,424	5.0	53	70	193,875	$4,938	193,875	$4,140
Bristol Eastern High School	Eastern_High	210,403	$308,451	$1.47	5,396.8	1,185,120	0	$0	$222,240	$0	$222,240	2.1	5.6	113,754	$72,072	0	$0	11,660	5.6	55	75	307,900	$7,609	307,900	$6,531
Chippens Hill Middle School	Chippens	166,855	$182,572	$1.09	3,133.4	809,700	0	$0	$126,305	$0	$126,305	1.6	4.9	54,319	$43,627	0	$0	5,568	4.9	33	50	273,090	$6,804	273,090	$5,836
Northeast Middle School	NE_Middle	72,731	$177,166	$2.44	1,504.0	368,340	0	$0	$61,242	$0	$61,242	1.7	5.1	0	$0	36,687	$113,022	5,088	5.1	70	87	50,475	$1,662	50,475	$1,240
West Bristol K8 School	W_Bristol	124,678	$218,178	$1.75	4,565.2	1,450,800	0	$0	$202,987	$0	$202,987	3.1	11.6	4,092	$4,787	0	$0	419	11.6	3	43	276,810	$6,678	276,810	$3,726
Green-Hills K8 School	Green-Hills	134,056	$12,603	$0.09	1,800.0	0	0	$0	$0	$0	$0	1.1	0.0	5,108	$7,026	0	$0	524	0.0	4	4	135,973	$3,805	135,973	$1,771
Ellen P. Hubbell Elementary School	Hubbell	60,070	$121,611	$2.02	983.8	278,400	0	$0	$46,031	$0	$46,031	1.4	4.6	0	$0	23,439	$72,397	3,251	4.6	54	70	56,925	$1,811	56,925	$1,373
Stafford Elementary School	Stafford	56,076	$165,697	$2.95	1,030.6	240,061	0	$0	$38,934	$0	$38,934	1.5	4.3	606	$1,018	38,723	$119,772	5,433	4.3	97	111	121,125	$3,281	121,125	$2,692
Ivy Drive Elementary School	Ivy_Drive	60,914	$105,904	$1.74	2,091.9	453,150	0	$0	$72,931	$0	$72,931	2.9	7.4	32,229	$30,080	0	$0	3,304	7.4	54	80	50,200	$1,656	50,200	$1,237
Edgewood Elementary School	Edgewood	41,888	$57,173	$1.36	737.1	144,000	0	$0	$26,968	$0	$26,968	1.5	3.4	0	$0	8,976	$27,625	1,245	3.4	30	41	43,100	$1,492	43,100	$1,089
Mountain View Elementary School	Mt_View	56,522	$73,010	$1.29	1,682.6	312,640	0	$0	$50,515	$0	$50,515	2.5	5.5	22,068	$20,116	0	$0	2,262	5.5	40	59	38,450	$1,384	38,450	$995
South Side Elementary School	South_Side	64,590	$99,865	$1.55	1,342.3	380,160	0	$0	$61,335	$0	$61,335	1.7	5.9	45,951	$34,653	0	$0	4,710	5.9	73	93	72,750	$2,177	72,750	$1,700
Board of Education Administration Building & Wareho	Admin	37,872	$54,465	$1.44	850.4	260,480	0	$0	$42,059	$0	$42,059	1.9	6.9	14,333	$10,948	0	$0	1,469	6.9	39	62	20,115	$873	20,115	$586
City Hall & Annex	City_Hall	60,053	$191,640	$3.19	2,561.5	343,680	484,032	$0	$82,862	$37,570	$120,432	3.6	13.8	1,933	$2,332	19,472	$60,176	2,899	13.8	48	95	129,600	$4,714	129,600	$3,985
Water Main Office & Garage	Water_Main	10,753	$22,206	$2.07	265.4	64,943	0	$0	$9,166	$0	$9,166	2.1	6.0	4,060	$5,482	1,875	$5,832	676	6.0	63	84	11,063	$1,072	11,063	$654
Water Filtration Plant & High Service Pump Station	Filtration	29,776	$182,428	$6.13	3,425.7	662,976	647,040	$0	$81,329	$52,508	$133,837	9.6	44.0	0	$0	15,613	$48,354	2,166	44.0	73	223	0	$0	0	$238
#1 Well House	Well_1	257	$6,927	$26.92	299.9	37,760	0	$0	$6,927	$0	$6,927	97.1	146.8	0	$0	0	$0	0	146.8	0	501	0	$0	0	$0
#2 Well House	Well_2	257	$44,390	$172.53	964.2	252,121	0	$0	$44,390	$0	$44,390	312.3	979.9	0	$0	0	$0	0	979.9	0	3,345	0	$0	0	$0
Chemical Control, Generator & #3-5 Well Houses	Chem_Control	1,673	$57,130	$34.15	1,240.0	499,760	0	$0	$57,130	$0	$57,130	61.8	298.8	0	$0	0	$0	0	298.8	0	1,020	0	$0	0	$0
Chemical Control - Mechanic St	Chem_Mech_St	912	$212	$0.23	0.0	67	0	$0	$212	$0	$212	0.0	0.1	0	$0	0	$0	0	0.1	0	0	0	$0	0	$0
Pump Control - Peck Lane	Pump_Peck_Lane	865	$16,396	$18.96	614.4	101,805	0	$0	$16,396	$0	$16,396	59.2	117.7	0	$0	0	$0	0	117.7	0	402	0	$0	0	$0
Pump Control & Generator - Hill St.	P_Control_Hill	2,400	$26,449	$11.02	1,027.2	44,640	41,360	$0	$18,598	$3,384	$21,983	35.7	35.8	0	$0	1,435	$4,466	199	35.8	83	205	0	$0	0	$0
Pump and Control - Wolcott St	P_Control_Wolcott	610	$9,431	$15.47	467.7	36,862	0	$0	$9,431	$0	$9,431	63.9	60.4	0	$0	0	$0	0	60.4	0	206	0	$0	0	$0
Police Court & Parking Garage	Police	83,343	$259,290	$3.11	2,483.3	591,120	534,960	$0	$99,857	$54,550	$154,407	2.5	13.5	0	$0	32,428	$100,352	4,498	13.5	54	100	87,780	$2,524	87,780	$2,007
Rockwell Park & Pavilion	Rockwell_Park	5,302	$16,101	$3.04	89.4	21,970	0	$0	$3,900	$0	$3,900	1.4	4.1	0	$0	3,945	$12,201	547	4.1	103	117	0	$0	0	$0
Bathhouse	Bath	2,574	$0	$0.00	0.0	0	0	$0	$0	$0	$0	0.0	0.0	0	$0	0	$0	0	0.0	0	0	0	$0	0	$0
Muzzy Field	Muzzy	1,104	$18,084	$16.38	852.1	34,878	7,030	$5,015	$8,810	$1,900	$15,725	64.3	38.0	35	$570	0	$0	4	38.0	3	133	13,170	$1,120	13,170	$669
Ski Lodge	Ski	655	$3,281	$5.01	51.9	17,912	0	$0	$2,888	$0	$2,888	6.6	27.3	0	$0	0	$0	0	27.3	0	93	4,890	$193	4,890	$199
Page Park Pavilion	Page_Park	2,938	$12,740	$4.34	28.9	3,335	0	$0	$980	$0	$980	0.8	1.1	0	$0	3,683	$11,346	511	1.1	174	178	162	$216	162	$199
Dennis Malone Aquatic Center	Aquatic	14,484	$75,638	$5.22	810.9	366,880	0	$0	$53,931	$0	$53,931	4.7	25.3	24,052	$17,691	0	$0	2,465	25.3	170	257	76,075	$2,253	76,075	$1,764
Fire Head Quarters	Fire_HQ	12,084	$36,577	$3.03	308.2	115,540	0	$0	$17,877	$0	$17,877	2.1	9.6	0	$0	5,477	$16,948	760	9.6	63	96	26,875	$1,029	26,875	$724
Engine 2	Engine_2	4,016	$17,250	$4.30	182.3	39,146	0	$0	$7,191	$0	$7,191	3.8	9.7	0	$0	2,903	$9,049	403	9.7	100	134	12,468	$608	12,468	$401
Engine 3	Engine_3	3,268	$9,397	$2.88	119.2	26,302	0	$0	$4,895	$0	$4,895	3.0	8.0	3,470	$3,384	0	$0	356	8.0	109	136	9,600	$718	9,600	$401
Engine 5	Engine_5	3,587	$13,433	$3.74	140.0	34,289	0	$0	$6,080	$0	$6,080	3.3	9.6	0	$0	2,089	$6,452	290	9.6	81	113	9,960	$550	9,960	$351
Beals Senior Center	Senior	55,866	$114,660	$2.05	1,847.7	361,500	38,550	$0	$75,265	$14,048	$89,313	2.8	7.2	31,151	$23,257	0	$0	3,193	7.2	57	82	31,875	$1,232	31,875	$858
Main Library	Main_Library	55,468	$106,277	$1.92	1,930.5	377,341	239,616	$0	$70,128	$23,104	$93,232	2.9	11.1	11,916	$11,131	0	$0	1,221	11.1	22	60	30,715	$1,118	30,715	$797
Manross Library	Manross_Library	17,237	$30,488	$1.77	469.9	140,700	0	$0	$23,276	$0	$23,276	2.3	8.2	7,730	$6,860	0	$0	792	8.2	46	74	4,700	$189	4,700	$163
Youth Services Building	Youth	12,816	$17,060	$1.33	169.6	39,991	0	$0	$7,425	$0	$7,425	1.1	3.1	0	$0	3,001	$9,341	416	3.1	32	43	2,580	$140	2,580	$155
Animal Control	Animal	2,126	$5,339	$2.51	32.8	9,729	0	$0	$1,803	$0	$1,803	1.3	4.6	2,784	$2,833	0	$0	285	4.6	134	150	12,282	$384	12,282	$320
Hill Street	Hill_St	4,904	$651	$0.13	0.4	392	0	$0	$651	$0	$651	0.0	0.1	0	$0	0	$0	0	0.1	0	0	0	$0	0	$0
City Yard	City_Yard	22,629	$30,391	$1.34	481.9	131,931	0	$0	$13,829	$0	$13,829	1.8	5.8	15,622	$13,627	457	$1,396	1,665	5.8	74	93	25,698	$864	25,698	$675
Transfer Stations - Lake Ave	Transfer_Lake_Ave	2,763	$4,221	$1.53	90.7	22,348	0	$0	$3,987	$0	$3,987	2.7	8.1	0	$0	0	$0	0	8.1	0	28	6,638	$233	6,638	$0
Water Pollution Control Park	Water_Pollution	13,751	$501,360	$36.46	6,881.1	1,864,800	1,708,200	$0	$302,066	$176,380	$478,446	41.7	259.8	31,679	$21,923	0	$0	3,247	259.8	236	1,123	800	$990	800	$0
Remote Pumping Stations	Pump_Stations	6,751	$120,037	$17.78	3,703.9	1,240,524	0	$0	$120,037	$0	$120,037	45.7	183.8	0	$0	0	$0	0	183.8	0	627	0	$0	0	$0
Street Lighting	Street_Lighting	0	$359,373	$0.00	0.0	2,537,578	0	$0	$359,373	$0	$359,373	0.0	0.0	0	$0	0	$0	0	0.0	0	0	0	$0	0	$0
Pool	Pool	6,200	$14,898	$2.40	102.5	42,203	0	$0	$6,719	$0	$6,719	1.4	6.8	0	$0	1,568	$4,699	217	6.8	35	58	129,150	$3,479	129,150	$0
50	50	0	$0	$0.00							$0	0.0	0.0					0	0.0	0	0.0			0	
Totals		**1,745,105**	**$4,344,389**	**$2.49**	**62,054.4**	**17,030,030**	**3,700,788**	**$5,015**	**$2,654,937**	**$363,445**	**$3,023,398**	**3.0**	**11.9**	**430,983**	**$336,986**	**281,111**	**$868,737**	**83,166**	**11.9**	**47.7**	**88.2**	**2,266,866**	**$67,794**	**2,266,866**	**$47,475**

Conversions

Electricity		3,413	BTU/kWh
Natural gas		102,500	BTU/CCF
Propane		91,300	BTU/Gallons
Steam		1,000,000	BTU/Mlbs
Fuel Oil, #2		138,700	BTU/Gallons
Fuel Oil, #4		145,000	BTU/Gallons
Fuel Oil, #6		150,000	BTU/Gallons
Max Daily Demand (Natural Gas)		102,500	BTU/CCF (Demand)

Fiscal HDD		
2013	5,487	-7%
2014	6,054	2%
2015	6,259	6%
Average	5,933	
30-yr Avg.	5,920	

Detailed Baseline Information

"Page content is subject to Confidentiality Restrictions"

This page is intentionally left blank.

AMERESCO

City of Bristol, CT

Utility Data Summary - All Facilities

Fiscal Year 2014

	Weather		Electric										#2 Fuel Oil			Natural Gas			Total	Water & Sewer					Total
Date	HDD	CDD	kW	Peak kWh	Off-Peak kWh	Total kWh	Peak $	Off-Peak $	Total $	$/Peak kWh	$/Off-Peak kWh	$/kWh Blended	Gallons	$	$/Gal	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	2	362	7,154	1,399,818	540,476	1,940,294	$230,282	$53,757	$284,954	$0.1645	$0.0995	$0.1469	368	$1,124	$3.0569	2,710	$14,903	$5.4993	329	73,980	$2,792	$1,774	$4,566	$0.06	$305,546
Aug	0	251	5,414	1,259,651	547,488	1,807,139	$215,849	$54,076	$270,838	$0.1714	$0.0988	$0.1499	0	$0	$0.0000	4,066	$15,058	$3.7033	417	264,318	$7,395	$4,014	$11,409	$0.04	$297,304
Sep	88	161	6,174	1,305,449	519,264	1,824,713	$228,261	$48,537	$277,601	$0.1749	$0.0935	$0.1521	0	$0	$0.0000	6,514	$15,474	$2.3754	668	358,845	$9,499	$7,196	$16,695	$0.05	$309,770
Oct	282	13	5,689	1,143,248	411,344	1,554,592	$200,331	$43,721	$244,972	$0.1752	$0.1063	$0.1576	9,979	$30,505	$3.0569	18,222	$16,653	$0.9139	3,252	122,255	$3,995	$2,200	$6,195	$0.05	$298,325
Nov	638	0	4,767	1,163,486	407,904	1,571,390	$195,053	$42,743	$238,768	$0.1676	$0.1048	$0.1519	24,010	$73,397	$3.0569	52,260	$19,443	$0.3720	8,687	214,285	$6,239	$3,821	$10,060	$0.05	$341,669
Dec	981	0	4,664	1,294,504	431,616	1,726,120	$209,974	$44,511	$255,420	$0.1622	$0.1031	$0.1480	48,788	$149,140	$3.0569	73,524	$21,257	$0.2891	14,303	383,315	$10,065	$7,154	$17,218	$0.04	$443,036
Jan	1,186	0	5,822	1,319,996	424,832	1,744,828	$213,705	$46,669	$260,408	$0.1619	$0.1099	$0.1492	66,317	$202,486	$3.0533	93,608	$27,469	$0.2934	18,793	85,030	$3,095	$1,721	$4,816	$0.06	$495,179
Feb	1,077	0	4,740	1,307,218	425,728	1,732,946	$214,278	$45,375	$259,662	$0.1639	$0.1066	$0.1498	54,122	$178,746	$3.3026	79,597	$26,647	$0.3348	15,665	206,840	$6,067	$4,660	$10,727	$0.05	$475,782
Mar	1,001	0	4,681	1,286,722	416,880	1,703,602	$210,711	$40,393	$251,113	$0.1638	$0.0969	$0.1474	40,576	$134,719	$3.3202	73,645	$25,883	$0.3515	13,176	166,965	$4,767	$3,669	$8,436	$0.05	$420,150
Apr	532	0	4,487	1,231,329	447,888	1,679,217	$204,135	$42,283	$246,623	$0.1658	$0.0944	$0.1469	25,275	$80,176	$3.1722	30,649	$21,407	$0.6984	6,647	69,712	$2,641	$1,437	$4,078	$0.06	$352,284
May	221	9	5,076	1,296,599	451,456	1,748,055	$216,568	$50,640	$268,182	$0.1670	$0.1122	$0.1534	0	$0	$0.0000	8,924	$18,557	$2.0794	915	191,300	$5,681	$4,341	$10,022	$0.05	$296,761
Jun	24	49	5,492	1,362,849	528,288	1,891,137	$236,183	$52,530	$289,734	$0.1733	$0.0994	$0.1532	0	$0	$0.0000	4,585	$17,607	$3.8401	470	157,405	$4,846	$3,502	$8,348	$0.05	$315,689
Totals	**6,032**	**845**	**64,158**	**15,370,868**	**5,553,164**	**20,924,032**	**$2,575,329**	**$565,236**	**$3,148,276**	**$0.1675**	**$0.1018**	**$0.1505**	**269,435**	**$850,293**	**$3.1558**	**448,304**	**$240,357**	**$0.5361**	**83,322**	**2,294,250**	**$67,082**	**$45,488**	**$112,570**	**$0.05**	**$4,351,495**

Fiscal Year 2015

	Weather		Electric										#2 Fuel Oil			Natural Gas			Total	Water & Sewer					Total
Date	HDD	CDD	kW	Peak kWh	Off-Peak kWh	Total kWh	Peak $	Off-Peak $	Total $	$/Peak kWh	$/Off-Peak kWh	$/kWh Blended	Gallons	$	$/Gal	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	248	6,572	1,305,391	572,808	1,878,199	$231,804	$56,589	$289,386	$0.1776	$0.0988	$0.1541	837	$2,554	$3.0506	3,591	$18,848	$5.2487	484	111,303	$3,702	$2,181	$5,883	$0.05	$316,671
Aug	2	186	4,605	1,193,586	529,460	1,723,046	$212,589	$52,162	$265,712	$0.1781	$0.0985	$0.1542	0	$0	$0.0000	3,960	$18,862	$4.7632	406	265,340	$7,418	$4,672	$12,090	$0.05	$296,664
Sep	71	145	5,489	1,300,673	495,008	1,795,681	$218,972	$48,581	$267,917	$0.1684	$0.0981	$0.1492	15,022	$45,550	$3.0323	5,415	$20,004	$3.6942	2,639	397,320	$10,388	$8,010	$18,398	$0.05	$351,869
Oct	263	17	5,001	1,531,226	0	1,531,226	$182,357	$0	$182,357	$0.1191	#DIV/0!	$0.1191	7,093	$21,509	$3.0323	14,321	$26,073	$1.8206	2,452	48,190	$2,246	$1,236	$3,483	$0.07	$233,422
Nov	682	4	4,497	1,661,064	0	1,661,064	$189,126	$0	$189,126	$0.1139	#DIV/0!	$0.1139	36,473	$110,607	$3.0326	48,174	$44,584	$0.9255	9,997	210,025	$6,141	$3,963	$10,104	$0.05	$354,421
Dec	898	0	4,452	1,668,889	0	1,668,889	$195,238	$0	$195,238	$0.1170	#DIV/0!	$0.1170	50,698	$153,731	$3.0323	67,342	$59,567	$0.8845	13,934	339,660	$11,169	$8,905	$20,074	$0.06	$428,610
Jan	1,227	0	5,306	1,716,840	42,240	1,759,080	$288,203	$4,322	$292,526	$0.1679	$0.1023	$0.1663	60,520	$183,535	$3.0327	94,105	$79,195	$0.8416	18,040	83,815	$3,067	$1,819	$4,886	$0.06	$560,142
Feb	1,334	0	4,313	1,683,075	39,168	1,722,243	$242,729	$0	$242,729	$0.1442	$0.0000	$0.1409	61,629	$186,877	$3.0323	92,505	$71,789	$0.7761	18,030	192,860	$5,744	$4,646	$10,390	$0.05	$511,784
Mar	1,036	0	4,474	1,645,075	38,784	1,683,859	$240,398	$0	$240,398	$0.1461	$0.0000	$0.1428	55,066	$167,029	$3.0332	73,134	$55,127	$0.7538	15,134	144,890	$4,557	$3,470	$8,027	$0.06	$470,581
Apr	554	0	4,549	1,708,293	37,632	1,745,925	$245,388	$0	$245,388	$0.1436	$0.0000	$0.1405	28,212	$85,582	$3.0335	34,275	$33,960	$0.9908	7,426	78,568	$2,946	$1,746	$4,692	$0.06	$369,622
May	126	41	5,416	1,622,697	44,160	1,666,857	$244,495	$0	$244,495	$0.1507	$0.0000	$0.1467	0	$0	$0.0000	6,625	$19,268	$2.9083	679	186,915	$5,607	$4,503	$10,110	$0.05	$273,873
Jun	57	94	5,304	1,654,456	49,152	1,703,608	$247,509	$0	$247,509	$0.1496	$0.0000	$0.1453	185	$561	$3.0323	5,502	$18,366	$3.3380	590	180,595	$5,521	$4,311	$9,832	$0.05	$276,268
Totals	**6,250**	**736**	**59,979**	**18,691,264**	**1,848,412**	**20,539,676**	**$2,738,808**	**$161,654**	**$2,902,782**	**$0.1465**	**$0.0875**	**$0.1413**	**315,734**	**$957,535**	**$3.0327**	**448,949**	**$465,643**	**$1.0372**	**89,810**	**2,239,481**	**$68,506**	**$49,462**	**$117,968**	**$0.05**	**$4,443,928**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		Electric										#2 Fuel Oil			Natural Gas			Total	Water & Sewer					Total
Date	HDD	CDD	kW	Peak kWh	Off-Peak kWh	Total kWh	Peak $	Off-Peak $	Total $	$/Peak kWh	$/Off-Peak kWh	$/kWh Blended	Gallons	$	$/Gal	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	7,154	1,399,818	540,476	1,940,294	$230,282	$53,757	$284,954	$0.1645	$0.0995	$0.1469	3	$9	$3.1557	5	2.679758456	$0.5361	1	73,980	$2,792	$1,774	$4,566	$0.06	$289,532
Aug	21	200	5,414	1,259,651	547,488	1,807,139	$215,849	$54,076	$270,838	$0.1714	$0.0988	$0.1499	946	$2,984	$3.1557	1,573	$844	$0.5361	292	264,318	$7,395	$4,014	$11,409	$0.04	$286,074
Sep	119	63	6,174	1,305,449	519,264	1,824,713	$228,261	$48,537	$277,601	$0.1749	$0.0935	$0.1521	5,317	$16,781	$3.1557	8,847	$4,743	$0.5361	1,644	358,845	$9,499	$7,196	$16,695	$0.05	$315,820
Oct	409	0	5,689	1,143,248	411,344	1,554,592	$200,331	$43,721	$244,972	$0.1752	$0.1063	$0.1576	18,190	$57,402	$3.1557	30,265	$16,226	$0.5361	5,625	122,255	$3,995	$2,200	$6,195	$0.05	$324,796
Nov	644	0	4,767	1,163,486	407,904	1,571,390	$195,053	$42,743	$238,768	$0.1676	$0.1048	$0.1519	28,668	$90,468	$3.1557	47,699	$25,573	$0.5361	8,865	214,285	$6,239	$3,821	$10,060	$0.05	$364,870
Dec	1,114	0	4,664	1,294,504	431,616	1,726,120	$209,974	$44,511	$255,420	$0.1622	$0.1031	$0.1480	49,598	$156,518	$3.1557	82,523	$44,244	$0.5361	15,338	383,315	$10,065	$7,154	$17,218	$0.04	$473,400
Jan	1,145	0	5,822	1,319,996	424,832	1,744,828	$213,705	$46,669	$260,408	$0.1619	$0.1099	$0.1492	50,968	$160,841	$3.1557	84,803	$45,466	$0.5361	15,762	85,030	$3,095	$1,721	$4,816	$0.06	$471,530
Feb	1,007	0	4,740	1,307,218	425,728	1,732,946	$214,278	$45,375	$259,662	$0.1639	$0.1066	$0.1498	44,806	$141,394	$3.1557	74,550	$39,969	$0.5361	13,856	206,840	$6,067	$4,660	$10,727	$0.05	$451,752
Mar	778	0	4,681	1,286,722	416,880	1,703,602	$210,711	$40,393	$251,113	$0.1638	$0.0969	$0.1474	34,611	$109,221	$3.1557	57,587	$30,874	$0.5361	10,703	166,965	$4,767	$3,669	$8,436	$0.05	$399,645
Apr	450	1	4,487	1,231,329	447,888	1,679,217	$204,135	$42,283	$246,623	$0.1658	$0.0944	$0.1469	20,028	$63,202	$3.1557	33,323	$17,866	$0.5361	6,193	69,712	$2,641	$1,437	$4,078	$0.06	$331,769
May	167	27	5,076	1,296,599	451,456	1,748,055	$216,568	$50,640	$268,182	$0.1670	$0.1122	$0.1534	7,446	$23,497	$3.1557	12,388	$6,642	$0.5361	2,303	191,300	$5,681	$4,341	$10,022	$0.05	$308,343
Jun	65	133	5,492	1,362,849	528,288	1,891,137	$236,183	$52,530	$289,734	$0.1733	$0.0994	$0.1532	2,877	$9,079	$3.1557	4,787	$2,566	$0.5361	890	157,405	$4,846	$3,502	$8,348	$0.05	$309,727
Totals	**5,920**	**706**	**64,158**	**15,370,868**	**5,553,164**	**20,924,032**	**$2,575,329**	**$565,236**	**$3,148,276**	**$0.1675**	**$0.1018**	**$0.1505**	**264,438**	**$831,395**	**$3.1440**	**438,350**	**$235,016**	**$0.5361**	**81,472**	**2,294,250**	**$67,082**	**$45,488**	**$112,570**	**$0.05**	**$4,327,257**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		Electric										#2 Fuel Oil			Natural Gas			Total	Water & Sewer					Total
Date	HDD	CDD	kW	Peak kWh	Off-Peak kWh	Total kWh	Peak $	Off-Peak $	Total $	$/Peak kWh	$/Off-Peak kWh	$/kWh Blended	Gallons	$	$/Gal	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	6,572	1,305,391	572,808	1,878,199	$231,804	$56,589	$289,386	$0.1776	$0.0988	$0.1541	3	$10	$3.0327	5	5.021962806	$1.0372	1	111,303	$3,702	$2,181	$5,883	$0.05	$295,284
Aug	21	200	4,605	1,193,586	529,460	1,723,046	$212,589	$52,162	$265,712	$0.1781	$0.0985	$0.1542	1,072	$3,252	$3.0327	1,524	$1,581	$1.0372	305	265,340	$7,418	$4,672	$12,090	$0.05	$282,635
Sep	119	63	5,489	1,300,673	495,008	1,795,681	$218,972	$48,581	$267,917	$0.1684	$0.0981	$0.1492	6,030	$18,288	$3.0327	8,571	$8,889	$1.0372	1,715	397,320	$10,388	$8,010	$18,398	$0.05	$313,492
Oct	409	0	5,001	1,531,226	0	1,531,226	$182,357	$0	$182,357	$0.1191	#DIV/0!	$0.1191	20,628	$62,558	$3.0327	29,318	$30,409	$1.0372	5,866	48,190	$2,246	$1,236	$3,483	$0.07	$278,807
Nov	644	0	4,497	1,661,064	0	1,661,064	$189,126	$0	$189,126	$0.1139	#DIV/0!	$0.1139	32,510	$98,595	$3.0327	46,206	$47,925	$1.0372	9,245	210,025	$6,141	$3,963	$10,104	$0.05	$345,750
Dec	1,114	0	4,452	1,668,889	0	1,668,889	$195,238	$0	$195,238	$0.1170	#DIV/0!	$0.1170	56,245	$170,578	$3.0327	79,941	$82,915	$1.0372	15,995	339,660	$11,169	$8,905	$20,074	$0.06	$468,805
Jan	1,145	0	5,306	1,716,840	42,240	1,759,080	$288,203	$4,322	$292,526	$0.1679	$0.1023	$0.1663	57,799	$175,289	$3.0327	82,149	$85,205	$1.0372	16,437	83,815	$3,067	$1,819	$4,886	$0.06	$557,905
Feb	1,007	0	4,313	1,683,075	39,168	1,722,243	$242,729	$0	$242,729	$0.1442	$0.0000	$0.1409	50,811	$154,095	$3.0327	72,217	$74,903	$1.0372	14,450	192,860	$5,744	$4,646	$10,390	$0.05	$482,117
Mar	778	0	4,474	1,645,075	38,784	1,683,859	$240,398	$0	$240,398	$0.1461	$0.0000	$0.1428	39,249	$119,033	$3.0327	55,785	$57,860	$1.0372	11,162	144,890	$4,557	$3,470	$8,027	$0.06	$425,317
Apr	450	1	4,549	1,708,293	37,632	1,745,925	$245,388	$0	$245,388	$0.1436	$0.0000	$0.1405	22,712	$68,879	$3.0327	32,280	$33,481	$1.0372	6,459	78,568	$2,946	$1,746	$4,692	$0.06	$352,440
May	167	27	5,416	1,622,697	44,160	1,666,857	$244,495	$0	$244,495	$0.1507	$0.0000	$0.1467	8,444	$25,607	$3.0327	12,001	$12,447	$1.0372	2,401	186,915	$5,607	$4,503	$10,110	$0.05	$292,660
Jun	65	133	5,304	1,654,456	49,152	1,703,608	$247,509	$0	$247,509	$0.1496	$0.0000	$0.1453	3,262	$9,894	$3.0327	4,637	$4,809	$1.0372	928	180,595	$5,521	$4,311	$9,832	$0.05	$272,045
Totals	**5,920**	**706**	**59,979**	**18,691,264**	**1,848,412**	**20,539,676**	**$2,738,808**	**$161,654**	**$2,902,782**	**$0.1465**	**$0.0875**	**$0.1413**	**299,071**	**$906,078**	**$3.0296**	**424,634**	**$440,429**	**$1.0372**	**84,964**	**2,239,481**	**$68,506**	**$49,462**	**$117,968**	**$0.05**	**$4,367,257**

AMERESCO

City of Bristol, CT

Utility Data Summary

Bristol Central High School

1.000	CCF

Delivery: Eversource
Account #: 51586993073
Meter #: 891016022
Tariff Rate: Rate 41
Supplier: Constellation Energy Services

Supplier East River Energy
Account #: N/A

Delivery: Eversource
Account #: 57425060092
Meter #: 0419312
Tariff Rate: R20
Supplier: Eversource

Water Service: Bristol Water Department
Account #: 01-10989000
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*#2 Fuel Oil*			*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	2	446	1,007	84,960	$15,941	$0.1876	0	$0	$0.0000	328	$205	$0.6259	34	0	$0	$0	$0	$0.00	$16,146
Aug	0	178	376	63,360	$10,817	$0.1707	0	$0	$0.0000	421	$269	$0.6389	43	0	$0	$0	$0	$0.00	$11,086
Sep	99	143	624	108,000	$21,001	$0.1945	0	$0	$0.0000	579	$254	$0.4382	59	26,550	$737	$579	$1,316	$0.05	$22,570
Oct	310	6	446	82,080	$14,540	$0.1771	0	$0	$0.0000	586	$263	$0.4491	60	0	$0	$0	$0	$0.00	$14,803
Nov	663	0	284	82,800	$12,557	$0.1517	7,200	$22,010	$3.0569	254	$207	$0.8149	1,025	0	$0	$0	$0	$0.00	$34,773
Dec	1,001	0	283	90,000	$13,612	$0.1512	14,401	$44,022	$3.0569	180	$197	$1.0931	2,016	40,150	$1,051	$850	$1,902	$0.05	$59,733
Jan	1,206	0	552	81,360	$12,585	$0.1547	20,205	$61,765	$3.0569	217	$208	$0.9595	2,825	0	$0	$0	$0	$0.00	$74,558
Feb	1,056	0	282	91,440	$14,121	$0.1544	14,704	$49,675	$3.3783	152	$197	$1.2982	2,055	0	$0	$0	$0	$0.00	$63,993
Mar	1,007	0	274	87,120	$13,440	$0.1543	7,200	$24,213	$3.3629	184	$203	$1.1015	1,018	82,350	$2,026	$1,692	$3,719	$0.05	$41,575
Apr	508	0	269	82,800	$12,733	$0.1538	7,200	$22,997	$3.1940	462	$249	$0.5397	1,046	0	$0	$0	$0	$0.00	$35,979
May	191	11	408	84,240	$14,646	$0.1739	0	$0	$0.0000	628	$283	$0.4504	64	0	$0	$0	$0	$0.00	$14,929
Jun	11	72	458	105,840	$18,685	$0.1765	0	$0	$0.0000	469	$253	$0.5401	48	70,550	$1,754	$1,457	$3,211	$0.05	$22,149
Totals	**6,054**	**856**	**5,263**	**1,044,000**	**$174,678**	**$0.1673**	**70,910**	**$224,681**	**$3.1685**	**4,460**	**$2,789**	**$0.6253**	**10,292**	**219,600**	**$5,569**	**$4,578**	**$10,147**	**$0.05**	**$412,295**

Fiscal Year 2015

	Weather		*Electric*				*#2 Fuel Oil*			*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	275	788	84,960	$14,972	$0.1762	0	$0	$0.0000	363	$437	$1.2039	37	0	$0	$0	$0	$0.00	$15,409
Aug	2	160	340	74,880	$12,412	$0.1658	0	$0	$0.0000	395	$435	$1.1020	40	0	$0	$0	$0	$0.00	$12,847
Sep	79	139	593	113,040	$22,698	$0.2008	12,002	$36,394	$3.0323	567	$582	$1.0271	1,723	31,600	$854	$721	$1,575	$0.05	$61,250
Oct	282	17	464	87,840	$16,605	$0.1890	0	$0	$0.0000	580	$607	$1.0465	59	0	$0	$0	$0	$0.00	$17,212
Nov	720	0	293	88,560	$14,504	$0.1638	7,000	$21,226	$3.0323	235	$330	$1.4024	995	0	$0	$0	$0	$0.00	$36,060
Dec	896	0	303	99,360	$16,237	$0.1634	14,205	$43,074	$3.0323	116	$255	$2.1969	1,982	34,200	$841	$710	$1,551	$0.05	$61,117
Jan	1,243	0	618	89,280	$14,760	$0.1653	14,407	$43,686	$3.0323	111	$255	$2.2989	2,010	0	$0	$0	$0	$0.00	$58,701
Feb	1,354	0	293	95,040	$15,503	$0.1631	18,049	$54,730	$3.0323	101	$240	$2.3735	2,514	0	$0	$0	$0	$0.00	$70,473
Mar	1,019	0	310	90,720	$14,793	$0.1631	14,401	$43,668	$3.0323	147	$261	$1.7784	2,012	63,700	$1,595	$1,401	$2,996	$0.05	$61,719
Apr	511	0	294	88,560	$14,428	$0.1629	14,399	$43,662	$3.0323	348	$382	$1.0976	2,033	0	$0	$0	$0	$0.00	$58,472
May	99	49	495	92,160	$17,831	$0.1935	0	$0	$0.0000	612	$493	$0.8052	63	0	$0	$0	$0	$0.00	$18,324
Jun	54	133	536	115,920	$22,548	$0.1945	0	$0	$0.0000	465	$384	$0.8265	48	38,650	$1,017	$871	$1,887	$0.05	$24,819
Totals	**6,259**	**773**	**5,327**	**1,120,320**	**$197,291**	**$0.1761**	**94,463**	**$286,440**	**$3.0323**	**4,040**	**$4,661**	**$1.1538**	**13,516**	**168,150**	**$4,308**	**$3,702**	**$8,010**	**$0.05**	**$496,402**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	1,007	84,960	$15,941	$0.1876	1	$3	$3.1685	0	0.031092703	$0.6253	0	0	$0	$0	$0	$0.00	$15,943
Aug	21	200	376	63,360	$10,817	$0.1707	249	$789	$3.1685	16	$10	$0.6253	36	0	$0	$0	$0	$0.00	$11,615
Sep	119	63	624	108,000	$21,001	$0.1945	1,399	$4,434	$3.1685	88	$55	$0.6253	203	26,550	$737	$579	$1,316	$0.05	$26,806
Oct	409	0	446	82,080	$14,540	$0.1771	4,787	$15,169	$3.1685	301	$188	$0.6253	695	0	$0	$0	$0	$0.00	$29,897
Nov	644	0	284	82,800	$12,557	$0.1517	7,545	$23,907	$3.1685	475	$297	$0.6253	1,095	0	$0	$0	$0	$0.00	$36,760
Dec	1,114	0	283	90,000	$13,612	$0.1512	13,054	$41,361	$3.1685	821	$513	$0.6253	1,895	40,150	$1,051	$850	$1,902	$0.05	$57,387
Jan	1,145	0	552	81,360	$12,585	$0.1547	13,414	$42,503	$3.1685	844	$528	$0.6253	1,947	0	$0	$0	$0	$0.00	$55,616
Feb	1,007	0	282	91,440	$14,121	$0.1544	11,792	$37,364	$3.1685	742	$464	$0.6253	1,712	0	$0	$0	$0	$0.00	$51,949
Mar	778	0	274	87,120	$13,440	$0.1543	9,109	$28,862	$3.1685	573	$358	$0.6253	1,322	82,350	$2,026	$1,692	$3,719	$0.05	$46,380
Apr	450	1	269	82,800	$12,733	$0.1538	5,271	$16,701	$3.1685	332	$207	$0.6253	765	0	$0	$0	$0	$0.00	$29,642
May	167	27	408	84,240	$14,646	$0.1739	1,960	$6,209	$3.1685	123	$77	$0.6253	284	0	$0	$0	$0	$0.00	$20,932
Jun	65	133	458	105,840	$18,685	$0.1765	757	$2,399	$3.1685	48	$30	$0.6253	110	70,550	$1,754	$1,457	$3,211	$0.05	$24,324
Totals	**5,920**	**706**	**5,263**	**1,044,000**	**$174,678**	**$0.1673**	**69,338**	**$219,700**	**$3.1685**	**4,361**	**$2,727**	**$0.6253**	**10,064**	**219,600**	**$5,569**	**$4,578**	**$10,147**	**$0.05**	**$407,252**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	788	84,960	$14,972	$0.1762	1	$3	$3.0323	0	0.050271269	$1.1538	0	0	$0	$0	$0	$0.00	$14,975
Aug	21	200	340	74,880	$12,412	$0.1658	321	$972	$3.0323	14	$16	$1.1538	46	0	$0	$0	$0	$0.00	$13,400
Sep	119	63	593	113,040	$22,698	$0.2008	1,803	$5,468	$3.0323	77	$89	$1.1538	258	31,600	$854	$721	$1,575	$0.05	$29,831
Oct	409	0	464	87,840	$16,605	$0.1890	6,169	$18,705	$3.0323	264	$304	$1.1538	883	0	$0	$0	$0	$0.00	$35,614
Nov	644	0	293	88,560	$14,504	$0.1638	9,722	$29,480	$3.0323	416	$480	$1.1538	1,391	0	$0	$0	$0	$0.00	$44,463
Dec	1,114	0	303	99,360	$16,237	$0.1634	16,820	$51,003	$3.0323	719	$830	$1.1538	2,407	34,200	$841	$710	$1,551	$0.05	$69,620
Jan	1,145	0	618	89,280	$14,760	$0.1653	17,284	$52,411	$3.0323	739	$853	$1.1538	2,473	0	$0	$0	$0	$0.00	$68,024
Feb	1,007	0	293	95,040	$15,503	$0.1631	15,195	$46,074	$3.0323	650	$750	$1.1538	2,174	0	$0	$0	$0	$0.00	$62,327
Mar	778	0	310	90,720	$14,793	$0.1631	11,737	$35,591	$3.0323	502	$579	$1.1538	1,679	63,700	$1,595	$1,401	$2,996	$0.05	$53,959
Apr	450	1	294	88,560	$14,428	$0.1629	6,792	$20,595	$3.0323	290	$335	$1.1538	972	0	$0	$0	$0	$0.00	$35,358
May	167	27	495	92,160	$17,831	$0.1935	2,525	$7,657	$3.0323	108	$125	$1.1538	361	0	$0	$0	$0	$0.00	$25,612
Jun	65	133	536	115,920	$22,548	$0.1945	976	$2,958	$3.0323	42	$48	$1.1538	140	38,650	$1,017	$871	$1,887	$0.05	$27,441
Totals	**5,920**	**706**	**5,327**	**1,120,320**	**$197,291**	**$0.1761**	**89,344**	**$270,917**	**$3.0323**	**3,821**	**$4,409**	**$1.1538**	**12,784**	**168,150**	**$4,308**	**$3,702**	**$8,010**	**$0.05**	**$480,626**

City of Bristol, CT

Utility Data Summary

Bristol Eastern High School

1.000	CCF

Delivery: Eversource
Account #: 51775063043
Meter #: 891016102
Tariff Rate: Distribution Rate: 056. Supply Rate: 116
Supplier: Constellation Energy Services

Supplier
Delivery: Eversource
Account #: 57599660016
Meter #: 0465720
Tariff Rate: R30
Supplier: Eversource

Water Service: Bristol Water Department
Account #: 03-08928000
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	2	388	553	135,360	$22,713	$0.1678	520	$3,076	$5.9151	53	0	$0	$0	$0	$0.00	$25,789
Aug	0	237	483	97,920	$19,142	$0.1955	660	$3,089	$4.6803	68	71,750	$1,781	$1,481	$3,262	$0.05	$25,493
Sep	99	169	621	120,240	$21,992	$0.1829	820	$3,104	$3.7854	84	0	$0	$0	$0	$0.00	$25,097
Oct	310	6	448	90,000	$17,691	$0.1966	5,460	$3,407	$0.6240	560	0	$0	$0	$0	$0.00	$21,098
Nov	663	0	318	92,160	$16,103	$0.1747	16,250	$3,968	$0.2442	1,666	87,950	$2,156	$1,804	$3,960	$0.05	$24,031
Dec	1,001	0	297	93,600	$16,214	$0.1732	22,570	$4,372	$0.1937	2,313	0	$0	$0	$0	$0.00	$20,586
Jan	1,206	0	302	100,800	$17,265	$0.1713	26,320	$5,719	$0.2173	2,698	0	$0	$0	$0	$0.00	$22,984
Feb	1,056	0	299	87,120	$15,849	$0.1819	22,600	$5,420	$0.2398	2,317	82,000	$2,018	$1,685	$3,704	$0.05	$24,973
Mar	1,007	0	302	91,440	$16,295	$0.1782	21,490	$5,331	$0.2481	2,203	0	$0	$0	$0	$0.00	$21,626
Apr	508	0	308	85,680	$15,715	$0.1834	8,810	$4,313	$0.4895	903	0	$0	$0	$0	$0.00	$20,028
May	191	11	477	99,360	$18,834	$0.1896	920	$3,608	$3.9223	94	70,150	$1,744	$1,449	$3,193	$0.05	$25,636
Jun	11	46	544	114,480	$21,093	$0.1843	700	$3,581	$5.1156	72	0	$0	$0	$0	$0.00	$24,674
Totals	**6,054**	**857**	**4,953**	**1,208,160**	**$218,907**	**$0.1812**	**127,120**	**$48,989**	**$0.3854**	**13,030**	**311,850**	**$7,700**	**$6,420**	**$14,119**	**$0.05**	**$282,015**

Fiscal Year 2015

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	268	978	124,560	$22,979	$0.1845	630	$3,905	$6.1987	65	0	$0	$0	$0	$0.00	$26,885
Aug	2	179	462	98,640	$19,866	$0.2014	650	$3,877	$5.9645	67	83,700	$2,057	$1,824	$3,881	$0.05	$27,624
Sep	79	149	624	120,240	$22,990	$0.1912	820	$4,013	$4.8937	84	0	$0	$0	$0	$0.00	$27,003
Oct	282	21	511	90,720	$18,674	$0.2058	2,960	$5,425	$1.8329	303	0	$0	$0	$0	$0.00	$24,100
Nov	720	0	399	92,880	$18,271	$0.1967	13,740	$11,135	$0.8104	1,408	84,900	$2,085	$1,849	$3,934	$0.05	$33,340
Dec	896	0	304	90,000	$16,816	$0.1868	16,630	$13,662	$0.8215	1,705	0	$0	$0	$0	$0.00	$30,477
Jan	1,243	0	569	80,640	$15,836	$0.1964	22,260	$17,467	$0.7847	2,282	0	$0	$0	$0	$0.00	$33,303
Feb	1,354	0	281	83,520	$16,213	$0.1941	22,020	$15,633	$0.7099	2,257	72,100	$1,790	$1,578	$3,368	$0.05	$35,213
Mar	1,019	0	297	90,720	$17,000	$0.1874	18,680	$12,413	$0.6645	1,915	0	$0	$0	$0	$0.00	$29,412
Apr	511	0	305	90,000	$16,754	$0.1862	9,000	$7,338	$0.8154	923	0	$0	$0	$0	$0.00	$24,092
May	99	49	565	92,880	$19,205	$0.2068	920	$3,494	$3.7975	94	63,250	$1,585	$1,391	$2,976	$0.05	$25,675
Jun	54	103	547	107,280	$20,970	$0.1955	810	$3,395	$4.1911	83	0	$0	$0	$0	$0.00	$24,364
Totals	**6,259**	**769**	**5,841**	**1,162,080**	**$225,573**	**$0.1941**	**109,120**	**$101,756**	**$0.9325**	**11,185**	**303,950**	**$7,517**	**$6,642**	**$14,160**	**$0.05**	**$341,489**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	553	135,360	$22,713	$0.1678	1	0.546205785	$0.3854	0	0	$0	$0	$0	$0.00	$22,714
Aug	21	200	483	97,920	$19,142	$0.1955	446	$172	$0.3854	46	71,750	$1,781	$1,481	$3,262	$0.05	$22,576
Sep	119	63	621	120,240	$21,992	$0.1829	2,509	$967	$0.3854	257	0	$0	$0	$0	$0.00	$22,959
Oct	409	0	448	90,000	$17,691	$0.1966	8,582	$3,307	$0.3854	880	0	$0	$0	$0	$0.00	$20,998
Nov	644	0	318	92,160	$16,103	$0.1747	13,526	$5,213	$0.3854	1,386	87,950	$2,156	$1,804	$3,960	$0.05	$25,276
Dec	1,114	0	297	93,600	$16,214	$0.1732	23,401	$9,018	$0.3854	2,399	0	$0	$0	$0	$0.00	$25,232
Jan	1,145	0	302	100,800	$17,265	$0.1713	24,047	$9,267	$0.3854	2,465	0	$0	$0	$0	$0.00	$26,532
Feb	1,007	0	299	87,120	$15,849	$0.1819	21,140	$8,147	$0.3854	2,167	82,000	$2,018	$1,685	$3,704	$0.05	$27,700
Mar	778	0	302	91,440	$16,295	$0.1782	16,330	$6,293	$0.3854	1,674	0	$0	$0	$0	$0.00	$22,588
Apr	450	1	308	85,680	$15,715	$0.1834	9,449	$3,641	$0.3854	969	0	$0	$0	$0	$0.00	$19,357
May	167	27	477	99,360	$18,834	$0.1896	3,513	$1,354	$0.3854	360	70,150	$1,744	$1,449	$3,193	$0.05	$23,381
Jun	65	133	544	114,480	$21,093	$0.1843	1,357	$523	$0.3854	139	0	$0	$0	$0	$0.00	$21,616
Totals	**5,920**	**706**	**4,953**	**1,208,160**	**$218,907**	**$0.1812**	**124,302**	**$47,903**	**$0.3854**	**12,741**	**311,850**	**$7,700**	**$6,420**	**$14,119**	**$0.05**	**$280,929**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	978	124,560	$22,979	$0.1845	1	1.097388017	$0.9325	0	0	$0	$0	$0	$0.00	$22,980
Aug	21	200	462	98,640	$19,866	$0.2014	370	$345	$0.9325	38	83,700	$2,057	$1,824	$3,881	$0.05	$24,092
Sep	119	63	624	120,240	$22,990	$0.1912	2,083	$1,942	$0.9325	214	0	$0	$0	$0	$0.00	$24,932
Oct	409	0	511	90,720	$18,674	$0.2058	7,126	$6,645	$0.9325	730	0	$0	$0	$0	$0.00	$25,319
Nov	644	0	399	92,880	$18,271	$0.1967	11,230	$10,472	$0.9325	1,151	84,900	$2,085	$1,849	$3,934	$0.05	$32,678
Dec	1,114	0	304	90,000	$16,816	$0.1868	19,430	$18,118	$0.9325	1,992	0	$0	$0	$0	$0.00	$34,934
Jan	1,145	0	569	80,640	$15,836	$0.1964	19,966	$18,619	$0.9325	2,047	0	$0	$0	$0	$0.00	$34,454
Feb	1,007	0	281	83,520	$16,213	$0.1941	17,552	$16,368	$0.9325	1,799	72,100	$1,790	$1,578	$3,368	$0.05	$35,948
Mar	778	0	297	90,720	$17,000	$0.1874	13,558	$12,643	$0.9325	1,390	0	$0	$0	$0	$0.00	$29,643
Apr	450	1	305	90,000	$16,754	$0.1862	7,846	$7,316	$0.9325	804	0	$0	$0	$0	$0.00	$24,070
May	167	27	565	92,880	$19,205	$0.2068	2,917	$2,720	$0.9325	299	63,250	$1,585	$1,391	$2,976	$0.05	$24,901
Jun	65	133	547	107,280	$20,970	$0.1955	1,127	$1,051	$0.9325	116	0	$0	$0	$0	$0.00	$22,021
Totals	**5,920**	**706**	**5,841**	**1,162,080**	**$225,573**	**$0.1941**	**103,206**	**$96,242**	**$0.9325**	**10,579**	**303,950**	**$7,517**	**$6,642**	**$14,160**	**$0.05**	**$335,974**

City of Bristol, CT

Utility Data Summary

Chippens Hill Middle School

1.000	CCF

Delivery: Eversource
Account #: 51666793070
Meter #: 078003651
Tariff Rate: Rate 037
Supplier: Constellation Energy Services

Supplier
Delivery: Eversource
Account #:
Account #: 57334310091
Meter #: 0545036
Tariff Rate: R30
Supplier: Eversource

Water Service: Bristol Water Department
Account #: 01-16838000
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	2	363	254	54,300	$8,683	$0.1599	0	$1,793	$0.0000	0	0	$0	$0	$0	$0.00	$10,475
Aug	0	257	150	45,300	$7,432	$0.1641	0	$1,793	$0.0000	0	0	$0	$0	$0	$0.00	$9,225
Sep	99	188	271	66,300	$10,129	$0.1528	130	$1,805	$13.8835	13	131,650	$3,165	$2,676	$5,842	$0.04	$17,775
Oct	310	6	243	65,700	$9,904	$0.1507	1,860	$1,967	$1.0577	191	0	$0	$0	$0	$0.00	$11,872
Nov	663	0	216	64,500	$9,758	$0.1513	6,420	$2,232	$0.3477	658	0	$0	$0	$0	$0.00	$11,990
Dec	1,001	0	223	95,400	$13,913	$0.1458	9,790	$2,404	$0.2456	1,003	61,500	$1,545	$1,276	$2,821	$0.05	$19,138
Jan	1,206	0	483	72,300	$10,863	$0.1502	13,840	$3,674	$0.2655	1,419	0	$0	$0	$0	$0.00	$14,537
Feb	1,056	0	239	57,600	$8,472	$0.1471	10,940	$3,441	$0.3146	1,121	0	$0	$0	$0	$0.00	$11,913
Mar	1,007	0	257	82,500	$11,994	$0.1454	9,790	$3,349	$0.3421	1,003	21,900	$630	$486	$1,116	$0.05	$16,459
Apr	508	0	224	69,900	$10,491	$0.1501	2,080	$2,711	$1.3035	213	0	$0	$0	$0	$0.00	$13,202
May	191	9	205	63,300	$9,723	$0.1536	160	$2,471	$15.4439	16	0	$0	$0	$0	$0.00	$12,194
Jun	11	74	289	89,700	$13,913	$0.1551	20	$2,454	$122.6750	2	28,250	$777	$613	$1,389	$0.05	$17,756
Totals	**6,054**	**897**	**3,056**	**826,800**	**$125,273**	**$0.1515**	**55,030**	**$30,094**	**$0.5469**	**5,641**	**243,300**	**$6,116**	**$5,051**	**$11,168**	**$0.05**	**$166,535**

Fiscal Year 2015

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	224	459	29,700	$5,797	$0.1952	0	$2,451	$0.0000	0	0	$0	$0	$0	$0.00	$8,248
Aug	2	188	139	44,400	$7,726	$0.1740	0	$2,451	$0.0000	0	0	$0	$0	$0	$0.00	$10,177
Sep	79	158	274	66,300	$10,846	$0.1636	170	$2,559	$15.0512	17	136,130	$3,269	$2,933	$6,202	$0.05	$19,606
Oct	282	15	215	61,800	$10,128	$0.1639	1,260	$3,282	$2.6049	129	0	$0	$0	$0	$0.00	$13,411
Nov	720	6	221	81,000	$12,439	$0.1536	5,210	$5,418	$1.0399	534	0	$0	$0	$0	$0.00	$17,857
Dec	896	0	229	59,100	$9,933	$0.1681	9,520	$8,320	$0.8739	976	118,300	$2,857	$2,556	$5,413	$0.05	$23,666
Jan	1,243	0	470	72,600	$11,490	$0.1583	14,220	$11,324	$0.7964	1,458	0	$0	$0	$0	$0.00	$22,814
Feb	1,354	0	241	85,800	$12,999	$0.1515	14,110	$10,177	$0.7213	1,446	0	$0	$0	$0	$0.00	$23,177
Mar	1,019	0	243	79,500	$12,278	$0.1544	9,770	$7,028	$0.7193	1,001	22,800	$651	$535	$1,186	$0.05	$20,492
Apr	511	0	218	69,300	$11,017	$0.1590	3,590	$3,865	$1.0767	368	0	$0	$0	$0	$0.00	$14,882
May	99	38	230	65,100	$10,596	$0.1628	80	$2,143	$26.7858	8	0	$0	$0	$0	$0.00	$12,738
Jun	54	106	271	78,000	$12,087	$0.1550	40	$2,123	$53.0835	4	25,650	$717	$595	$1,312	$0.05	$15,523
Totals	**6,259**	**735**	**3,211**	**792,600**	**$127,336**	**$0.1607**	**57,970**	**$61,141**	**$1.0547**	**5,942**	**302,880**	**$7,493**	**$6,620**	**$14,112**	**$0.05**	**$202,590**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	254	54,300	$8,683	$0.1599	1	0.335539445	$0.5469	0	0	$0	$0	$0	$0.00	$8,683
Aug	21	200	150	45,300	$7,432	$0.1641	193	$106	$0.5469	20	0	$0	$0	$0	$0.00	$7,538
Sep	119	63	271	66,300	$10,129	$0.1528	1,086	$594	$0.5469	111	131,650	$3,165	$2,676	$5,842	$0.04	$16,564
Oct	409	0	243	65,700	$9,904	$0.1507	3,715	$2,032	$0.5469	381	0	$0	$0	$0	$0.00	$11,936
Nov	644	0	216	64,500	$9,758	$0.1513	5,855	$3,202	$0.5469	600	0	$0	$0	$0	$0.00	$12,960
Dec	1,114	0	223	95,400	$13,913	$0.1458	10,130	$5,540	$0.5469	1,038	61,500	$1,545	$1,276	$2,821	$0.05	$22,273
Jan	1,145	0	483	72,300	$10,863	$0.1502	10,410	$5,693	$0.5469	1,067	0	$0	$0	$0	$0.00	$16,555
Feb	1,007	0	239	57,600	$8,472	$0.1471	9,151	$5,005	$0.5469	938	0	$0	$0	$0	$0.00	$13,476
Mar	778	0	257	82,500	$11,994	$0.1454	7,069	$3,866	$0.5469	725	21,900	$630	$486	$1,116	$0.05	$16,975
Apr	450	1	224	69,900	$10,491	$0.1501	4,091	$2,237	$0.5469	419	0	$0	$0	$0	$0.00	$12,728
May	167	27	205	63,300	$9,723	$0.1536	1,521	$832	$0.5469	156	0	$0	$0	$0	$0.00	$10,555
Jun	65	133	289	89,700	$13,913	$0.1551	588	$321	$0.5469	60	28,250	$777	$613	$1,389	$0.05	$15,623
Totals	**5,920**	**706**	**3,056**	**826,800**	**$125,273**	**$0.1515**	**53,810**	**$29,427**	**$0.5469**	**5,516**	**243,300**	**$6,116**	**$5,051**	**$11,168**	**$0.05**	**$165,868**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	459	29,700	$5,797	$0.1952	1	0.659377832	$1.0547	0	0	$0	$0	$0	$0.00	$5,798
Aug	21	200	139	44,400	$7,726	$0.1740	197	$208	$1.0547	20	0	$0	$0	$0	$0.00	$7,933
Sep	119	63	274	66,300	$10,846	$0.1636	1,107	$1,167	$1.0547	113	136,130	$3,269	$2,933	$6,202	$0.05	$18,215
Oct	409	0	215	61,800	$10,128	$0.1639	3,786	$3,993	$1.0547	388	0	$0	$0	$0	$0.00	$14,121
Nov	644	0	221	81,000	$12,439	$0.1536	5,966	$6,293	$1.0547	612	0	$0	$0	$0	$0.00	$18,732
Dec	1,114	0	229	59,100	$9,933	$0.1681	10,322	$10,887	$1.0547	1,058	118,300	$2,857	$2,556	$5,413	$0.05	$26,233
Jan	1,145	0	470	72,600	$11,490	$0.1583	10,607	$11,187	$1.0547	1,087	0	$0	$0	$0	$0.00	$22,677
Feb	1,007	0	241	85,800	$12,999	$0.1515	9,325	$9,835	$1.0547	956	0	$0	$0	$0	$0.00	$22,834
Mar	778	0	243	79,500	$12,278	$0.1544	7,203	$7,597	$1.0547	738	22,800	$651	$535	$1,186	$0.05	$21,061
Apr	450	1	218	69,300	$11,017	$0.1590	4,168	$4,396	$1.0547	427	0	$0	$0	$0	$0.00	$15,413
May	167	27	230	65,100	$10,596	$0.1628	1,550	$1,634	$1.0547	159	0	$0	$0	$0	$0.00	$12,230
Jun	65	133	271	78,000	$12,087	$0.1550	599	$631	$1.0547	61	25,650	$717	$595	$1,312	$0.05	$14,031
Totals	**5,920**	**706**	**3,211**	**792,600**	**$127,336**	**$0.1607**	**54,828**	**$57,828**	**$1.0547**	**5,620**	**302,880**	**$7,493**	**$6,620**	**$14,112**	**$0.05**	**$199,276**

City of Bristol, CT
Utility Data Summary
Northeast Middle School

Delivery: Eversource
Account #: 51167753029
Meter #: 890376992
Tariff Rate: Rate 030
Supplier: Constellation Energy Services

Supplier East River Energy
Account #: N/A

Water Service: Bristol Water Department
Account #: 03-09599000
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	2	282	105	22,440	$3,839	$0.1711	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$3,839
Aug	0	324	46	16,920	$2,500	$0.1477	0	$0	$0.0000	0	12,600	$415	$300	$715	$0.06	$3,215
Sep	99	171	116	22,920	$4,096	$0.1787	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$4,096
Oct	310	40	105	26,400	$4,339	$0.1643	5,223	$15,966	$3.0569	724	0	$0	$0	$0	$0.00	$20,305
Nov	663	0	117	32,880	$5,217	$0.1587	0	$0	$0.0000	0	9,950	$354	$247	$601	$0.06	$5,818
Dec	1,001	0	118	27,840	$4,672	$0.1678	6,001	$18,344	$3.0569	832	0	$0	$0	$0	$0.00	$23,016
Jan	1,206	0	244	43,200	$6,546	$0.1515	9,016	$27,560	$3.0569	1,250	0	$0	$0	$0	$0.00	$34,106
Feb	1,056	0	121	36,720	$5,838	$0.1590	6,000	$18,341	$3.0569	832	14,300	$454	$334	$789	$0.06	$24,968
Mar	1,007	0	117	34,800	$5,556	$0.1597	6,500	$21,970	$3.3800	902	0	$0	$0	$0	$0.00	$27,526
Apr	508	0	126	36,600	$5,884	$0.1608	6,500	$20,439	$3.1445	902	0	$0	$0	$0	$0.00	$26,323
May	191	0	117	39,720	$6,139	$0.1546	0	$0	$0.0000	0	11,850	$398	$285	$683	$0.06	$6,822
Jun	11	36	119	31,680	$5,216	$0.1647	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$5,216
Totals	**6,054**	**853**	**1,450**	**372,120**	**$59,842**	**$0.1608**	**39,240**	**$122,622**	**$3.1249**	**5,443**	**48,700**	**$1,621**	**$1,167**	**$2,788**	**$0.06**	**$185,252**

Fiscal Year 2015

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	203	200	21,360	$4,022	$0.1883	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$4,022
Aug	2	234	51	19,320	$3,090	$0.1599	0	$0	$0.0000	0	16,250	$499	$397	$896	$0.06	$3,986
Sep	79	174	105	24,360	$4,372	$0.1795	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$4,372
Oct	282	17	121	27,000	$4,910	$0.1818	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$4,910
Nov	720	10	131	35,400	$6,096	$0.1722	6,499	$19,707	$3.0323	901	7,350	$294	$208	$502	$0.07	$26,305
Dec	896	0	124	37,920	$6,338	$0.1672	6,500	$19,710	$3.0323	902	0	$0	$0	$0	$0.00	$26,048
Jan	1,243	0	251	36,000	$6,099	$0.1694	6,000	$18,194	$3.0323	832	0	$0	$0	$0	$0.00	$24,293
Feb	1,354	0	119	33,360	$5,690	$0.1706	12,046	$36,527	$3.0323	1,671	13,950	$446	$345	$791	$0.06	$43,008
Mar	1,019	0	117	34,800	$5,801	$0.1667	5,964	$18,085	$3.0323	827	0	$0	$0	$0	$0.00	$23,886
Apr	511	0	117	37,440	$6,091	$0.1627	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$6,091
May	99	21	117	38,640	$6,218	$0.1609	0	$0	$0.0000	0	14,700	$464	$364	$827	$0.06	$7,045
Jun	54	78	106	18,960	$3,915	$0.2065	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$3,915
Totals	**6,259**	**737**	**1,558**	**364,560**	**$62,641**	**$0.1718**	**37,009**	**$112,222**	**$3.0323**	**5,133**	**52,250**	**$1,703**	**$1,313**	**$3,016**	**$0.06**	**$177,880**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	105	22,440	$3,839	$0.1711	0	$1	$3.1249	0	0	$0	$0	$0	$0.00	$3,840
Aug	21	200	46	16,920	$2,500	$0.1477	138	$430	$3.1249	19	12,600	$415	$300	$715	$0.06	$3,645
Sep	119	63	116	22,920	$4,096	$0.1787	774	$2,420	$3.1249	107	0	$0	$0	$0	$0.00	$6,517
Oct	409	0	105	26,400	$4,339	$0.1643	2,649	$8,278	$3.1249	367	0	$0	$0	$0	$0.00	$12,617
Nov	644	0	117	32,880	$5,217	$0.1587	4,175	$13,047	$3.1249	579	9,950	$354	$247	$601	$0.06	$18,865
Dec	1,114	0	118	27,840	$4,672	$0.1678	7,223	$22,573	$3.1249	1,002	0	$0	$0	$0	$0.00	$27,245
Jan	1,145	0	244	43,200	$6,546	$0.1515	7,423	$23,196	$3.1249	1,030	0	$0	$0	$0	$0.00	$29,742
Feb	1,007	0	121	36,720	$5,838	$0.1590	6,526	$20,392	$3.1249	905	14,300	$454	$334	$789	$0.06	$27,018
Mar	778	0	117	34,800	$5,556	$0.1597	5,041	$15,752	$3.1249	699	0	$0	$0	$0	$0.00	$21,308
Apr	450	1	126	36,600	$5,884	$0.1608	2,917	$9,115	$3.1249	405	0	$0	$0	$0	$0.00	$14,999
May	167	27	117	39,720	$6,139	$0.1546	1,084	$3,389	$3.1249	150	11,850	$398	$285	$683	$0.06	$10,211
Jun	65	133	119	31,680	$5,216	$0.1647	419	$1,309	$3.1249	58	0	$0	$0	$0	$0.00	$6,526
Totals	**5,920**	**706**	**1,450**	**372,120**	**$59,842**	**$0.1608**	**38,370**	**$119,903**	**$3.1249**	**5,322**	**48,700**	**$1,621**	**$1,167**	**$2,788**	**$0.06**	**$182,533**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	200	21,360	$4,022	$0.1883	0	$1	$3.0323	0	0	$0	$0	$0	$0.00	$4,023
Aug	21	200	51	19,320	$3,090	$0.1599	126	$381	$3.0323	17	16,250	$499	$397	$896	$0.06	$4,367
Sep	119	63	105	24,360	$4,372	$0.1795	706	$2,142	$3.0323	98	0	$0	$0	$0	$0.00	$6,515
Oct	409	0	121	27,000	$4,910	$0.1818	2,417	$7,328	$3.0323	335	0	$0	$0	$0	$0.00	$12,238
Nov	644	0	131	35,400	$6,096	$0.1722	3,809	$11,550	$3.0323	528	7,350	$294	$208	$502	$0.07	$18,148
Dec	1,114	0	124	37,920	$6,338	$0.1672	6,590	$19,982	$3.0323	914	0	$0	$0	$0	$0.00	$26,320
Jan	1,145	0	251	36,000	$6,099	$0.1694	6,772	$20,534	$3.0323	939	0	$0	$0	$0	$0.00	$26,633
Feb	1,007	0	119	33,360	$5,690	$0.1706	5,953	$18,051	$3.0323	826	13,950	$446	$345	$791	$0.06	$24,532
Mar	778	0	117	34,800	$5,801	$0.1667	4,598	$13,944	$3.0323	638	0	$0	$0	$0	$0.00	$19,745
Apr	450	1	117	37,440	$6,091	$0.1627	2,661	$8,069	$3.0323	369	0	$0	$0	$0	$0.00	$14,160
May	167	27	117	38,640	$6,218	$0.1609	989	$3,000	$3.0323	137	14,700	$464	$364	$827	$0.06	$10,045
Jun	65	133	106	18,960	$3,915	$0.2065	382	$1,159	$3.0323	53	0	$0	$0	$0	$0.00	$5,074
Totals	**5,920**	**706**	**1,558**	**364,560**	**$62,641**	**$0.1718**	**35,003**	**$106,140**	**$3.0323**	**4,855**	**52,250**	**$1,703**	**$1,313**	**$3,016**	**$0.06**	**$171,798**

City of Bristol, CT

Utility Data Summary

West Bristol K8 School

1.000	CCF

Delivery: Eversource
Account #: 51856775036, 51127816080
Meter #: 891975492
Tariff Rate: Rate 056
Supplier: Constellation Energy Services

Supplier
Delivery: Eversource
Account #:
Account #: 57035895077
Meter #: 0525873
Tariff Rate: R10
Supplier: Eversource

Water Service: Bristol Water Department
Account #: 01-18770000
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*							*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Water	$/CF Sewer	$/CF Total	$
Jul	0	373	672	96,480	$12,648	$0.1311	240	$257	$1.0715	25	0	$0	$0	$0	$0.00	$0.00	$0.00	$12,905
Aug	2	252	199	80,640	$10,624	$0.1317	220	$245	$1.1120	23	0	$0	$0	$0	$0.00	$0.00	$0.00	$10,869
Sep	39	175	372	98,640	$13,635	$0.1382	310	$344	$1.1111	32	85,355	$2,096	$1,242	$3,338	$0.02	$0.01	$0.04	$17,317
Oct	155	6	302	99,360	$13,053	$0.1314	370	$396	$1.0699	38	0	$0	$0	$0	$0.00	$0.00	$0.00	$13,449
Nov	505	0	359	120,960	$14,872	$0.1229	390	$422	$1.0815	40	0	$0	$0	$0	$0.00	$0.00	$0.00	$15,294
Dec	945	0	369	176,400	$19,422	$0.1101	430	$485	$1.1281	44	154,035	$3,682	$2,083	$5,765	$0.02	$0.01	$0.04	$25,672
Jan	1,051	0	845	164,160	$19,837	$0.1208	400	$488	$1.2201	41	0	$0	$0	$0	$0.00	$0.00	$0.00	$20,325
Feb	1,285	0	444	182,880	$21,581	$0.1180	440	$560	$1.2716	45	0	$0	$0	$0	$0.00	$0.00	$0.00	$22,141
Mar	984	0	413	156,960	$19,257	$0.1227	430	$574	$1.3344	44	20,590	$300	$218	$518	$0.01	$0.01	$0.03	$20,349
Apr	622	0	385	126,720	$16,528	$0.1304	380	$511	$1.3460	39	0	$0	$0	$0	$0.00	$0.00	$0.00	$17,040
May	379	11	348	113,760	$15,058	$0.1324	400	$518	$1.2949	41	0	$0	$0	$0	$0.00	$0.00	$0.00	$15,576
Jun	87	37	335	108,000	$14,917	$0.1381	390	$484	$1.2422	40	18,335	$548	$211	$759	$0.03	$0.01	$0.04	$16,160
Totals	**6,054**	**854**	**5,043**	**1,524,960**	**$191,432**	**$0.1255**	**4,400**	**$5,284**	**$1.2010**	**451**	**278,315**	**$6,625**	**$3,755**	**$10,380**	**$0.02**	**$0.01**	**$0.04**	**$207,096**

Fiscal Year 2015

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*							*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Water	$/CF Sewer	$/CF Total	$
Jul	0	266	325	91,440	$15,432	$0.1688	220	$310	$1.4083	23	0	$0	$0	$0	$0.00	$0.00	$0.00	$15,742
Aug	2	187	199	82,080	$13,679	$0.1667	230	$304	$1.3224	24	0	$0	$0	$0	$0.00	$0.00	$0.00	$13,983
Sep	33	152	357	91,440	$15,733	$0.1721	280	$357	$1.2756	29	139,225	$3,340	$2,013	$5,353	$0.02	$0.01	$0.04	$21,443
Oct	167	20	330	92,880	$15,468	$0.1665	340	$419	$1.2309	35	0	$0	$0	$0	$0.00	$0.00	$0.00	$15,887
Nov	518	1	349	119,520	$18,462	$0.1545	400	$446	$1.1145	41	0	$0	$0	$0	$0.00	$0.00	$0.00	$18,908
Dec	877	0	392	135,360	$20,699	$0.1529	400	$468	$1.1711	41	97,915	$2,262	$1,205	$3,467	$0.02	$0.01	$0.04	$24,634
Jan	1,188	0	391	163,440	$23,510	$0.1438	390	$470	$1.2059	40	0	$0	$0	$0	$0.00	$0.00	$0.00	$23,980
Feb	1,307	0	379	150,480	$21,815	$0.1450	400	$449	$1.1226	41	0	$0	$0	$0	$0.00	$0.00	$0.00	$22,264
Mar	1,086	0	377	136,080	$20,090	$0.1476	380	$402	$1.0586	39	17,625	$531	$221	$752	$0.03	$0.01	$0.04	$21,244
Apr	753	0	355	113,040	$17,555	$0.1553	360	$374	$1.0401	37	0	$0	$0	$0	$0.00	$0.00	$0.00	$17,930
May	241	46	319	99,360	$15,915	$0.1602	340	$332	$0.9779	35	0	$0	$0	$0	$0.00	$0.00	$0.00	$16,247
Jun	81	103	315	101,520	$16,185	$0.1594	360	$322	$0.8958	37	20,540	$598	$258	$856	$0.03	$0.01	$0.04	$17,364
Totals	**6,253**	**775**	**4,088**	**1,376,640**	**$214,542**	**$0.1558**	**4,100**	**$4,655**	**$1.1353**	**420**	**275,305**	**$6,732**	**$3,697**	**$10,429**	**$0.02**	**$0.01**	**$0.04**	**$229,626**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*							*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Water	$/CF Sewer	$/CF Total	$
Jul	0	281	672	96,480	$12,648	$0.1311	0	0.058917443	$1.2010	0	0	$0	$0	$0	$0.00	$0.00	$0.00	$12,648
Aug	21	200	199	80,640	$10,624	$0.1317	15	$19	$1.2010	2	0	$0	$0	$0	$0.00	$0.00	$0.00	$10,642
Sep	119	63	372	98,640	$13,635	$0.1382	87	$104	$1.2010	9	85,355	$2,096	$1,242	$3,338	$0.02	$0.01	$0.04	$17,077
Oct	409	0	302	99,360	$13,053	$0.1314	297	$357	$1.2010	30	0	$0	$0	$0	$0.00	$0.00	$0.00	$13,410
Nov	644	0	359	120,960	$14,872	$0.1229	468	$562	$1.2010	48	0	$0	$0	$0	$0.00	$0.00	$0.00	$15,434
Dec	1,114	0	369	176,400	$19,422	$0.1101	810	$973	$1.2010	83	154,035	$3,682	$2,083	$5,765	$0.02	$0.01	$0.04	$26,159
Jan	1,145	0	845	164,160	$19,837	$0.1208	832	$1,000	$1.2010	85	0	$0	$0	$0	$0.00	$0.00	$0.00	$20,837
Feb	1,007	0	444	182,880	$21,581	$0.1180	732	$879	$1.2010	75	0	$0	$0	$0	$0.00	$0.00	$0.00	$22,460
Mar	778	0	413	156,960	$19,257	$0.1227	565	$679	$1.2010	58	20,590	$300	$218	$518	$0.01	$0.01	$0.03	$20,454
Apr	450	1	385	126,720	$16,528	$0.1304	327	$393	$1.2010	34	0	$0	$0	$0	$0.00	$0.00	$0.00	$16,921
May	167	27	348	113,760	$15,058	$0.1324	122	$146	$1.2010	12	0	$0	$0	$0	$0.00	$0.00	$0.00	$15,204
Jun	65	133	335	108,000	$14,917	$0.1381	47	$56	$1.2010	5	18,335	$548	$211	$759	$0.03	$0.01	$0.04	$15,732
Totals	**5,920**	**706**	**5,043**	**1,524,960**	**$191,432**	**$0.1255**	**4,302**	**$5,167**	**$1.2010**	**441**	**278,315**	**$6,625**	**$3,755**	**$10,380**	**$0.02**	**$0.01**	**$0.04**	**$206,979**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*							*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Water	$/CF Sewer	$/CF Total	$
Jul	0	281	325	91,440	$15,432	$0.1688	0	0.050249016	$1.1353	0	0	$0	$0	$0	$0.00	$0.00	$0.00	$15,432
Aug	21	200	199	82,080	$13,679	$0.1667	14	$16	$1.1353	1	0	$0	$0	$0	$0.00	$0.00	$0.00	$13,695
Sep	119	63	357	91,440	$15,733	$0.1721	78	$89	$1.1353	8	139,225	$3,340	$2,013	$5,353	$0.02	$0.01	$0.04	$21,175
Oct	409	0	330	92,880	$15,468	$0.1665	268	$304	$1.1353	27	0	$0	$0	$0	$0.00	$0.00	$0.00	$15,772
Nov	644	0	349	119,520	$18,462	$0.1545	422	$480	$1.1353	43	0	$0	$0	$0	$0.00	$0.00	$0.00	$18,942
Dec	1,114	0	392	135,360	$20,699	$0.1529	731	$830	$1.1353	75	97,915	$2,262	$1,205	$3,467	$0.02	$0.01	$0.04	$24,995
Jan	1,145	0	391	163,440	$23,510	$0.1438	751	$853	$1.1353	77	0	$0	$0	$0	$0.00	$0.00	$0.00	$24,362
Feb	1,007	0	379	150,480	$21,815	$0.1450	660	$749	$1.1353	68	0	$0	$0	$0	$0.00	$0.00	$0.00	$22,564
Mar	778	0	377	136,080	$20,090	$0.1476	510	$579	$1.1353	52	17,625	$531	$221	$752	$0.03	$0.01	$0.04	$21,421
Apr	450	1	355	113,040	$17,555	$0.1553	295	$335	$1.1353	30	0	$0	$0	$0	$0.00	$0.00	$0.00	$17,890
May	167	27	319	99,360	$15,915	$0.1602	110	$125	$1.1353	11	0	$0	$0	$0	$0.00	$0.00	$0.00	$16,039
Jun	65	133	315	101,520	$16,185	$0.1594	42	$48	$1.1353	4	20,540	$598	$258	$856	$0.03	$0.01	$0.04	$17,090
Totals	**5,920**	**706**	**4,088**	**1,376,640**	**$214,542**	**$0.1558**	**3,882**	**$4,407**	**$1.1353**	**398**	**275,305**	**$6,732**	**$3,697**	**$10,429**	**$0.02**	**$0.01**	**$0.04**	**$229,377**

City of Bristol, CT

Utility Data Summary

1.000	CCF

Green-Hills K8 School

Delivery: **Delivery:** Eversource
Account #: **Account #:** 57772606091
Meter #: **Meter #:** 0525834
Tariff Rate: **Tariff Rate:** R30
Supplier: **Supplier:** Eversource

Water Service: Bristol Water Department
Account #: 02-07377000
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	2	324	360	$514	$1.4269	37	12,200	$406	$292	$698	$0.06	$1,212
Aug	0	171	360	$512	$1.4226	37	0	$0	$0	$0	$0.00	$512
Sep	99	40	460	$617	$1.3422	47	0	$0	$0	$0	$0.00	$617
Oct	310	0	520	$657	$1.2642	53	89,855	$2,248	$1,213	$3,461	$0.04	$4,118
Nov	663	0	510	$667	$1.3070	52	0	$0	$0	$0	$0.00	$667
Dec	1,001	0	430	$656	$1.5255	44	0	$0	$0	$0	$0.00	$656
Jan	1,206	0	510	$741	$1.4533	52	32,220	$916	$378	$1,294	$0.04	$2,035
Feb	1,056	0	490	$739	$1.5071	50	0	$0	$0	$0	$0.00	$739
Mar	1,007	0	540	$807	$1.4944	55	0	$0	$0	$0	$0.00	$807
Apr	508	0	410	$697	$1.7001	42	22,745	$697	$223	$921	$0.04	$1,618
May	191	0	410	$682	$1.6638	42	0	$0	$0	$0	$0.00	$682
Jun	11	0	340	$608	$1.7878	35	0	$0	$0	$0	$0.00	$608
Totals	**6,054**	**535**	**5,340**	**$7,897**	**$1.4788**	**547**	**157,020**	**$4,267**	**$2,106**	**$6,373**	**$0.04**	**$14,270**

Fiscal Year 2015

	Weather		*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	0	260	$536	$2.0623	27	55,650	$1,458	$727	$2,185	$0.04	$2,721
Aug	2	0	270	$526	$1.9466	28	0	$0	$0	$0	$0.00	$526
Sep	79	0	440	$645	$1.4659	45	0	$0	$0	$0	$0.00	$645
Oct	282	0	470	$567	$1.2063	48	11,760	$444	$179	$623	$0.05	$1,190
Nov	720	0	460	$529	$1.1493	47	0	$0	$0	$0	$0.00	$529
Dec	896	0	520	$599	$1.1522	53	0	$0	$0	$0	$0.00	$599
Jan	1,243	0	650	$747	$1.1499	67	25,865	$769	$293	$1,062	$0.04	$1,810
Feb	1,354	0	530	$614	$1.1581	54	0	$0	$0	$0	$0.00	$614
Mar	1,019	0	600	$620	$1.0333	62	0	$0	$0	$0	$0.00	$620
Apr	511	0	480	$529	$1.1022	49	21,650	$672	$237	$909	$0.04	$1,438
May	99	0	370	$434	$1.1739	38	0	$0	$0	$0	$0.00	$434
Jun	54	0	230	$348	$1.5110	24	0	$0	$0	$0	$0.00	$348
Totals	**6,259**	**0**	**5,280**	**$6,694**	**$1.2677**	**541**	**114,925**	**$3,343**	**$1,436**	**$4,779**	**$0.04**	**$11,473**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	0	0.088048142	$1.4788	0	12,200	$406	$292	$698	$0.06	$698
Aug	21	200	19	$28	$1.4788	2	0	$0	$0	$0	$0.00	$28
Sep	119	63	105	$156	$1.4788	11	0	$0	$0	$0	$0.00	$156
Oct	409	0	361	$533	$1.4788	37	89,855	$2,248	$1,213	$3,461	$0.04	$3,994
Nov	644	0	568	$840	$1.4788	58	0	$0	$0	$0	$0.00	$840
Dec	1,114	0	983	$1,454	$1.4788	101	0	$0	$0	$0	$0.00	$1,454
Jan	1,145	0	1,010	$1,494	$1.4788	104	32,220	$916	$378	$1,294	$0.04	$2,788
Feb	1,007	0	888	$1,313	$1.4788	91	0	$0	$0	$0	$0.00	$1,313
Mar	778	0	686	$1,014	$1.4788	70	0	$0	$0	$0	$0.00	$1,014
Apr	450	1	397	$587	$1.4788	41	22,745	$697	$223	$921	$0.04	$1,508
May	167	27	148	$218	$1.4788	15	0	$0	$0	$0	$0.00	$218
Jun	65	133	57	$84	$1.4788	6	0	$0	$0	$0	$0.00	$84
Totals	**5,920**	**706**	**5,222**	**$7,722**	**$1.4788**	**535**	**157,020**	**$4,267**	**$2,106**	**$6,373**	**$0.04**	**$14,095**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	0	0.072187147	$1.2677	0	55,650	$1,458	$727	$2,185	$0.04	$2,185
Aug	21	200	18	$23	$1.2677	2	0	$0	$0	$0	$0.00	$23
Sep	119	63	101	$128	$1.2677	10	0	$0	$0	$0	$0.00	$128
Oct	409	0	345	$437	$1.2677	35	11,760	$444	$179	$623	$0.05	$1,060
Nov	644	0	543	$689	$1.2677	56	0	$0	$0	$0	$0.00	$689
Dec	1,114	0	940	$1,192	$1.2677	96	0	$0	$0	$0	$0.00	$1,192
Jan	1,145	0	966	$1,225	$1.2677	99	25,865	$769	$293	$1,062	$0.04	$2,287
Feb	1,007	0	849	$1,077	$1.2677	87	0	$0	$0	$0	$0.00	$1,077
Mar	778	0	656	$832	$1.2677	67	0	$0	$0	$0	$0.00	$832
Apr	450	1	380	$481	$1.2677	39	21,650	$672	$237	$909	$0.04	$1,390
May	167	27	141	$179	$1.2677	14	0	$0	$0	$0	$0.00	$179
Jun	65	133	55	$69	$1.2677	6	0	$0	$0	$0	$0.00	$69
Totals	**5,920**	**706**	**4,994**	**$6,331**	**$1.2677**	**512**	**114,925**	**$3,343**	**$1,436**	**$4,779**	**$0.04**	**$11,110**

City of Bristol, CT

Utility Data Summary

Ellen P. Hubbell Elementary School

Delivery: Eversource
Account #: 51271853053
Meter #: 890404262
Tariff Rate: Rate 030
Supplier: Constellation Energy Services

Supplier East River Energy
Account #: N/A

Water Service: Bristol Water Department
Account #: 02-09571000
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	2	329	74	15,920	$2,728	$0.1714	0	$0	$0.0000	0	19,200	$568	$432	$1,000	$0.05	$3,728
Aug	0	288	34	10,880	$1,673	$0.1538	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$1,673
Sep	99	188	82	17,120	$3,002	$0.1754	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$3,002
Oct	310	10	74	19,520	$3,165	$0.1621	0	$0	$0.0000	0	7,450	$296	$197	$494	$0.07	$3,659
Nov	663	0	93	25,920	$4,121	$0.1590	2,500	$7,642	$3.0569	347	0	$0	$0	$0	$0.00	$11,764
Dec	1,001	0	91	27,680	$4,290	$0.1550	4,362	$13,334	$3.0569	605	0	$0	$0	$0	$0.00	$17,624
Jan	1,206	0	89	28,160	$4,404	$0.1564	5,982	$18,287	$3.0569	830	17,900	$537	$406	$944	$0.05	$23,635
Feb	1,056	0	92	27,280	$4,371	$0.1602	2,599	$8,804	$3.3870	361	0	$0	$0	$0	$0.00	$13,175
Mar	1,007	0	93	25,840	$4,211	$0.1629	5,870	$19,265	$3.2819	814	0	$0	$0	$0	$0.00	$23,475
Apr	508	0	95	28,000	$4,484	$0.1601	0	$0	$0.0000	0	13,250	$430	$313	$743	$0.06	$5,227
May	191	9	91	25,760	$4,170	$0.1619	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$4,170
Jun	11	32	77	20,720	$3,404	$0.1643	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$3,404
Totals	**6,054**	**856**	**985**	**272,800**	**$44,024**	**$0.1614**	**21,314**	**$67,332**	**$3.1591**	**2,956**	**57,800**	**$1,831**	**$1,349**	**$3,180**	**$0.06**	**$114,536**

Fiscal Year 2015

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	246	66	13,280	$2,542	$0.1914	0	$0	$0.0000	0	16,850	$513	$409	$922	$0.05	$3,464
Aug	2	200	27	9,680	$1,573	$0.1625	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$1,573
Sep	79	166	74	18,880	$3,311	$0.1754	3,020	$9,156	$3.0323	419	0	$0	$0	$0	$0.00	$12,467
Oct	282	12	85	21,120	$3,726	$0.1764	0	$0	$0.0000	0	7,400	$295	$209	$504	$0.07	$4,230
Nov	720	9	97	30,560	$5,068	$0.1659	2,800	$8,490	$3.0323	388	0	$0	$0	$0	$0.00	$13,559
Dec	896	0	97	31,120	$5,140	$0.1652	6,710	$20,347	$3.0323	931	0	$0	$0	$0	$0.00	$25,487
Jan	1,243	0	90	27,840	$4,618	$0.1659	6,000	$18,194	$3.0323	832	18,400	$549	$442	$991	$0.05	$23,803
Feb	1,354	0	96	27,920	$4,705	$0.1685	6,000	$18,194	$3.0323	832	0	$0	$0	$0	$0.00	$22,898
Mar	1,019	0	100	28,880	$4,868	$0.1685	3,000	$9,097	$3.0323	416	0	$0	$0	$0	$0.00	$13,965
Apr	511	0	89	29,840	$4,786	$0.1604	0	$0	$0.0000	0	13,400	$434	$336	$770	$0.06	$5,556
May	99	38	86	23,200	$4,021	$0.1733	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$4,021
Jun	54	77	76	21,680	$3,682	$0.1698	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$3,682
Totals	**6,259**	**748**	**983**	**284,000**	**$48,038**	**$0.1691**	**27,530**	**$83,478**	**$3.0323**	**3,818**	**56,050**	**$1,791**	**$1,397**	**$3,188**	**$0.06**	**$134,704**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	74	15,920	$2,728	$0.1714	0	$1	$3.1591	0	19,200	$568	$432	$1,000	$0.05	$3,729
Aug	21	200	34	10,880	$1,673	$0.1538	75	$236	$3.1591	10	0	$0	$0	$0	$0.00	$1,909
Sep	119	63	82	17,120	$3,002	$0.1754	421	$1,329	$3.1591	58	0	$0	$0	$0	$0.00	$4,331
Oct	409	0	74	19,520	$3,165	$0.1621	1,439	$4,546	$3.1591	200	7,450	$296	$197	$494	$0.07	$8,204
Nov	644	0	93	25,920	$4,121	$0.1590	2,268	$7,164	$3.1591	315	0	$0	$0	$0	$0.00	$11,286
Dec	1,114	0	91	27,680	$4,290	$0.1550	3,924	$12,395	$3.1591	544	0	$0	$0	$0	$0.00	$16,684
Jan	1,145	0	89	28,160	$4,404	$0.1564	4,032	$12,737	$3.1591	559	17,900	$537	$406	$944	$0.05	$18,085
Feb	1,007	0	92	27,280	$4,371	$0.1602	3,544	$11,197	$3.1591	492	0	$0	$0	$0	$0.00	$15,568
Mar	778	0	93	25,840	$4,211	$0.1629	2,738	$8,649	$3.1591	380	0	$0	$0	$0	$0.00	$12,860
Apr	450	1	95	28,000	$4,484	$0.1601	1,584	$5,005	$3.1591	220	13,250	$430	$313	$743	$0.06	$10,232
May	167	27	91	25,760	$4,170	$0.1619	589	$1,861	$3.1591	82	0	$0	$0	$0	$0.00	$6,031
Jun	65	133	77	20,720	$3,404	$0.1643	228	$719	$3.1591	32	0	$0	$0	$0	$0.00	$4,123
Totals	**5,920**	**706**	**985**	**272,800**	**$44,024**	**$0.1614**	**20,841**	**$65,840**	**$3.1591**	**2,891**	**57,800**	**$1,831**	**$1,349**	**$3,180**	**$0.06**	**$113,043**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	66	13,280	$2,542	$0.1914	0	$1	$3.0323	0	16,850	$513	$409	$922	$0.05	$3,465
Aug	21	200	27	9,680	$1,573	$0.1625	93	$283	$3.0323	13	0	$0	$0	$0	$0.00	$1,857
Sep	119	63	74	18,880	$3,311	$0.1754	526	$1,594	$3.0323	73	0	$0	$0	$0	$0.00	$4,905
Oct	409	0	85	21,120	$3,726	$0.1764	1,798	$5,451	$3.0323	249	7,400	$295	$209	$504	$0.07	$9,681
Nov	644	0	97	30,560	$5,068	$0.1659	2,833	$8,591	$3.0323	393	0	$0	$0	$0	$0.00	$13,660
Dec	1,114	0	97	31,120	$5,140	$0.1652	4,902	$14,864	$3.0323	680	0	$0	$0	$0	$0.00	$20,004
Jan	1,145	0	90	27,840	$4,618	$0.1659	5,037	$15,274	$3.0323	699	18,400	$549	$442	$991	$0.05	$20,883
Feb	1,007	0	96	27,920	$4,705	$0.1685	4,428	$13,428	$3.0323	614	0	$0	$0	$0	$0.00	$18,132
Mar	778	0	100	28,880	$4,868	$0.1685	3,421	$10,372	$3.0323	474	0	$0	$0	$0	$0.00	$15,240
Apr	450	1	89	29,840	$4,786	$0.1604	1,979	$6,002	$3.0323	275	13,400	$434	$336	$770	$0.06	$11,558
May	167	27	86	23,200	$4,021	$0.1733	736	$2,231	$3.0323	102	0	$0	$0	$0	$0.00	$6,252
Jun	65	133	76	21,680	$3,682	$0.1698	284	$862	$3.0323	39	0	$0	$0	$0	$0.00	$4,544
Totals	**5,920**	**706**	**983**	**284,000**	**$48,038**	**$0.1691**	**26,038**	**$78,954**	**$3.0323**	**3,611**	**56,050**	**$1,791**	**$1,397**	**$3,188**	**$0.06**	**$130,180**

AMERESCO

City of Bristol, CT

Utility Data Summary

Stafford Elementary School

1.000	CCF

Delivery: Eversource
Account #: 51611063033
Meter #: 893725692
Tariff Rate: Rate 040
Supplier: Constellation Energy Services

Supplier East River Energy
Account #: N/A

Delivery: Eversource
Account #: 57651080087
Meter #: 0491647
Tariff Rate: R10
Supplier: Eversource

Water Service: Bristol Water Department
Account #: 03-06387000
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*#2 Fuel Oil*			*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	13	282	94	17,797	$2,723	$0.1530	0	$0	$0.0000	20	$59	$2.9525	2	0	$0	$0	$0	$0.00	$2,782
Aug	2	324	66	12,387	$1,933	$0.1560	0	$0	$0.0000	0	$51	$0.0000	0	20,500	$598	$458	$1,055	$0.05	$3,040
Sep	14	171	101	16,464	$2,553	$0.1551	0	$0	$0.0000	29	$63	$2.1583	3	0	$0	$0	$0	$0.00	$2,616
Oct	110	40	91	18,346	$2,840	$0.1548	0	$0	$0.0000	53	$72	$1.3592	5	0	$0	$0	$0	$0.00	$2,912
Nov	399	0	82	21,246	$3,281	$0.1544	7,791	$23,816	$3.0569	59	$74	$1.2559	1,087	12,350	$409	$295	$705	$0.06	$27,876
Dec	837	0	85	25,166	$3,878	$0.1541	4,200	$12,839	$3.0569	67	$83	$1.2454	589	0	$0	$0	$0	$0.00	$16,800
Jan	1,154	0	81	20,149	$3,167	$0.1572	11,020	$33,687	$3.0569	54	$80	$1.4794	1,534	0	$0	$0	$0	$0.00	$36,934
Feb	1,137	0	83	21,482	$3,398	$0.1582	6,502	$22,192	$3.4131	65	$85	$1.3009	908	43,650	$1,132	$920	$2,052	$0.05	$27,727
Mar	1,104	0	82	21,246	$3,361	$0.1582	5,384	$18,107	$3.3630	65	$85	$1.3009	753	0	$0	$0	$0	$0.00	$21,552
Apr	759	0	88	21,482	$3,398	$0.1582	0	$0	$0.0000	66	$85	$1.2877	7	0	$0	$0	$0	$0.00	$3,483
May	435	0	87	21,090	$3,337	$0.1582	0	$0	$0.0000	63	$84	$1.3287	6	46,050	$1,161	$968	$2,129	$0.05	$5,549
Jun	102	36	90	22,109	$3,496	$0.1581	0	$0	$0.0000	64	$84	$1.3145	7	0	$0	$0	$0	$0.00	$3,580
Totals	**6,066**	**853**	**1,030**	**238,964**	**$37,365**	**$0.1564**	**34,897**	**$110,641**	**$3.1705**	**605**	**$904**	**$1.4946**	**4,902**	**122,550**	**$3,300**	**$2,641**	**$5,941**	**$0.05**	**$154,851**

Fiscal Year 2015

	Weather		*Electric*				*#2 Fuel Oil*			*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	1	203	94	16,464	$2,816	$0.1710	0	$0	$0.0000	12	$23	$1.9300	1	0	$0	$0	$0	$0.00	$2,839
Aug	0	234	53	12,230	$2,061	$0.1685	0	$0	$0.0000	0	$56	$0.0000	0	25,600	$715	$594	$1,310	$0.05	$3,427
Sep	4	174	101	16,542	$2,771	$0.1675	0	$0	$0.0000	25	$83	$3.3008	3	0	$0	$0	$0	$0.00	$2,854
Oct	129	17	86	18,581	$3,107	$0.1672	0	$0	$0.0000	60	$120	$1.9973	6	0	$0	$0	$0	$0.00	$3,227
Nov	358	10	86	22,501	$3,752	$0.1668	5,655	$17,148	$3.0323	77	$127	$1.6534	792	13,500	$436	$338	$774	$0.06	$21,801
Dec	887	0	88	23,520	$3,920	$0.1667	10,199	$30,926	$3.0323	68	$122	$1.7990	1,422	0	$0	$0	$0	$0.00	$34,969
Jan	1,089	0	86	21,090	$3,531	$0.1674	10,570	$32,052	$3.0323	60	$116	$1.9370	1,472	0	$0	$0	$0	$0.00	$35,699
Feb	1,264	0	86	20,854	$3,511	$0.1684	6,272	$19,019	$3.0323	74	$126	$1.6974	878	42,150	$1,098	$945	$2,042	$0.05	$24,698
Mar	1,262	0	87	22,109	$3,720	$0.1682	13,136	$39,832	$3.0323	69	$116	$1.6796	1,829	0	$0	$0	$0	$0.00	$43,668
Apr	835	0	86	22,971	$3,862	$0.1681	0	$0	$0.0000	74	$118	$1.5957	8	0	$0	$0	$0	$0.00	$3,980
May	323	21	85	21,168	$3,564	$0.1683	0	$0	$0.0000	64	$104	$1.6259	7	38,450	$1,012	$866	$1,878	$0.05	$5,546
Jun	101	78	93	23,128	$3,888	$0.1681	0	$0	$0.0000	73	$107	$1.4610	7	0	$0	$0	$0	$0.00	$3,995
Totals	**6,253**	**737**	**1,031**	**241,158**	**$40,502**	**$0.1679**	**45,832**	**$138,977**	**$3.0323**	**656**	**$1,218**	**$1.8562**	**6,424**	**119,700**	**$3,261**	**$2,744**	**$6,005**	**$0.05**	**$186,702**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	94	17,797	$2,723	$0.1530	0	$1	$3.1705	0	0.01006224	$1.4946	0	0	$0	$0	$0	$0.00	$2,724
Aug	21	200	66	12,387	$1,933	$0.1560	122	$388	$3.1705	2	$3	$1.4946	17	20,500	$598	$458	$1,055	$0.05	$3,379
Sep	119	63	101	16,464	$2,553	$0.1551	687	$2,179	$3.1705	12	$18	$1.4946	97	0	$0	$0	$0	$0.00	$4,751
Oct	409	0	91	18,346	$2,840	$0.1548	2,351	$7,455	$3.1705	41	$61	$1.4946	330	0	$0	$0	$0	$0.00	$10,356
Nov	644	0	82	21,246	$3,281	$0.1544	3,706	$11,749	$3.1705	64	$96	$1.4946	521	12,350	$409	$295	$705	$0.06	$15,831
Dec	1,114	0	85	25,166	$3,878	$0.1541	6,411	$20,327	$3.1705	111	$166	$1.4946	901	0	$0	$0	$0	$0.00	$24,371
Jan	1,145	0	81	20,149	$3,167	$0.1572	6,588	$20,888	$3.1705	114	$171	$1.4946	926	0	$0	$0	$0	$0.00	$24,226
Feb	1,007	0	83	21,482	$3,398	$0.1582	5,792	$18,363	$3.1705	100	$150	$1.4946	814	43,650	$1,132	$920	$2,052	$0.05	$23,963
Mar	778	0	82	21,246	$3,361	$0.1582	4,474	$14,185	$3.1705	78	$116	$1.4946	628	0	$0	$0	$0	$0.00	$17,662
Apr	450	1	88	21,482	$3,398	$0.1582	2,589	$8,208	$3.1705	45	$67	$1.4946	364	0	$0	$0	$0	$0.00	$11,673
May	167	27	87	21,090	$3,337	$0.1582	962	$3,052	$3.1705	17	$25	$1.4946	135	46,050	$1,161	$968	$2,129	$0.05	$8,542
Jun	65	133	90	22,109	$3,496	$0.1581	372	$1,179	$3.1705	6	$10	$1.4946	52	0	$0	$0	$0	$0.00	$4,685
Totals	**5,920**	**706**	**1,030**	**238,964**	**$37,365**	**$0.1564**	**34,056**	**$107,974**	**$3.1705**	**590**	**$882**	**$1.4946**	**4,784**	**122,550**	**$3,300**	**$2,641**	**$5,941**	**$0.05**	**$152,163**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	94	16,464	$2,816	$0.1710	0	$2	$3.0323	0	0.013144311	$1.8562	0	0	$0	$0	$0	$0.00	$2,817
Aug	21	200	53	12,230	$2,061	$0.1685	156	$472	$3.0323	2	$4	$1.8562	22	25,600	$715	$594	$1,310	$0.05	$3,847
Sep	119	63	101	16,542	$2,771	$0.1675	876	$2,656	$3.0323	13	$23	$1.8562	123	0	$0	$0	$0	$0.00	$5,450
Oct	409	0	86	18,581	$3,107	$0.1672	2,996	$9,084	$3.0323	43	$80	$1.8562	420	0	$0	$0	$0	$0.00	$12,270
Nov	644	0	86	22,501	$3,752	$0.1668	4,721	$14,317	$3.0323	68	$125	$1.8562	662	13,500	$436	$338	$774	$0.06	$18,969
Dec	1,114	0	88	23,520	$3,920	$0.1667	8,169	$24,769	$3.0323	117	$217	$1.8562	1,145	0	$0	$0	$0	$0.00	$28,906
Jan	1,145	0	86	21,090	$3,531	$0.1674	8,394	$25,454	$3.0323	120	$223	$1.8562	1,177	0	$0	$0	$0	$0.00	$29,208
Feb	1,007	0	86	20,854	$3,511	$0.1684	7,379	$22,376	$3.0323	106	$196	$1.8562	1,034	42,150	$1,098	$945	$2,042	$0.05	$28,126
Mar	778	0	87	22,109	$3,720	$0.1682	5,700	$17,285	$3.0323	82	$151	$1.8562	799	0	$0	$0	$0	$0.00	$21,156
Apr	450	1	86	22,971	$3,862	$0.1681	3,298	$10,002	$3.0323	47	$88	$1.8562	462	0	$0	$0	$0	$0.00	$13,952
May	167	27	85	21,168	$3,564	$0.1683	1,226	$3,718	$3.0323	18	$33	$1.8562	172	38,450	$1,012	$866	$1,878	$0.05	$9,193
Jun	65	133	93	23,128	$3,888	$0.1681	474	$1,437	$3.0323	7	$13	$1.8562	66	0	$0	$0	$0	$0.00	$5,338
Totals	**5,920**	**706**	**1,031**	**241,158**	**$40,502**	**$0.1679**	**43,390**	**$131,571**	**$3.0323**	**621**	**$1,153**	**$1.8562**	**6,082**	**119,700**	**$3,261**	**$2,744**	**$6,005**	**$0.05**	**$179,231**

City of Bristol, CT

Utility Data Summary

Ivy Drive Elementary School

1.000	CCF

Delivery: Eversource
Account #: 51005063060
Meter #: 89058934
Tariff Rate: Rate 040
Supplier: Constellation Energy Services

Supplier
Delivery: Eversource
Account #: 57727080012
Meter #: 465768
Tariff Rate: R30
Supplier: Eversource

Water Service: Bristol Water Department
Account #: 03-11303000
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	2	282	237	45,300	$6,857	$0.1514	140	$1,339	$9.5677	14	0	$0	$0	$0	$0.00	$8,196
Aug	0	324	239	49,200	$7,536	$0.1532	170	$1,342	$7.8958	17	11,300	$385	$274	$659	$0.06	$9,538
Sep	99	171	213	45,600	$6,988	$0.1533	300	$1,355	$4.5150	31	0	$0	$0	$0	$0.00	$8,343
Oct	310	40	260	37,800	$5,801	$0.1535	810	$1,402	$1.7313	83	0	$0	$0	$0	$0.00	$7,203
Nov	663	0	140	24,900	$3,838	$0.1541	4,020	$1,643	$0.4088	412	9,150	$335	$231	$567	$0.06	$6,048
Dec	1,001	0	140	35,100	$5,390	$0.1536	4,490	$1,667	$0.3713	460	0	$0	$0	$0	$0.00	$7,057
Jan	1,206	0	124	28,200	$4,413	$0.1565	8,580	$2,731	$0.3183	879	0	$0	$0	$0	$0.00	$7,144
Feb	1,056	0	125	38,400	$6,037	$0.1572	6,300	$2,548	$0.4044	646	13,100	$427	$310	$737	$0.06	$9,321
Mar	1,007	0	132	33,900	$5,335	$0.1574	5,420	$2,477	$0.4570	556	0	$0	$0	$0	$0.00	$7,812
Apr	508	0	141	32,700	$5,148	$0.1574	2,420	$2,233	$0.9225	248	0	$0	$0	$0	$0.00	$7,380
May	191	0	138	33,600	$5,288	$0.1574	620	$2,007	$3.2377	64	13,350	$432	$315	$748	$0.06	$8,043
Jun	11	36	208	41,700	$6,551	$0.1571	170	$1,951	$11.4769	17	0	$0	$0	$0	$0.00	$8,503
Totals	**6,054**	**853**	**2,097**	**446,400**	**$69,182**	**$0.1550**	**33,440**	**$22,696**	**$0.6787**	**3,428**	**46,900**	**$1,579**	**$1,131**	**$2,711**	**$0.06**	**$94,588**

Fiscal Year 2015

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	203	209	35,700	$6,050	$0.1695	70	$1,976	$28.2224	7	0	$0	$0	$0	$0.00	$8,025
Aug	2	234	172	45,900	$7,604	$0.1657	160	$2,024	$12.6514	16	13,700	$440	$343	$783	$0.06	$10,412
Sep	79	174	242	51,900	$8,592	$0.1656	230	$2,076	$9.0240	24	0	$0	$0	$0	$0.00	$10,668
Oct	282	17	193	35,400	$5,876	$0.1660	1,130	$2,675	$2.3675	116	0	$0	$0	$0	$0.00	$8,551
Nov	720	10	185	36,600	$6,073	$0.1659	3,290	$3,845	$1.1686	337	13,100	$427	$330	$757	$0.06	$10,675
Dec	896	0	145	32,100	$5,332	$0.1661	4,480	$4,751	$1.0605	459	0	$0	$0	$0	$0.00	$10,083
Jan	1,243	0	132	30,600	$5,101	$0.1667	8,130	$6,761	$0.8316	833	0	$0	$0	$0	$0.00	$11,862
Feb	1,354	0	130	40,800	$6,818	$0.1671	7,940	$6,061	$0.7633	814	11,950	$400	$306	$706	$0.06	$13,584
Mar	1,019	0	126	38,400	$6,420	$0.1672	4,900	$3,994	$0.8150	502	0	$0	$0	$0	$0.00	$10,414
Apr	511	0	129	32,700	$5,475	$0.1674	2,610	$2,780	$1.0653	268	0	$0	$0	$0	$0.00	$8,256
May	99	21	193	33,900	$5,674	$0.1674	400	$1,642	$4.1059	41	14,750	$465	$365	$830	$0.06	$8,146
Jun	54	78	231	45,900	$7,663	$0.1670	240	$1,559	$6.4963	25	0	$0	$0	$0	$0.00	$9,222
Totals	**6,259**	**737**	**2,087**	**459,900**	**$76,679**	**$0.1667**	**33,580**	**$40,144**	**$1.1955**	**3,442**	**53,500**	**$1,732**	**$1,343**	**$3,075**	**$0.06**	**$119,897**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	237	45,300	$6,857	$0.1514	0	0.253050743	$0.6787	0	0	$0	$0	$0	$0.00	$6,857
Aug	21	200	239	49,200	$7,536	$0.1532	117	$80	$0.6787	12	11,300	$385	$274	$659	$0.06	$8,275
Sep	119	63	213	45,600	$6,988	$0.1533	660	$448	$0.6787	68	0	$0	$0	$0	$0.00	$7,436
Oct	409	0	260	37,800	$5,801	$0.1535	2,258	$1,532	$0.6787	231	0	$0	$0	$0	$0.00	$7,333
Nov	644	0	140	24,900	$3,838	$0.1541	3,558	$2,415	$0.6787	365	9,150	$335	$231	$567	$0.06	$6,819
Dec	1,114	0	140	35,100	$5,390	$0.1536	6,156	$4,178	$0.6787	631	0	$0	$0	$0	$0.00	$9,568
Jan	1,145	0	124	28,200	$4,413	$0.1565	6,326	$4,293	$0.6787	648	0	$0	$0	$0	$0.00	$8,707
Feb	1,007	0	125	38,400	$6,037	$0.1572	5,561	$3,774	$0.6787	570	13,100	$427	$310	$737	$0.06	$10,548
Mar	778	0	132	33,900	$5,335	$0.1574	4,296	$2,915	$0.6787	440	0	$0	$0	$0	$0.00	$8,250
Apr	450	1	141	32,700	$5,148	$0.1574	2,486	$1,687	$0.6787	255	0	$0	$0	$0	$0.00	$6,835
May	167	27	138	33,600	$5,288	$0.1574	924	$627	$0.6787	95	13,350	$432	$315	$748	$0.06	$6,663
Jun	65	133	208	41,700	$6,551	$0.1571	357	$242	$0.6787	37	0	$0	$0	$0	$0.00	$6,794
Totals	**5,920**	**706**	**2,097**	**446,400**	**$69,182**	**$0.1550**	**32,699**	**$22,193**	**$0.6787**	**3,352**	**46,900**	**$1,579**	**$1,131**	**$2,711**	**$0.06**	**$94,085**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	209	35,700	$6,050	$0.1695	0	0.432927357	$1.1955	0	0	$0	$0	$0	$0.00	$6,050
Aug	21	200	172	45,900	$7,604	$0.1657	114	$136	$1.1955	12	13,700	$440	$343	$783	$0.06	$8,524
Sep	119	63	242	51,900	$8,592	$0.1656	641	$766	$1.1955	66	0	$0	$0	$0	$0.00	$9,359
Oct	409	0	193	35,400	$5,876	$0.1660	2,193	$2,621	$1.1955	225	0	$0	$0	$0	$0.00	$8,497
Nov	644	0	185	36,600	$6,073	$0.1659	3,456	$4,131	$1.1955	354	13,100	$427	$330	$757	$0.06	$10,961
Dec	1,114	0	145	32,100	$5,332	$0.1661	5,979	$7,148	$1.1955	613	0	$0	$0	$0	$0.00	$12,480
Jan	1,145	0	132	30,600	$5,101	$0.1667	6,144	$7,345	$1.1955	630	0	$0	$0	$0	$0.00	$12,446
Feb	1,007	0	130	40,800	$6,818	$0.1671	5,401	$6,457	$1.1955	554	11,950	$400	$306	$706	$0.06	$13,981
Mar	778	0	126	38,400	$6,420	$0.1672	4,172	$4,988	$1.1955	428	0	$0	$0	$0	$0.00	$11,408
Apr	450	1	129	32,700	$5,475	$0.1674	2,414	$2,886	$1.1955	247	0	$0	$0	$0	$0.00	$8,361
May	167	27	193	33,900	$5,674	$0.1674	898	$1,073	$1.1955	92	14,750	$465	$365	$830	$0.06	$7,577
Jun	65	133	231	45,900	$7,663	$0.1670	347	$415	$1.1955	36	0	$0	$0	$0	$0.00	$8,078
Totals	**5,920**	**706**	**2,087**	**459,900**	**$76,679**	**$0.1667**	**31,760**	**$37,968**	**$1.1955**	**3,255**	**53,500**	**$1,732**	**$1,343**	**$3,075**	**$0.06**	**$117,722**

City of Bristol, CT

Utility Data Summary

Edgewood Elementary School

Delivery: Eversource
Account #: 51797063070
Meter #: 890588122
Tariff Rate: Rate 030
Supplier: Constellation Energy Services

Supplier East River Energy
Account #: N/A

Water Service: Bristol Water Department
Account #: 03-08218000
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	2	282	54	8,640	$1,656	$0.1917	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$1,656
Aug	0	324	19	4,320	$746	$0.1728	0	$0	$0.0000	0	13,250	$430	$313	$743	$0.06	$1,490
Sep	99	171	58	9,760	$1,865	$0.1911	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$1,865
Oct	310	40	55	11,520	$2,020	$0.1754	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$2,020
Nov	663	0	63	12,480	$2,231	$0.1788	0	$0	$0.0000	0	6,650	$278	$181	$459	$0.07	$2,690
Dec	1,001	0	64	15,040	$2,535	$0.1685	4,140	$12,656	$3.0569	574	0	$0	$0	$0	$0.00	$15,190
Jan	1,206	0	79	13,760	$2,610	$0.1897	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$2,610
Feb	1,056	0	78	15,360	$2,795	$0.1820	5,027	$15,974	$3.1780	697	11,800	$397	$284	$681	$0.06	$19,450
Mar	1,007	0	76	15,200	$2,752	$0.1811	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$2,752
Apr	508	0	68	14,400	$2,548	$0.1770	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$2,548
May	191	0	64	12,000	$2,217	$0.1847	0	$0	$0.0000	0	10,850	$375	$265	$640	$0.06	$2,857
Jun	11	36	59	12,640	$2,234	$0.1768	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$2,234
Totals	**6,054**	**853**	**736**	**145,120**	**$26,210**	**$0.1806**	**9,167**	**$28,630**	**$3.1233**	**1,271**	**42,550**	**$1,479**	**$1,044**	**$2,523**	**$0.06**	**$57,363**

Fiscal Year 2015

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	203	60	7,200	$1,692	$0.2350	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$1,692
Aug	2	234	24	4,960	$938	$0.1891	0	$0	$0.0000	0	13,500	$436	$338	$774	$0.06	$1,712
Sep	79	174	60	9,120	$1,898	$0.2081	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$1,898
Oct	282	17	61	12,160	$2,293	$0.1885	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$2,293
Nov	720	10	64	12,960	$2,430	$0.1875	5,013	$15,201	$3.0323	695	6,200	$267	$184	$451	$0.07	$18,082
Dec	896	0	85	14,880	$2,926	$0.1967	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$2,926
Jan	1,243	0	64	13,440	$2,523	$0.1877	4,490	$13,615	$3.0323	623	0	$0	$0	$0	$0.00	$16,138
Feb	1,354	0	62	14,080	$2,625	$0.1864	0	$0	$0.0000	0	11,400	$387	$294	$681	$0.06	$3,306
Mar	1,019	0	65	15,360	$2,813	$0.1831	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$2,813
Apr	511	0	68	15,040	$2,831	$0.1882	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$2,831
May	99	21	64	11,360	$2,358	$0.2075	0	$0	$0.0000	0	12,550	$414	$318	$732	$0.06	$3,090
Jun	54	78	60	12,320	$2,399	$0.1948	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$2,399
Totals	**6,259**	**737**	**738**	**142,880**	**$27,725**	**$0.1940**	**9,503**	**$28,816**	**$3.0323**	**1,318**	**43,650**	**$1,504**	**$1,134**	**$2,639**	**$0.06**	**$59,179**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	54	8,640	$1,656	$0.1917	0	$0	$3.1233	0	0	$0	$0	$0	$0.00	$1,656
Aug	21	200	19	4,320	$746	$0.1728	32	$100	$3.1233	4	13,250	$430	$313	$743	$0.06	$1,590
Sep	119	63	58	9,760	$1,865	$0.1911	181	$565	$3.1233	25	0	$0	$0	$0	$0.00	$2,430
Oct	409	0	55	11,520	$2,020	$0.1754	619	$1,933	$3.1233	86	0	$0	$0	$0	$0.00	$3,953
Nov	644	0	63	12,480	$2,231	$0.1788	975	$3,046	$3.1233	135	6,650	$278	$181	$459	$0.07	$5,737
Dec	1,114	0	64	15,040	$2,535	$0.1685	1,687	$5,270	$3.1233	234	0	$0	$0	$0	$0.00	$7,805
Jan	1,145	0	79	13,760	$2,610	$0.1897	1,734	$5,416	$3.1233	241	0	$0	$0	$0	$0.00	$8,026
Feb	1,007	0	78	15,360	$2,795	$0.1820	1,524	$4,761	$3.1233	211	11,800	$397	$284	$681	$0.06	$8,237
Mar	778	0	76	15,200	$2,752	$0.1811	1,178	$3,678	$3.1233	163	0	$0	$0	$0	$0.00	$6,430
Apr	450	1	68	14,400	$2,548	$0.1770	681	$2,128	$3.1233	95	0	$0	$0	$0	$0.00	$4,677
May	167	27	64	12,000	$2,217	$0.1847	253	$791	$3.1233	35	10,850	$375	$265	$640	$0.06	$3,648
Jun	65	133	59	12,640	$2,234	$0.1768	98	$306	$3.1233	14	0	$0	$0	$0	$0.00	$2,540
Totals	**5,920**	**706**	**736**	**145,120**	**$26,210**	**$0.1806**	**8,963**	**$27,995**	**$3.1233**	**1,243**	**42,550**	**$1,479**	**$1,044**	**$2,523**	**$0.06**	**$56,729**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	60	7,200	$1,692	$0.2350	0	$0	$3.0323	0	0	$0	$0	$0	$0.00	$1,693
Aug	21	200	24	4,960	$938	$0.1891	32	$98	$3.0323	4	13,500	$436	$338	$774	$0.06	$1,810
Sep	119	63	60	9,120	$1,898	$0.2081	181	$550	$3.0323	25	0	$0	$0	$0	$0.00	$2,448
Oct	409	0	61	12,160	$2,293	$0.1885	621	$1,882	$3.0323	86	0	$0	$0	$0	$0.00	$4,174
Nov	644	0	64	12,960	$2,430	$0.1875	978	$2,966	$3.0323	136	6,200	$267	$184	$451	$0.07	$5,847
Dec	1,114	0	85	14,880	$2,926	$0.1967	1,692	$5,131	$3.0323	235	0	$0	$0	$0	$0.00	$8,057
Jan	1,145	0	64	13,440	$2,523	$0.1877	1,739	$5,273	$3.0323	241	0	$0	$0	$0	$0.00	$7,795
Feb	1,007	0	62	14,080	$2,625	$0.1864	1,529	$4,635	$3.0323	212	11,400	$387	$294	$681	$0.06	$7,941
Mar	778	0	65	15,360	$2,813	$0.1831	1,181	$3,580	$3.0323	164	0	$0	$0	$0	$0.00	$6,393
Apr	450	1	68	15,040	$2,831	$0.1882	683	$2,072	$3.0323	95	0	$0	$0	$0	$0.00	$4,902
May	167	27	64	11,360	$2,358	$0.2075	254	$770	$3.0323	35	12,550	$414	$318	$732	$0.06	$3,860
Jun	65	133	60	12,320	$2,399	$0.1948	98	$298	$3.0323	14	0	$0	$0	$0	$0.00	$2,697
Totals	**5,920**	**706**	**738**	**142,880**	**$27,725**	**$0.1940**	**8,988**	**$27,254**	**$3.0323**	**1,247**	**43,650**	**$1,504**	**$1,134**	**$2,639**	**$0.06**	**$57,618**

City of Bristol, CT

Utility Data Summary

Mountain View Elementary School

1.000	CCF

Delivery: Eversource
Account #: 51869953034
Meter #: 891017612
Tariff Rate: Rate 040
Supplier: Constellation Energy Services

Supplier
Delivery: Eversource
Account #: 57389940008
Meter #: 0457870
Tariff Rate: R20
Supplier: Eversource

Water Service: Bristol Water Department
Account #: 03-11305000
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	2	282	224	32,640	$4,954	$0.1518	100	$936	$9.3606	10	0	$0	$0	$0	$0.00	$5,890
Aug	0	324	129	19,200	$2,970	$0.1547	100	$936	$9.3606	10	9,600	$346	$240	$586	$0.06	$4,492
Sep	99	171	164	27,040	$4,163	$0.1540	210	$951	$4.5290	22	0	$0	$0	$0	$0.00	$5,114
Oct	310	40	229	28,160	$4,334	$0.1539	860	$1,040	$1.2092	88	0	$0	$0	$0	$0.00	$5,374
Nov	663	0	105	24,000	$3,701	$0.1542	2,710	$1,185	$0.4372	278	6,150	$266	$172	$438	$0.07	$5,323
Dec	1,001	0	103	28,000	$4,309	$0.1539	3,580	$1,248	$0.3485	367	0	$0	$0	$0	$0.00	$5,557
Jan	1,206	0	111	22,560	$3,540	$0.1569	5,060	$1,475	$0.2915	519	0	$0	$0	$0	$0.00	$5,015
Feb	1,056	0	105	25,280	$3,990	$0.1578	4,240	$1,391	$0.3282	435	10,400	$364	$256	$621	$0.06	$6,002
Mar	1,007	0	103	24,960	$3,941	$0.1579	4,010	$1,368	$0.3411	411	0	$0	$0	$0	$0.00	$5,309
Apr	508	0	104	24,960	$3,941	$0.1579	1,080	$1,070	$0.9908	111	0	$0	$0	$0	$0.00	$5,011
May	191	0	101	22,400	$3,541	$0.1581	240	$934	$3.8931	25	9,500	$343	$238	$582	$0.06	$5,057
Jun	11	36	175	28,320	$4,465	$0.1576	120	$914	$7.6183	12	0	$0	$0	$0	$0.00	$5,379
Totals	**6,054**	**853**	**1,655**	**307,520**	**$47,848**	**$0.1556**	**22,310**	**$13,448**	**$0.6028**	**2,287**	**35,650**	**$1,320**	**$907**	**$2,226**	**$0.06**	**$63,522**

Fiscal Year 2015

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	203	203	26,720	$4,540	$0.1699	100	$967	$9.6713	10	0	$0	$0	$0	$0.00	$5,507
Aug	2	234	124	19,680	$3,288	$0.1671	100	$961	$9.6077	10	11,500	$390	$296	$686	$0.06	$4,934
Sep	79	174	211	29,120	$4,842	$0.1663	140	$995	$7.1104	14	0	$0	$0	$0	$0.00	$5,837
Oct	282	17	170	26,880	$4,473	$0.1664	650	$1,382	$2.1258	67	0	$0	$0	$0	$0.00	$5,855
Nov	720	10	142	26,880	$4,473	$0.1664	2,460	$2,479	$1.0076	252	6,050	$264	$181	$444	$0.07	$7,396
Dec	896	0	104	27,200	$4,526	$0.1664	3,490	$3,312	$0.9491	358	0	$0	$0	$0	$0.00	$7,838
Jan	1,243	0	104	24,160	$4,038	$0.1671	5,530	$5,286	$0.9558	567	0	$0	$0	$0	$0.00	$9,323
Feb	1,354	0	105	24,480	$4,113	$0.1680	5,320	$4,731	$0.8892	545	10,900	$376	$283	$659	$0.06	$9,502
Mar	1,019	0	110	25,600	$4,298	$0.1679	4,010	$3,614	$0.9011	411	0	$0	$0	$0	$0.00	$7,912
Apr	511	0	104	26,880	$4,510	$0.1678	1,400	$2,108	$1.5060	144	0	$0	$0	$0	$0.00	$6,619
May	99	21	146	23,360	$3,927	$0.1681	180	$1,397	$7.7588	18	12,800	$420	$324	$743	$0.06	$6,067
Jun	54	78	188	36,800	$6,155	$0.1673	220	$1,403	$6.3768	23	0	$0	$0	$0	$0.00	$7,558
Totals	**6,259**	**737**	**1,710**	**317,760**	**$53,182**	**$0.1674**	**23,600**	**$28,634**	**$1.2133**	**2,419**	**41,250**	**$1,449**	**$1,084**	**$2,532**	**$0.06**	**$84,348**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	224	32,640	$4,954	$0.1518	0	0.149942542	$0.6028	0	0	$0	$0	$0	$0.00	$4,954
Aug	21	200	129	19,200	$2,970	$0.1547	78	$47	$0.6028	8	9,600	$346	$240	$586	$0.06	$3,603
Sep	119	63	164	27,040	$4,163	$0.1540	440	$265	$0.6028	45	0	$0	$0	$0	$0.00	$4,429
Oct	409	0	229	28,160	$4,334	$0.1539	1,506	$908	$0.6028	154	0	$0	$0	$0	$0.00	$5,242
Nov	644	0	105	24,000	$3,701	$0.1542	2,374	$1,431	$0.6028	243	6,150	$266	$172	$438	$0.07	$5,569
Dec	1,114	0	103	28,000	$4,309	$0.1539	4,107	$2,476	$0.6028	421	0	$0	$0	$0	$0.00	$6,785
Jan	1,145	0	111	22,560	$3,540	$0.1569	4,220	$2,544	$0.6028	433	0	$0	$0	$0	$0.00	$6,084
Feb	1,007	0	105	25,280	$3,990	$0.1578	3,710	$2,236	$0.6028	380	10,400	$364	$256	$621	$0.06	$6,847
Mar	778	0	103	24,960	$3,941	$0.1579	2,866	$1,728	$0.6028	294	0	$0	$0	$0	$0.00	$5,668
Apr	450	1	104	24,960	$3,941	$0.1579	1,658	$1,000	$0.6028	170	0	$0	$0	$0	$0.00	$4,940
May	167	27	101	22,400	$3,541	$0.1581	617	$372	$0.6028	63	9,500	$343	$238	$582	$0.06	$4,495
Jun	65	133	175	28,320	$4,465	$0.1576	238	$144	$0.6028	24	0	$0	$0	$0	$0.00	$4,608
Totals	**5,920**	**706**	**1,655**	**307,520**	**$47,848**	**$0.1556**	**21,815**	**$13,150**	**$0.6028**	**2,236**	**35,650**	**$1,320**	**$907**	**$2,226**	**$0.06**	**$63,224**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	203	26,720	$4,540	$0.1699	0	0.308803926	$1.2133	0	0	$0	$0	$0	$0.00	$4,540
Aug	21	200	124	19,680	$3,288	$0.1671	80	$97	$1.2133	8	11,500	$390	$296	$686	$0.06	$4,071
Sep	119	63	211	29,120	$4,842	$0.1663	451	$547	$1.2133	46	0	$0	$0	$0	$0.00	$5,388
Oct	409	0	170	26,880	$4,473	$0.1664	1,541	$1,870	$1.2133	158	0	$0	$0	$0	$0.00	$6,343
Nov	644	0	142	26,880	$4,473	$0.1664	2,429	$2,947	$1.2133	249	6,050	$264	$181	$444	$0.07	$7,864
Dec	1,114	0	104	27,200	$4,526	$0.1664	4,202	$5,098	$1.2133	431	0	$0	$0	$0	$0.00	$9,624
Jan	1,145	0	104	24,160	$4,038	$0.1671	4,318	$5,239	$1.2133	443	0	$0	$0	$0	$0.00	$9,277
Feb	1,007	0	105	24,480	$4,113	$0.1680	3,796	$4,606	$1.2133	389	10,900	$376	$283	$659	$0.06	$9,378
Mar	778	0	110	25,600	$4,298	$0.1679	2,932	$3,558	$1.2133	301	0	$0	$0	$0	$0.00	$7,856
Apr	450	1	104	26,880	$4,510	$0.1678	1,697	$2,059	$1.2133	174	0	$0	$0	$0	$0.00	$6,569
May	167	27	146	23,360	$3,927	$0.1681	631	$765	$1.2133	65	12,800	$420	$324	$743	$0.06	$5,435
Jun	65	133	188	36,800	$6,155	$0.1673	244	$296	$1.2133	25	0	$0	$0	$0	$0.00	$6,451
Totals	**5,920**	**706**	**1,710**	**317,760**	**$53,182**	**$0.1674**	**22,321**	**$27,082**	**$1.2133**	**2,288**	**41,250**	**$1,449**	**$1,084**	**$2,532**	**$0.06**	**$82,796**

City of Bristol, CT

Utility Data Summary

South Side Elementary School

1.000	CCF

Delivery: Eversource
Account #: 51602753048
Meter #: 890838462
Tariff Rate: Rate 040
Supplier: Constellation Energy Services

Supplier
Delivery: Eversource
Account #: 57299360008
Meter #: 0356638
Tariff Rate: R30
Supplier: Eversource

Water Service: Bristol Water Department
Account #: 02-12973000
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	2	425	64	21,600	$3,327	$0.1540	128	$1,632	$12.7489	13	25,300	$708	$554	$1,262	$0.05	$6,221
Aug	0	189	102	49,920	$7,646	$0.1532	128	$1,632	$12.7489	13	0	$0	$0	$0	$0.00	$9,278
Sep	99	121	149	38,880	$5,965	$0.1534	186	$1,637	$8.8027	19	0	$0	$0	$0	$0.00	$7,603
Oct	310	6	110	28,800	$4,431	$0.1539	1,508	$1,761	$1.1681	155	8,300	$316	$214	$530	$0.06	$6,723
Nov	663	0	97	27,600	$4,248	$0.1539	4,996	$1,987	$0.3976	512	0	$0	$0	$0	$0.00	$6,235
Dec	1,001	0	96	27,120	$4,175	$0.1540	6,996	$2,089	$0.2985	717	0	$0	$0	$0	$0.00	$6,264
Jan	1,206	0	97	26,400	$4,159	$0.1576	8,016	$2,156	$0.2690	822	19,800	$581	$444	$1,025	$0.05	$7,341
Feb	1,056	0	101	27,120	$4,277	$0.1577	7,238	$2,094	$0.2893	742	0	$0	$0	$0	$0.00	$6,371
Mar	1,007	0	94	27,360	$4,315	$0.1577	6,706	$2,051	$0.3058	687	0	$0	$0	$0	$0.00	$6,366
Apr	508	0	101	25,680	$4,053	$0.1578	2,967	$1,751	$0.5900	304	16,300	$501	$374	$875	$0.05	$6,678
May	191	11	143	30,720	$4,839	$0.1575	978	$1,523	$1.5570	100	0	$0	$0	$0	$0.00	$6,362
Jun	11	81	145	35,760	$5,625	$0.1573	158	$1,420	$8.9884	16	0	$0	$0	$0	$0.00	$7,045
Totals	**6,054**	**833**	**1,298**	**366,960**	**$57,061**	**$0.1555**	**40,005**	**$21,732**	**$0.5432**	**4,101**	**69,700**	**$2,106**	**$1,586**	**$3,692**	**$0.05**	**$82,485**

Fiscal Year 2015

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	299	106	44,400	$7,393	$0.1665	121	$1,479	$12.2272	12	22,650	$647	$532	$1,179	$0.05	$10,051
Aug	2	142	119	37,200	$6,172	$0.1659	130	$1,477	$11.3623	13	0	$0	$0	$0	$0.00	$7,649
Sep	79	124	163	42,240	$7,002	$0.1658	178	$1,513	$8.5008	18	0	$0	$0	$0	$0.00	$8,515
Oct	282	17	100	27,840	$4,631	$0.1663	2,649	$3,141	$1.1858	272	9,700	$348	$258	$606	$0.06	$8,378
Nov	720	0	104	31,680	$5,263	$0.1661	6,499	$5,074	$0.7807	666	0	$0	$0	$0	$0.00	$10,337
Dec	896	0	102	31,200	$5,184	$0.1662	9,008	$6,960	$0.7726	923	0	$0	$0	$0	$0.00	$12,144
Jan	1,243	0	104	25,920	$4,349	$0.1678	11,509	$9,111	$0.7917	1,180	20,950	$608	$496	$1,104	$0.05	$14,564
Feb	1,354	0	109	29,760	$4,988	$0.1676	11,272	$8,157	$0.7237	1,155	0	$0	$0	$0	$0.00	$13,145
Mar	1,019	0	102	28,560	$4,789	$0.1677	9,603	$6,529	$0.6798	984	0	$0	$0	$0	$0.00	$11,317
Apr	511	0	99	28,320	$4,749	$0.1677	4,367	$3,801	$0.8704	448	22,500	$644	$529	$1,173	$0.05	$9,722
May	99	63	143	27,840	$4,670	$0.1677	313	$1,821	$5.8185	32	0	$0	$0	$0	$0.00	$6,491
Jun	54	138	135	38,400	$6,420	$0.1672	159	$1,746	$10.9794	16	0	$0	$0	$0	$0.00	$8,166
Totals	**6,259**	**783**	**1,387**	**393,360**	**$65,610**	**$0.1668**	**55,808**	**$50,809**	**$0.9104**	**5,720**	**75,800**	**$2,247**	**$1,815**	**$4,062**	**$0.05**	**$120,480**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	64	21,600	$3,327	$0.1540	0	0.242302478	$0.5432	0	25,300	$708	$554	$1,262	$0.05	$4,589
Aug	21	200	102	49,920	$7,646	$0.1532	140	$76	$0.5432	14	0	$0	$0	$0	$0.00	$7,722
Sep	119	63	149	38,880	$5,965	$0.1534	790	$429	$0.5432	81	0	$0	$0	$0	$0.00	$6,394
Oct	409	0	110	28,800	$4,431	$0.1539	2,701	$1,467	$0.5432	277	8,300	$316	$214	$530	$0.06	$6,428
Nov	644	0	97	27,600	$4,248	$0.1539	4,257	$2,312	$0.5432	436	0	$0	$0	$0	$0.00	$6,561
Dec	1,114	0	96	27,120	$4,175	$0.1540	7,364	$4,001	$0.5432	755	0	$0	$0	$0	$0.00	$8,176
Jan	1,145	0	97	26,400	$4,159	$0.1576	7,568	$4,111	$0.5432	776	19,800	$581	$444	$1,025	$0.05	$9,296
Feb	1,007	0	101	27,120	$4,277	$0.1577	6,653	$3,614	$0.5432	682	0	$0	$0	$0	$0.00	$7,891
Mar	778	0	94	27,360	$4,315	$0.1577	5,139	$2,792	$0.5432	527	0	$0	$0	$0	$0.00	$7,106
Apr	450	1	101	25,680	$4,053	$0.1578	2,974	$1,615	$0.5432	305	16,300	$501	$374	$875	$0.05	$6,543
May	167	27	143	30,720	$4,839	$0.1575	1,106	$601	$0.5432	113	0	$0	$0	$0	$0.00	$5,439
Jun	65	133	145	35,760	$5,625	$0.1573	427	$232	$0.5432	44	0	$0	$0	$0	$0.00	$5,857
Totals	**5,920**	**706**	**1,298**	**366,960**	**$57,061**	**$0.1555**	**39,118**	**$21,250**	**$0.5432**	**4,010**	**69,700**	**$2,106**	**$1,586**	**$3,692**	**$0.05**	**$82,004**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	106	44,400	$7,393	$0.1665	1	0.54794837	$0.9104	0	22,650	$647	$532	$1,179	$0.05	$8,572
Aug	21	200	119	37,200	$6,172	$0.1659	189	$172	$0.9104	19	0	$0	$0	$0	$0.00	$6,345
Sep	119	63	163	42,240	$7,002	$0.1658	1,065	$970	$0.9104	109	0	$0	$0	$0	$0.00	$7,972
Oct	409	0	100	27,840	$4,631	$0.1663	3,644	$3,318	$0.9104	374	9,700	$348	$258	$606	$0.06	$8,555
Nov	644	0	104	31,680	$5,263	$0.1661	5,744	$5,229	$0.9104	589	0	$0	$0	$0	$0.00	$10,492
Dec	1,114	0	102	31,200	$5,184	$0.1662	9,937	$9,047	$0.9104	1,019	0	$0	$0	$0	$0.00	$14,231
Jan	1,145	0	104	25,920	$4,349	$0.1678	10,211	$9,297	$0.9104	1,047	20,950	$608	$496	$1,104	$0.05	$14,749
Feb	1,007	0	109	29,760	$4,988	$0.1676	8,977	$8,173	$0.9104	920	0	$0	$0	$0	$0.00	$13,161
Mar	778	0	102	28,560	$4,789	$0.1677	6,934	$6,313	$0.9104	711	0	$0	$0	$0	$0.00	$11,102
Apr	450	1	99	28,320	$4,749	$0.1677	4,013	$3,653	$0.9104	411	22,500	$644	$529	$1,173	$0.05	$9,575
May	167	27	143	27,840	$4,670	$0.1677	1,492	$1,358	$0.9104	153	0	$0	$0	$0	$0.00	$6,028
Jun	65	133	135	38,400	$6,420	$0.1672	576	$525	$0.9104	59	0	$0	$0	$0	$0.00	$6,945
Totals	**5,920**	**706**	**1,387**	**393,360**	**$65,610**	**$0.1668**	**52,783**	**$48,055**	**$0.9104**	**5,410**	**75,800**	**$2,247**	**$1,815**	**$4,062**	**$0.05**	**$117,727**

City of Bristol, CT

Utility Data Summary

1.000	CCF

Board of Education Administration Building & Warehouse

Delivery: Eversource
Account #: 51852653070
Meter #: 891016112
Tariff Rate: Rate 030
Supplier: Constellation Energy Services

Supplier
Delivery: Eversource
Account #: 57078440013
Meter #: 0526009
Tariff Rate: R20
Supplier: Eversource

Water Service: Bristol Water Department
Account #: 01-00052000
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	2	425	101	36,320	$5,372	$0.1479	21	$482	$22.9657	2	0	$0	$0	$0	$0.00	$5,854
Aug	0	189	94	30,720	$4,666	$0.1519	26	$483	$18.5750	3	0	$0	$0	$0	$0.00	$5,149
Sep	99	121	100	26,080	$4,228	$0.1621	187	$505	$2.7003	19	4,750	$212	$136	$348	$0.07	$5,080
Oct	310	6	87	17,920	$3,149	$0.1757	650	$568	$0.8742	67	0	$0	$0	$0	$0.00	$3,718
Nov	663	0	66	18,720	$2,968	$0.1585	1,799	$676	$0.3756	184	0	$0	$0	$0	$0.00	$3,644
Dec	1,001	0	47	18,240	$2,658	$0.1457	2,674	$739	$0.2764	274	4,750	$212	$136	$348	$0.07	$3,745
Jan	1,206	0	50	17,440	$2,684	$0.1539	3,190	$860	$0.2695	327	0	$0	$0	$0	$0.00	$3,544
Feb	1,056	0	48	17,920	$2,715	$0.1515	2,742	$814	$0.2969	281	0	$0	$0	$0	$0.00	$3,529
Mar	1,007	0	46	16,960	$2,583	$0.1523	2,501	$790	$0.3157	256	5,000	$218	$141	$358	$0.07	$3,731
Apr	508	0	50	16,800	$2,616	$0.1557	1,201	$657	$0.5474	123	0	$0	$0	$0	$0.00	$3,274
May	191	11	88	19,520	$3,402	$0.1743	214	$505	$2.3603	22	0	$0	$0	$0	$0.00	$3,907
Jun	11	81	95	23,680	$3,984	$0.1683	21	$473	$22.5114	2	4,800	$213	$137	$350	$0.07	$4,807
Totals	**6,054**	**833**	**871**	**260,320**	**$41,026**	**$0.1576**	**15,226**	**$7,552**	**$0.4960**	**1,561**	**19,300**	**$854**	**$550**	**$1,404**	**$0.07**	**$49,982**

Fiscal Year 2015

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	299	96	32,800	$5,366	$0.1636	19	$483	$25.4258	2	0	$0	$0	$0	$0.00	$5,849
Aug	2	142	94	26,880	$4,569	$0.1700	19	$482	$25.3621	2	0	$0	$0	$0	$0.00	$5,051
Sep	79	124	98	25,600	$4,456	$0.1741	24	$487	$20.2742	2	4,930	$216	$149	$365	$0.07	$5,308
Oct	282	17	72	18,240	$3,204	$0.1757	558	$888	$1.5912	57	0	$0	$0	$0	$0.00	$4,092
Nov	720	0	46	19,200	$3,016	$0.1571	1,834	$1,667	$0.9092	188	0	$0	$0	$0	$0.00	$4,683
Dec	896	0	48	20,000	$3,136	$0.1568	2,232	$2,040	$0.9138	229	5,900	$238	$169	$408	$0.07	$5,583
Jan	1,243	0	50	18,080	$2,833	$0.1567	3,097	$2,724	$0.8797	317	0	$0	$0	$0	$0.00	$5,557
Feb	1,354	0	49	18,880	$2,890	$0.1531	3,051	$2,476	$0.8115	313	0	$0	$0	$0	$0.00	$5,366
Mar	1,019	0	49	18,240	$2,822	$0.1547	2,448	$1,919	$0.7838	251	4,900	$215	$148	$363	$0.07	$5,104
Apr	511	0	48	18,880	$2,874	$0.1522	1,195	$1,175	$0.9836	122	0	$0	$0	$0	$0.00	$4,050
May	99	63	90	20,000	$3,742	$0.1871	50	$505	$10.0964	5	0	$0	$0	$0	$0.00	$4,247
Jun	54	138	91	23,840	$4,184	$0.1755	41	$498	$12.1349	4	5,200	$222	$155	$377	$0.07	$5,058
Totals	**6,259**	**783**	**830**	**260,640**	**$43,092**	**$0.1653**	**14,568**	**$15,343**	**$1.0532**	**1,493**	**20,930**	**$891**	**$621**	**$1,513**	**$0.07**	**$59,948**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	101	36,320	$5,372	$0.1479	0	0.08420363	$0.4960	0	0	$0	$0	$0	$0.00	$5,372
Aug	21	200	94	30,720	$4,666	$0.1519	53	$27	$0.4960	5	0	$0	$0	$0	$0.00	$4,693
Sep	119	63	100	26,080	$4,228	$0.1621	301	$149	$0.4960	31	4,750	$212	$136	$348	$0.07	$4,724
Oct	409	0	87	17,920	$3,149	$0.1757	1,028	$510	$0.4960	105	0	$0	$0	$0	$0.00	$3,659
Nov	644	0	66	18,720	$2,968	$0.1585	1,620	$804	$0.4960	166	0	$0	$0	$0	$0.00	$3,771
Dec	1,114	0	47	18,240	$2,658	$0.1457	2,803	$1,390	$0.4960	287	4,750	$212	$136	$348	$0.07	$4,396
Jan	1,145	0	50	17,440	$2,684	$0.1539	2,880	$1,429	$0.4960	295	0	$0	$0	$0	$0.00	$4,113
Feb	1,007	0	48	17,920	$2,715	$0.1515	2,532	$1,256	$0.4960	260	0	$0	$0	$0	$0.00	$3,971
Mar	778	0	46	16,960	$2,583	$0.1523	1,956	$970	$0.4960	200	5,000	$218	$141	$358	$0.07	$3,911
Apr	450	1	50	16,800	$2,616	$0.1557	1,132	$561	$0.4960	116	0	$0	$0	$0	$0.00	$3,178
May	167	27	88	19,520	$3,402	$0.1743	421	$209	$0.4960	43	0	$0	$0	$0	$0.00	$3,611
Jun	65	133	95	23,680	$3,984	$0.1683	163	$81	$0.4960	17	4,800	$213	$137	$350	$0.07	$4,415
Totals	**5,920**	**706**	**871**	**260,320**	**$41,026**	**$0.1576**	**14,888**	**$7,385**	**$0.4960**	**1,526**	**19,300**	**$854**	**$550**	**$1,404**	**$0.07**	**$49,814**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	96	32,800	$5,366	$0.1636	0	0.165469256	$1.0532	0	0	$0	$0	$0	$0.00	$5,366
Aug	21	200	94	26,880	$4,569	$0.1700	49	$52	$1.0532	5	0	$0	$0	$0	$0.00	$4,621
Sep	119	63	98	25,600	$4,456	$0.1741	278	$293	$1.0532	29	4,930	$216	$149	$365	$0.07	$5,114
Oct	409	0	72	18,240	$3,204	$0.1757	951	$1,002	$1.0532	98	0	$0	$0	$0	$0.00	$4,206
Nov	644	0	46	19,200	$3,016	$0.1571	1,499	$1,579	$1.0532	154	0	$0	$0	$0	$0.00	$4,595
Dec	1,114	0	48	20,000	$3,136	$0.1568	2,594	$2,732	$1.0532	266	5,900	$238	$169	$408	$0.07	$6,275
Jan	1,145	0	50	18,080	$2,833	$0.1567	2,666	$2,807	$1.0532	273	0	$0	$0	$0	$0.00	$5,640
Feb	1,007	0	49	18,880	$2,890	$0.1531	2,343	$2,468	$1.0532	240	0	$0	$0	$0	$0.00	$5,358
Mar	778	0	49	18,240	$2,822	$0.1547	1,810	$1,906	$1.0532	186	4,900	$215	$148	$363	$0.07	$5,092
Apr	450	1	48	18,880	$2,874	$0.1522	1,047	$1,103	$1.0532	107	0	$0	$0	$0	$0.00	$3,977
May	167	27	90	20,000	$3,742	$0.1871	389	$410	$1.0532	40	0	$0	$0	$0	$0.00	$4,152
Jun	65	133	91	23,840	$4,184	$0.1755	150	$158	$1.0532	15	5,200	$222	$155	$377	$0.07	$4,719
Totals	**5,920**	**706**	**830**	**260,640**	**$43,092**	**$0.1653**	**13,778**	**$14,512**	**$1.0532**	**1,412**	**20,930**	**$891**	**$621**	**$1,513**	**$0.07**	**$59,117**

AMERESCO

City of Bristol, CT

Utility Data Summary

City Hall & Annex

1.000	CCF

Delivery: Eversource
Account #: 51254653009
Meter #: 891607712
Tariff Rate: Rate 037
Supplier: Liberty Power Holdings

Supplier East River Energy
Account #: N/A

Delivery: Eversource
Account #: 57264230038
Meter #: 042500
Tariff Rate: R10
Supplier: Eversource

Water Service: Bristol Water Department
Account #: 01-09935000
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*#2 Fuel Oil*			*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	373	491	99,072	$15,402	$0.1555	0	$0	$0.0000	18	$121	$6.7150	2	0	$0	$0	$0	$0.00	$15,523
Aug	2	252	252	97,920	$15,271	$0.1560	0	$0	$0.0000	0	$114	$0.0000	0	0	$0	$0	$0	$0.00	$15,385
Sep	39	175	237	87,936	$13,309	$0.1513	0	$0	$0.0000	0	$114	$0.0000	0	38,800	$1,020	$823	$1,843	$0.05	$15,266
Oct	155	6	232	71,040	$11,631	$0.1637	1,200	$3,668	$3.0569	19	$121	$6.3821	168	0	$0	$0	$0	$0.00	$15,421
Nov	505	0	214	57,984	$9,738	$0.1679	1,630	$4,983	$3.0569	23	$119	$5.1765	228	0	$0	$0	$0	$0.00	$14,840
Dec	945	0	154	60,288	$9,863	$0.1636	3,450	$10,546	$3.0569	281	$213	$0.7574	507	72,700	$1,803	$1,500	$3,303	$0.05	$23,925
Jan	1,051	0	296	59,904	$9,855	$0.1645	4,740	$14,490	$3.0569	487	$278	$0.5709	707	0	$0	$0	$0	$0.00	$24,623
Feb	1,285	0	159	57,984	$10,255	$0.1769	4,145	$13,558	$3.2709	660	$320	$0.4841	643	0	$0	$0	$0	$0.00	$24,132
Mar	984	0	154	57,600	$9,640	$0.1674	2,788	$9,213	$3.3045	490	$267	$0.5451	437	10,400	$364	$256	$621	$0.06	$19,741
Apr	622	0	143	55,680	$9,177	$0.1648	1,815	$5,797	$3.1940	261	$204	$0.7808	278	0	$0	$0	$0	$0.00	$15,178
May	379	11	140	53,760	$9,631	$0.1791	0	$0	$0.0000	88	$139	$1.5839	9	0	$0	$0	$0	$0.00	$9,770
Jun	87	37	235	85,632	$13,420	$0.1567	0	$0	$0.0000	11	$107	$9.7018	1	9,550	$345	$239	$584	$0.06	$14,110
Totals	**6,054**	**854**	**2,706**	**844,800**	**$137,192**	**$0.1624**	**19,768**	**$62,255**	**$3.1493**	**2,338**	**$2,116**	**$0.9051**	**2,981**	**131,450**	**$3,533**	**$2,819**	**$6,351**	**$0.05**	**$207,914**

Fiscal Year 2015

	Weather		*Electric*				*#2 Fuel Oil*			*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	266	253	91,392	$14,654	$0.1603	0	$0	$0.0000	1	$106	$106.4800	0	0	$0	$0	$0	$0.00	$14,761
Aug	2	187	256	83,712	$13,442	$0.1606	0	$0	$0.0000	1	$103	$103.0200	0	0	$0	$0	$0	$0.00	$13,545
Sep	33	152	235	78,336	$8,053	$0.1028	0	$0	$0.0000	0	$102	$0.0000	0	28,500	$782	$656	$1,438	$0.05	$9,593
Oct	167	20	208	58,368	$4,079	$0.0699	1,475	$4,473	$3.0323	0	$102	$0.0000	205	0	$0	$0	$0	$0.00	$8,654
Nov	518	1	196	57,984	$3,973	$0.0685	1,780	$5,397	$3.0323	7	$109	$15.5571	248	0	$0	$0	$0	$0.00	$9,480
Dec	877	0	157	58,752	$3,887	$0.0662	3,110	$9,430	$3.0323	127	$234	$1.8409	444	27,400	$3,067	$2,748	$5,815	$0.21	$19,367
Jan	1,188	0	161	63,360	$11,065	$0.1746	3,250	$9,855	$3.0323	349	$454	$1.3006	487	0	$0	$0	$0	$0.00	$21,374
Feb	1,307	0	159	59,520	$8,388	$0.1409	4,440	$13,463	$3.0323	549	$594	$1.0816	672	0	$0	$0	$0	$0.00	$22,445
Mar	1,086	0	161	57,984	$8,236	$0.1420	4,564	$13,839	$3.0323	472	$495	$1.0481	681	10,000	$355	$264	$619	$0.06	$23,189
Apr	753	0	145	56,064	$8,005	$0.1428	2,100	$6,368	$3.0323	157	$239	$1.5224	307	0	$0	$0	$0	$0.00	$14,612
May	241	46	245	67,200	$9,405	$0.1400	0	$0	$0.0000	5	$103	$20.6420	1	0	$0	$0	$0	$0.00	$9,508
Jun	81	103	243	77,952	$10,485	$0.1345	0	$0	$0.0000	1	$100	$99.9000	0	61,850	$1,692	$1,483	$3,175	$0.05	$13,759
Totals	**6,253**	**775**	**2,417**	**810,624**	**$103,673**	**$0.1279**	**20,719**	**$62,826**	**$3.0323**	**1,669**	**$2,741**	**$1.6422**	**3,045**	**127,750**	**$5,896**	**$5,151**	**$11,048**	**$0.09**	**$180,287**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	491	99,072	$15,402	$0.1555	0	$1	$3.1493	0	0.023594338	$0.9051	0	0	$0	$0	$0	$0.00	$15,403
Aug	21	200	252	97,920	$15,271	$0.1560	69	$218	$3.1493	8	$7	$0.9051	10	0	$0	$0	$0	$0.00	$15,497
Sep	119	63	237	87,936	$13,309	$0.1513	390	$1,229	$3.1493	46	$42	$0.9051	59	38,800	$1,020	$823	$1,843	$0.05	$16,423
Oct	409	0	232	71,040	$11,631	$0.1637	1,335	$4,203	$3.1493	158	$143	$0.9051	201	0	$0	$0	$0	$0.00	$15,977
Nov	644	0	214	57,984	$9,738	$0.1679	2,103	$6,624	$3.1493	249	$225	$0.9051	317	0	$0	$0	$0	$0.00	$16,588
Dec	1,114	0	154	60,288	$9,863	$0.1636	3,639	$11,460	$3.1493	430	$390	$0.9051	549	72,700	$1,803	$1,500	$3,303	$0.05	$25,016
Jan	1,145	0	296	59,904	$9,855	$0.1645	3,740	$11,777	$3.1493	442	$400	$0.9051	564	0	$0	$0	$0	$0.00	$22,032
Feb	1,007	0	159	57,984	$10,255	$0.1769	3,287	$10,353	$3.1493	389	$352	$0.9051	496	0	$0	$0	$0	$0.00	$20,960
Mar	778	0	154	57,600	$9,640	$0.1674	2,539	$7,997	$3.1493	300	$272	$0.9051	383	10,400	$364	$256	$621	$0.06	$18,530
Apr	450	1	143	55,680	$9,177	$0.1648	1,469	$4,628	$3.1493	174	$157	$0.9051	222	0	$0	$0	$0	$0.00	$13,962
May	167	27	140	53,760	$9,631	$0.1791	546	$1,720	$3.1493	65	$58	$0.9051	82	0	$0	$0	$0	$0.00	$11,409
Jun	65	133	235	85,632	$13,420	$0.1567	211	$665	$3.1493	25	$23	$0.9051	32	9,550	$345	$239	$584	$0.06	$14,691
Totals	**5,920**	**706**	**2,706**	**844,800**	**$137,192**	**$0.1624**	**19,330**	**$60,875**	**$3.1493**	**2,286**	**$2,069**	**$0.9051**	**2,915**	**131,450**	**$3,533**	**$2,819**	**$6,351**	**$0.05**	**$206,487**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	253	91,392	$14,654	$0.1603	0	$1	$3.0323	0	0.029586546	$1.6422	0	0	$0	$0	$0	$0.00	$14,655
Aug	21	200	256	83,712	$13,442	$0.1606	70	$213	$3.0323	6	$9	$1.6422	10	0	$0	$0	$0	$0.00	$13,665
Sep	119	63	235	78,336	$8,053	$0.1028	396	$1,200	$3.0323	32	$52	$1.6422	58	28,500	$782	$656	$1,438	$0.05	$10,744
Oct	409	0	208	58,368	$4,079	$0.0699	1,354	$4,107	$3.0323	109	$179	$1.6422	199	0	$0	$0	$0	$0.00	$8,365
Nov	644	0	196	57,984	$3,973	$0.0685	2,134	$6,472	$3.0323	172	$282	$1.6422	314	0	$0	$0	$0	$0.00	$10,728
Dec	1,114	0	157	58,752	$3,887	$0.0662	3,693	$11,197	$3.0323	297	$488	$1.6422	543	27,400	$3,067	$2,748	$5,815	$0.21	$21,388
Jan	1,145	0	161	63,360	$11,065	$0.1746	3,795	$11,507	$3.0323	306	$502	$1.6422	558	0	$0	$0	$0	$0.00	$23,074
Feb	1,007	0	159	59,520	$8,388	$0.1409	3,336	$10,115	$3.0323	269	$441	$1.6422	490	0	$0	$0	$0	$0.00	$18,945
Mar	778	0	161	57,984	$8,236	$0.1420	2,577	$7,814	$3.0323	208	$341	$1.6422	379	10,000	$355	$264	$619	$0.06	$17,010
Apr	450	1	145	56,064	$8,005	$0.1428	1,491	$4,521	$3.0323	120	$197	$1.6422	219	0	$0	$0	$0	$0.00	$12,724
May	167	27	245	67,200	$9,405	$0.1400	554	$1,681	$3.0323	45	$73	$1.6422	81	0	$0	$0	$0	$0.00	$11,159
Jun	65	133	243	77,952	$10,485	$0.1345	214	$649	$3.0323	17	$28	$1.6422	31	61,850	$1,692	$1,483	$3,175	$0.05	$14,337
Totals	**5,920**	**706**	**2,417**	**810,624**	**$103,673**	**$0.1279**	**19,615**	**$59,478**	**$3.0323**	**1,580**	**$2,595**	**$1.6422**	**2,883**	**127,750**	**$5,896**	**$5,151**	**$11,048**	**$0.09**	**$176,793**

AMERESCO

City of Bristol, CT

Utility Data Summary

Water Main Office & Garage

1.000	CCF

Delivery: Eversource
Account #: 51881653075
Meter #: 890129272
Tariff Rate: Rate 030
Supplier: Transcanada

Supplier East River Energy
Account #: N/A

Delivery: Eversource
Account #: 57873640031
Meter #: 0341655
Tariff Rate: R10
Supplier: Eversource

Water Service: Bristol Water Department
Account #: 02-15632000 & 0215632100
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*#2 Fuel Oil*			*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	373	29	7,789	$1,277	$0.1640	0	$0	$0.0000	17	$135	$7.9288	2	2,675	$266	$147	$413	$0.15	$1,825
Aug	2	252	29	7,086	$1,205	$0.1701	0	$0	$0.0000	17	$135	$7.9247	2	0	$0	$0	$0	$0.00	$1,340
Sep	39	175	29	6,377	$1,124	$0.1762	0	$0	$0.0000	17	$137	$8.0794	2	0	$0	$0	$0	$0.00	$1,261
Oct	155	6	27	4,699	$901	$0.1917	152	$463	$3.0569	16	$137	$8.5513	23	2,160	$254	$221	$475	$0.22	$1,976
Nov	505	0	25	4,730	$886	$0.1873	260	$794	$3.0569	43	$162	$3.7737	40	0	$0	$0	$0	$0.00	$1,843
Dec	945	0	15	4,819	$763	$0.1583	270	$825	$3.0569	392	$486	$1.2407	78	0	$0	$0	$0	$0.00	$2,075
Jan	1,051	0	17	4,928	$826	$0.1677	337	$1,030	$3.0569	999	$1,094	$1.0952	149	2,425	$260	$149	$409	$0.17	$3,360
Feb	1,285	0	17	5,205	$841	$0.1615	455	$1,539	$3.3800	1,194	$1,368	$1.1457	186	0	$0	$0	$0	$0.00	$3,747
Mar	984	0	17	4,448	$754	$0.1695	196	$662	$3.3800	841	$1,062	$1.2622	113	0	$0	$0	$0	$0.00	$2,477
Apr	622	0	17	4,140	$708	$0.1709	297	$947	$3.1910	385	$575	$1.4932	81	2,782	$268	$151	$419	$0.15	$2,648
May	379	11	24	4,376	$829	$0.1895	0	$0	$0.0000	159	$326	$2.0489	16	0	$0	$0	$0	$0.00	$1,155
Jun	87	37	24	5,473	$960	$0.1754	0	$0	$0.0000	18	$161	$8.9422	2	0	$0	$0	$0	$0.00	$1,121
Totals	**6,054**	**854**	**269**	**64,070**	**$11,074**	**$0.1728**	**1,966**	**$6,260**	**$3.1841**	**4,098**	**$5,778**	**$1.4099**	**693**	**10,042**	**$1,048**	**$668**	**$1,715**	**$0.17**	**$24,826**

Fiscal Year 2015

	Weather		*Electric*				*#2 Fuel Oil*			*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	266	29	8,221	$1,314	$0.1599	0	$0	$0.0000	17	$159	$9.3459	2	3,008	$273	$155	$428	$0.14	$1,902
Aug	2	187	27	7,174	$1,157	$0.1612	0	$0	$0.0000	16	$157	$9.8019	2	0	$0	$0	$0	$0.00	$1,314
Sep	33	152	27	6,358	$1,063	$0.1671	0	$0	$0.0000	17	$158	$9.3229	2	0	$0	$0	$0	$0.00	$1,221
Oct	167	20	26	4,988	$482	$0.0965	141	$426	$3.0323	15	$157	$10.4567	21	2,870	$272	$157	$430	$0.15	$1,494
Nov	518	1	21	4,412	$403	$0.0914	206	$625	$3.0323	30	$171	$5.6853	32	0	$0	$0	$0	$0.00	$1,199
Dec	877	0	15	4,557	$344	$0.0756	240	$728	$3.0323	752	$840	$1.1168	110	0	$0	$0	$0	$0.00	$1,913
Jan	1,188	0	15	5,109	$342	$0.0669	297	$901	$3.0323	899	$1,002	$1.1146	133	2,900	$271	$162	$433	$0.15	$2,677
Feb	1,307	0	17	5,269	$365	$0.0693	556	$1,685	$3.0323	1,191	$1,198	$1.0056	199	0	$0	$0	$0	$0.00	$3,248
Mar	1,086	0	18	5,265	$384	$0.0730	241	$731	$3.0323	904	$889	$0.9837	126	0	$0	$0	$0	$0.00	$2,005
Apr	753	0	15	4,258	$328	$0.0771	250	$758	$3.0323	462	$532	$1.1514	82	3,305	$280	$167	$447	$0.14	$2,066
May	241	46	25	4,849	$514	$0.1059	0	$0	$0.0000	24	$179	$7.4383	2	0	$0	$0	$0	$0.00	$692
Jun	81	103	28	5,355	$562	$0.1050	0	$0	$0.0000	17	$172	$10.1024	2	0	$0	$0	$0	$0.00	$734
Totals	**6,253**	**775**	**261**	**65,815**	**$7,258**	**$0.1103**	**1,931**	**$5,854**	**$3.0323**	**4,344**	**$5,613**	**$1.2920**	**713**	**12,083**	**$1,097**	**$641**	**$1,738**	**$0.14**	**$20,463**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	29	7,789	$1,277	$0.1640	0	$0	$3.1841	0	0.06441857	$1.4099	0	2,675	$266	$147	$413	$0.15	$1,690
Aug	21	200	29	7,086	$1,205	$0.1701	7	$22	$3.1841	14	$20	$1.4099	2	0	$0	$0	$0	$0.00	$1,247
Sep	119	63	29	6,377	$1,124	$0.1762	39	$124	$3.1841	81	$114	$1.4099	14	0	$0	$0	$0	$0.00	$1,361
Oct	409	0	27	4,699	$901	$0.1917	133	$423	$3.1841	277	$390	$1.4099	47	2,160	$254	$221	$475	$0.22	$2,188
Nov	644	0	25	4,730	$886	$0.1873	209	$666	$3.1841	436	$615	$1.4099	74	0	$0	$0	$0	$0.00	$2,167
Dec	1,114	0	15	4,819	$763	$0.1583	362	$1,152	$3.1841	754	$1,064	$1.4099	128	0	$0	$0	$0	$0.00	$2,979
Jan	1,145	0	17	4,928	$826	$0.1677	372	$1,184	$3.1841	775	$1,093	$1.4099	131	2,425	$260	$149	$409	$0.17	$3,513
Feb	1,007	0	17	5,205	$841	$0.1615	327	$1,041	$3.1841	681	$961	$1.4099	115	0	$0	$0	$0	$0.00	$2,842
Mar	778	0	17	4,448	$754	$0.1695	253	$804	$3.1841	526	$742	$1.4099	89	0	$0	$0	$0	$0.00	$2,300
Apr	450	1	17	4,140	$708	$0.1709	146	$465	$3.1841	305	$429	$1.4099	51	2,782	$268	$151	$419	$0.15	$2,021
May	167	27	24	4,376	$829	$0.1895	54	$173	$3.1841	113	$160	$1.4099	19	0	$0	$0	$0	$0.00	$1,162
Jun	65	133	24	5,473	$960	$0.1754	21	$67	$3.1841	44	$62	$1.4099	7	0	$0	$0	$0	$0.00	$1,088
Totals	**5,920**	**706**	**269**	**64,070**	**$11,074**	**$0.1728**	**1,922**	**$6,121**	**$3.1841**	**4,007**	**$5,650**	**$1.4099**	**677**	**10,042**	**$1,048**	**$668**	**$1,715**	**$0.17**	**$24,560**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	29	8,221	$1,314	$0.1599	0	$0	$3.0323	0	0.060586998	$1.2920	0	3,008	$273	$155	$428	$0.14	$1,743
Aug	21	200	27	7,174	$1,157	$0.1612	7	$20	$3.0323	15	$19	$1.2920	2	0	$0	$0	$0	$0.00	$1,196
Sep	119	63	27	6,358	$1,063	$0.1671	37	$112	$3.0323	83	$107	$1.2920	14	0	$0	$0	$0	$0.00	$1,282
Oct	409	0	26	4,988	$482	$0.0965	126	$383	$3.0323	284	$367	$1.2920	47	2,870	$272	$157	$430	$0.15	$1,661
Nov	644	0	21	4,412	$403	$0.0914	199	$603	$3.0323	448	$578	$1.2920	73	0	$0	$0	$0	$0.00	$1,584
Dec	1,114	0	15	4,557	$344	$0.0756	344	$1,043	$3.0323	774	$1,000	$1.2920	127	0	$0	$0	$0	$0.00	$2,388
Jan	1,145	0	15	5,109	$342	$0.0669	354	$1,072	$3.0323	796	$1,028	$1.2920	131	2,900	$271	$162	$433	$0.15	$2,875
Feb	1,007	0	17	5,269	$365	$0.0693	311	$943	$3.0323	699	$904	$1.2920	115	0	$0	$0	$0	$0.00	$2,211
Mar	778	0	18	5,265	$384	$0.0730	240	$728	$3.0323	540	$698	$1.2920	89	0	$0	$0	$0	$0.00	$1,811
Apr	450	1	15	4,258	$328	$0.0771	139	$421	$3.0323	313	$404	$1.2920	51	3,305	$280	$167	$447	$0.14	$1,601
May	167	27	25	4,849	$514	$0.1059	52	$157	$3.0323	116	$150	$1.2920	19	0	$0	$0	$0	$0.00	$820
Jun	65	133	28	5,355	$562	$0.1050	20	$61	$3.0323	45	$58	$1.2920	7	0	$0	$0	$0	$0.00	$681
Totals	**5,920**	**706**	**261**	**65,815**	**$7,258**	**$0.1103**	**1,828**	**$5,542**	**$3.0323**	**4,113**	**$5,314**	**$1.2920**	**675**	**12,083**	**$1,097**	**$641**	**$1,738**	**$0.14**	**$19,852**

AMERESCO

City of Bristol, CT

Utility Data Summary

Water Filtration Plant & High Service Pump Station

Delivery: Eversource
Account #: 51298493073
Meter #: 891608112
Tariff Rate: Rate 037
Supplier: Transcanada

Supplier East River Energy
Account #: N/A

Water Service: Bristol Water Department
Account #: 01-17546000
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	2	373	319	126,336	$16,680	$0.1320	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$16,680
Aug	0	252	292	122,496	$16,027	$0.1308	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$16,027
Sep	99	175	287	129,024	$15,598	$0.1209	0	$0	$0.0000	0	0	$0	$57	$57	$0.00	$15,655
Oct	310	6	278	86,016	$15,477	$0.1799	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$15,477
Nov	663	0	285	96,000	$13,558	$0.1412	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$13,558
Dec	1,001	0	277	110,976	$14,028	$0.1264	2,510	$7,673	$3.0569	348	0	$0	$57	$57	$0.00	$21,758
Jan	1,206	0	272	110,592	$14,543	$0.1315	2,360	$7,214	$3.0569	327	0	$0	$0	$0	$0.00	$21,757
Feb	1,056	0	264	94,464	$12,713	$0.1346	3,300	$11,154	$3.3800	458	0	$0	$0	$0	$0.00	$23,867
Mar	1,007	0	268	91,776	$11,971	$0.1304	4,100	$12,993	$3.1690	569	0	$0	$57	$57	$0.00	$25,021
Apr	508	0	274	86,784	$12,186	$0.1404	2,814	$8,772	$3.1174	390	0	$0	$0	$0	$0.00	$20,959
May	191	11	267	103,680	$13,981	$0.1349	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$13,981
Jun	11	37	275	115,200	$15,068	$0.1308	0	$0	$0.0000	0	0	$0	$57	$57	$0.00	$15,125
Totals	**6,054**	**854**	**3,358**	**1,273,344**	**$171,831**	**$0.1349**	**15,084**	**$47,806**	**$3.1693**	**2,092**	**0**	**$0**	**$229**	**$229**	**$0.00**	**$219,865**

Fiscal Year 2015

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	266	299	141,312	$18,096	$0.1281	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$18,096
Aug	2	187	297	136,320	$17,240	$0.1265	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$17,240
Sep	79	152	321	140,544	$11,497	$0.0818	0	$0	$0.0000	0	0	$0	$62	$62	$0.00	$11,558
Oct	282	20	277	105,600	$5,535	$0.0524	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$5,535
Nov	720	1	277	115,584	$5,713	$0.0494	2,900	$8,794	$3.0323	402	0	$0	$0	$0	$0.00	$14,506
Dec	896	0	278	100,992	$5,473	$0.0542	1,922	$5,828	$3.0323	267	0	$0	$62	$62	$0.00	$11,362
Jan	1,243	0	277	109,440	$5,498	$0.0502	3,700	$11,220	$3.0323	513	0	$0	$0	$0	$0.00	$16,717
Feb	1,354	0	285	90,240	$5,098	$0.0565	1,500	$4,548	$3.0323	208	0	$0	$0	$0	$0.00	$9,647
Mar	1,019	0	293	89,856	$5,176	$0.0576	2,001	$6,066	$3.0323	277	0	$0	$62	$62	$0.00	$11,304
Apr	511	0	305	104,064	$5,483	$0.0527	5,398	$16,368	$3.0323	749	0	$0	$0	$0	$0.00	$21,851
May	99	46	301	104,448	$5,489	$0.0525	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$5,489
Jun	54	103	285	108,288	$5,547	$0.0512	0	$0	$0.0000	0	0	$0	$62	$62	$0.00	$5,608
Totals	**6,259**	**775**	**3,494**	**1,346,688**	**$95,843**	**$0.0712**	**17,420**	**$52,824**	**$3.0323**	**2,416**	**0**	**$0**	**$246**	**$246**	**$0.00**	**$148,913**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	319	126,336	$16,680	$0.1320	0	$1	$3.1693	0	0	$0	$0	$0	$0.00	$16,680
Aug	21	200	292	122,496	$16,027	$0.1308	53	$168	$3.1693	7	0	$0	$0	$0	$0.00	$16,195
Sep	119	63	287	129,024	$15,598	$0.1209	298	$944	$3.1693	41	0	$0	$57	$57	$0.00	$16,599
Oct	409	0	278	86,016	$15,477	$0.1799	1,018	$3,228	$3.1693	141	0	$0	$0	$0	$0.00	$18,705
Nov	644	0	285	96,000	$13,558	$0.1412	1,605	$5,087	$3.1693	223	0	$0	$0	$0	$0.00	$18,645
Dec	1,114	0	277	110,976	$14,028	$0.1264	2,777	$8,800	$3.1693	385	0	$0	$57	$57	$0.00	$22,885
Jan	1,145	0	272	110,592	$14,543	$0.1315	2,853	$9,043	$3.1693	396	0	$0	$0	$0	$0.00	$23,586
Feb	1,007	0	264	94,464	$12,713	$0.1346	2,508	$7,950	$3.1693	348	0	$0	$0	$0	$0.00	$20,664
Mar	778	0	268	91,776	$11,971	$0.1304	1,938	$6,141	$3.1693	269	0	$0	$57	$57	$0.00	$18,169
Apr	450	1	274	86,784	$12,186	$0.1404	1,121	$3,554	$3.1693	156	0	$0	$0	$0	$0.00	$15,740
May	167	27	267	103,680	$13,981	$0.1349	417	$1,321	$3.1693	58	0	$0	$0	$0	$0.00	$15,303
Jun	65	133	275	115,200	$15,068	$0.1308	161	$510	$3.1693	22	0	$0	$57	$57	$0.00	$15,635
Totals	**5,920**	**706**	**3,358**	**1,273,344**	**$171,831**	**$0.1349**	**14,750**	**$46,746**	**$3.1693**	**2,046**	**0**	**$0**	**$229**	**$229**	**$0.00**	**$218,806**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	299	141,312	$18,096	$0.1281	0	$1	$3.0323	0	0	$0	$0	$0	$0.00	$18,096
Aug	21	200	297	136,320	$17,240	$0.1265	59	$179	$3.0323	8	0	$0	$0	$0	$0.00	$17,420
Sep	119	63	321	140,544	$11,497	$0.0818	333	$1,008	$3.0323	46	0	$0	$62	$62	$0.00	$12,567
Oct	409	0	277	105,600	$5,535	$0.0524	1,138	$3,449	$3.0323	158	0	$0	$0	$0	$0.00	$8,984
Nov	644	0	277	115,584	$5,713	$0.0494	1,793	$5,436	$3.0323	249	0	$0	$0	$0	$0.00	$11,149
Dec	1,114	0	278	100,992	$5,473	$0.0542	3,102	$9,406	$3.0323	430	0	$0	$62	$62	$0.00	$14,940
Jan	1,145	0	277	109,440	$5,498	$0.0502	3,187	$9,665	$3.0323	442	0	$0	$0	$0	$0.00	$15,163
Feb	1,007	0	285	90,240	$5,098	$0.0565	2,802	$8,497	$3.0323	389	0	$0	$0	$0	$0.00	$13,595
Mar	778	0	293	89,856	$5,176	$0.0576	2,165	$6,563	$3.0323	300	0	$0	$62	$62	$0.00	$11,801
Apr	450	1	305	104,064	$5,483	$0.0527	1,253	$3,798	$3.0323	174	0	$0	$0	$0	$0.00	$9,281
May	167	27	301	104,448	$5,489	$0.0525	466	$1,412	$3.0323	65	0	$0	$0	$0	$0.00	$6,901
Jun	65	133	285	108,288	$5,547	$0.0512	180	$546	$3.0323	25	0	$0	$62	$62	$0.00	$6,154
Totals	**5,920**	**706**	**3,494**	**1,346,688**	**$95,843**	**$0.0712**	**16,476**	**$49,961**	**$3.0323**	**2,285**	**0**	**$0**	**$246**	**$246**	**$0.00**	**$146,050**

City of Bristol, CT

Utility Data Summary

#1 Well House

Delivery: Eversource
Account #: 51430063040
Meter #: 890559102
Tariff Rate: Rate 030
Supplier: Transcanada

Supplier Account #:

Fiscal Year 2014

	Weather		*Electric*			
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended
Jul	2	373	26	2,640	$650	$0.2462
Aug	0	252	26	2,680	$663	$0.2473
Sep	99	175	26	2,400	$628	$0.2617
Oct	310	6	26	2,360	$623	$0.2642
Nov	663	0	27	2,680	$679	$0.2532
Dec	1,001	0	29	3,640	$806	$0.2214
Jan	1,206	0	29	3,920	$851	$0.2172
Feb	1,056	0	29	3,120	$745	$0.2388
Mar	1,007	0	4	1,560	$252	$0.1617
Apr	508	0	5	1,000	$195	$0.1951
May	191	11	6	1,000	$204	$0.2038
Jun	11	37	26	560	$401	$0.7160
Totals	**6,054**	**854**	**258**	**27,560**	**$6,697**	**$0.2430**

Fiscal Year 2015

	Weather		*Electric*			
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended
Jul	0	266	26	3,400	$719	$0.2116
Aug	2	187	26	3,560	$727	$0.2041
Sep	79	152	26	3,520	$726	$0.2062
Oct	282	20	26	3,760	$446	$0.1185
Nov	720	1	31	5,000	$543	$0.1086
Dec	896	0	31	5,120	$544	$0.1063
Jan	1,243	0	30	4,600	$565	$0.1228
Feb	1,354	0	31	4,560	$612	$0.1342
Mar	1,019	0	31	4,560	$612	$0.1342
Apr	511	0	32	4,240	$632	$0.1490
May	99	46	27	2,880	$516	$0.1792
Jun	54	103	27	2,760	$515	$0.1865
Totals	**6,259**	**775**	**341**	**47,960**	**$7,156**	**$0.1492**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*			
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended
Jul	0	281	26	2,640	$650	$0.2462
Aug	21	200	26	2,680	$663	$0.2473
Sep	119	63	26	2,400	$628	$0.2617
Oct	409	0	26	2,360	$623	$0.2642
Nov	644	0	27	2,680	$679	$0.2532
Dec	1,114	0	29	3,640	$806	$0.2214
Jan	1,145	0	29	3,920	$851	$0.2172
Feb	1,007	0	29	3,120	$745	$0.2388
Mar	778	0	4	1,560	$252	$0.1617
Apr	450	1	5	1,000	$195	$0.1951
May	167	27	6	1,000	$204	$0.2038
Jun	65	133	26	560	$401	$0.7160
Totals	**5,920**	**706**	**258**	**27,560**	**$6,697**	**$0.2430**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*			
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended
Jul	0	281	26	3,400	$719	$0.2116
Aug	21	200	26	3,560	$727	$0.2041
Sep	119	63	26	3,520	$726	$0.2062
Oct	409	0	26	3,760	$446	$0.1185
Nov	644	0	31	5,000	$543	$0.1086
Dec	1,114	0	31	5,120	$544	$0.1063
Jan	1,145	0	30	4,600	$565	$0.1228
Feb	1,007	0	31	4,560	$612	$0.1342
Mar	778	0	31	4,560	$612	$0.1342
Apr	450	1	32	4,240	$632	$0.1490
May	167	27	27	2,880	$516	$0.1792
Jun	65	133	27	2,760	$515	$0.1865
Totals	**5,920**	**706**	**341**	**47,960**	**$7,156**	**$0.1492**

City of Bristol, CT

Utility Data Summary

#2 Well House

Delivery: Eversource
Account #: 51844163030
Meter #: 890867202
Tariff Rate: Rate 035
Supplier: Transcanada

Supplier Account #:

Fiscal Year 2014

	Weather		*Electric*				*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	$
Jul	2	329	77	25,350	$3,966	$0.1565	$3,966
Aug	0	288	76	31,040	$4,544	$0.1464	$4,544
Sep	99	188	77	32,540	$4,699	$0.1444	$4,699
Oct	310	10	80	27,720	$4,254	$0.1535	$4,254
Nov	663	0	85	25,480	$4,079	$0.1601	$4,079
Dec	1,001	0	93	26,670	$4,263	$0.1598	$4,263
Jan	1,206	0	92	27,950	$4,442	$0.1589	$4,442
Feb	1,056	0	96	29,460	$4,546	$0.1543	$4,546
Mar	1,007	0	91	45,090	$6,049	$0.1342	$6,049
Apr	508	0	90	35,400	$5,087	$0.1437	$5,087
May	191	9	85	41,650	$5,669	$0.1361	$5,669
Jun	11	32	77	34,560	$4,914	$0.1422	$4,914
Totals	**6,054**	**856**	**1,019**	**382,910**	**$56,512**	**$0.1476**	**$56,512**

Fiscal Year 2015

	Weather		*Electric*				*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	$
Jul	0	246	75	43,790	$5,715	$0.1305	$5,715
Aug	2	200	75	37,960	$5,057	$0.1332	$5,057
Sep	79	166	0	29,940	$4,292	$0.1433	$4,292
Oct	282	12	77	1,255	$1,926	$1.5345	$1,926
Nov	720	9	79	1,042	$1,930	$1.8518	$1,930
Dec	896	0	84	952	$1,889	$1.9849	$1,889
Jan	1,243	0	92	1,020	$1,992	$1.9529	$1,992
Feb	1,354	0	89	1,251	$1,956	$1.5638	$1,956
Mar	1,019	0	94	1,153	$1,965	$1.7037	$1,965
Apr	511	0	86	829	$1,844	$2.2237	$1,844
May	99	38	81	987	$1,829	$1.8544	$1,829
Jun	54	77	77	1,152	$1,872	$1.6253	$1,872
Totals	**6,259**	**748**	**909**	**121,331**	**$32,267**	**$0.2659**	**$32,267**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	$
Jul	0	281	77	25,350	$3,966	$0.1565	$3,966
Aug	21	200	76	31,040	$4,544	$0.1464	$4,544
Sep	119	63	77	32,540	$4,699	$0.1444	$4,699
Oct	409	0	80	27,720	$4,254	$0.1535	$4,254
Nov	644	0	85	25,480	$4,079	$0.1601	$4,079
Dec	1,114	0	93	26,670	$4,263	$0.1598	$4,263
Jan	1,145	0	92	27,950	$4,442	$0.1589	$4,442
Feb	1,007	0	96	29,460	$4,546	$0.1543	$4,546
Mar	778	0	91	45,090	$6,049	$0.1342	$6,049
Apr	450	1	90	35,400	$5,087	$0.1437	$5,087
May	167	27	85	41,650	$5,669	$0.1361	$5,669
Jun	65	133	77	34,560	$4,914	$0.1422	$4,914
Totals	**5,920**	**706**	**1,019**	**382,910**	**$56,512**	**$0.1476**	**$56,512**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	$
Jul	0	281	75	43,790	$5,715	$0.1305	$5,715
Aug	21	200	75	37,960	$5,057	$0.1332	$5,057
Sep	119	63	0	29,940	$4,292	$0.1433	$4,292
Oct	409	0	77	1,255	$1,926	$1.5345	$1,926
Nov	644	0	79	1,042	$1,930	$1.8518	$1,930
Dec	1,114	0	84	952	$1,889	$1.9849	$1,889
Jan	1,145	0	92	1,020	$1,992	$1.9529	$1,992
Feb	1,007	0	89	1,251	$1,956	$1.5638	$1,956
Mar	778	0	94	1,153	$1,965	$1.7037	$1,965
Apr	450	1	86	829	$1,844	$2.2237	$1,844
May	167	27	81	987	$1,829	$1.8544	$1,829
Jun	65	133	77	1,152	$1,872	$1.6253	$1,872
Totals	**5,920**	**706**	**909**	**121,331**	**$32,267**	**$0.2659**	**$32,267**

City of Bristol, CT

Utility Data Summary

Chemical Control, Generator & #3-5 Well Houses

Delivery: Eversource
Account #: 51826553018
Meter #: 886092112
Tariff Rate: Rate 035
Supplier: Transcanada

Supplier Account #:

Fiscal Year 2014

	Weather		*Electric*				*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	$
Jul	2	282	95	49,600	$6,539	$0.1318	$6,539
Aug	0	324	94	53,920	$7,010	$0.1300	$7,010
Sep	99	171	93	42,880	$5,942	$0.1386	$5,942
Oct	310	40	95	40,800	$5,764	$0.1413	$5,764
Nov	663	0	99	40,800	$5,794	$0.1420	$5,794
Dec	1,001	0	108	47,200	$6,476	$0.1372	$6,476
Jan	1,206	0	118	52,160	$7,175	$0.1376	$7,175
Feb	1,056	0	120	54,880	$7,371	$0.1343	$7,371
Mar	1,007	0	116	52,800	$7,140	$0.1352	$7,140
Apr	508	0	115	52,000	$7,050	$0.1356	$7,050
May	191	0	99	49,760	$6,719	$0.1350	$6,719
Jun	11	36	91	46,400	$6,332	$0.1365	$6,332
Totals	**6,054**	**853**	**1,243**	**583,200**	**$79,311**	**$0.1360**	**$79,311**

Fiscal Year 2015

	Weather		*Electric*				*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	$
Jul	0	203	88	40,640	$5,677	$0.1397	$5,677
Aug	2	234	89	34,400	$4,960	$0.1442	$4,960
Sep	79	174	87	23,680	$3,933	$0.1661	$3,933
Oct	282	17	93	33,760	$2,164	$0.0641	$2,164
Nov	720	10	96	30,720	$2,148	$0.0699	$2,148
Dec	896	0	113	32,640	$2,282	$0.0699	$2,282
Jan	1,243	0	117	39,360	$2,381	$0.0605	$2,381
Feb	1,354	0	118	41,280	$2,376	$0.0576	$2,376
Mar	1,019	0	119	43,360	$2,412	$0.0556	$2,412
Apr	511	0	112	27,520	$2,192	$0.0796	$2,192
May	99	21	102	30,720	$2,166	$0.0705	$2,166
Jun	54	78	104	38,240	$2,260	$0.0591	$2,260
Totals	**6,259**	**737**	**1,237**	**416,320**	**$34,949**	**$0.0839**	**$34,949**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	$
Jul	0	281	95	49,600	$6,539	$0.1318	$6,539
Aug	21	200	94	53,920	$7,010	$0.1300	$7,010
Sep	119	63	93	42,880	$5,942	$0.1386	$5,942
Oct	409	0	95	40,800	$5,764	$0.1413	$5,764
Nov	644	0	99	40,800	$5,794	$0.1420	$5,794
Dec	1,114	0	108	47,200	$6,476	$0.1372	$6,476
Jan	1,145	0	118	52,160	$7,175	$0.1376	$7,175
Feb	1,007	0	120	54,880	$7,371	$0.1343	$7,371
Mar	778	0	116	52,800	$7,140	$0.1352	$7,140
Apr	450	1	115	52,000	$7,050	$0.1356	$7,050
May	167	27	99	49,760	$6,719	$0.1350	$6,719
Jun	65	133	91	46,400	$6,332	$0.1365	$6,332
Totals	**5,920**	**706**	**1,243**	**583,200**	**$79,311**	**$0.1360**	**$79,311**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	$
Jul	0	281	88	40,640	$5,677	$0.1397	$5,677
Aug	21	200	89	34,400	$4,960	$0.1442	$4,960
Sep	119	63	87	23,680	$3,933	$0.1661	$3,933
Oct	409	0	93	33,760	$2,164	$0.0641	$2,164
Nov	644	0	96	30,720	$2,148	$0.0699	$2,148
Dec	1,114	0	113	32,640	$2,282	$0.0699	$2,282
Jan	1,145	0	117	39,360	$2,381	$0.0605	$2,381
Feb	1,007	0	118	41,280	$2,376	$0.0576	$2,376
Mar	778	0	119	43,360	$2,412	$0.0556	$2,412
Apr	450	1	112	27,520	$2,192	$0.0796	$2,192
May	167	27	102	30,720	$2,166	$0.0705	$2,166
Jun	65	133	104	38,240	$2,260	$0.0591	$2,260
Totals	**5,920**	**706**	**1,237**	**416,320**	**$34,949**	**$0.0839**	**$34,949**

City of Bristol, CT

Utility Data Summary

Chemical Control - Mechanic St

Delivery: Eversource
Account #: 51596674077
Meter #: 866330802
Tariff Rate: Rate 001
Supplier: Eversource

Supplier Account #:

Fiscal Year 2014

	Weather		*Electric*				*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	$
Jul	2	282	0	0	$16	#DIV/0!	$16
Aug	0	324	0	0	$16	#DIV/0!	$16
Sep	99	171	0	58	$24	$0.4157	$24
Oct	310	40	0	0	$16	#DIV/0!	$16
Nov	663	0	0	0	$16	#DIV/0!	$16
Dec	1,001	0	0	1	$16	$16.1400	$16
Jan	1,206	0	0	0	$16	#DIV/0!	$16
Feb	1,056	0	0	0	$16	#DIV/0!	$16
Mar	1,007	0	0	0	$16	#DIV/0!	$16
Apr	508	0	0	0	$16	#DIV/0!	$16
May	191	0	0	0	$16	#DIV/0!	$16
Jun	11	36	0	0	$16	#DIV/0!	$16
Totals	**6,054**	**853**	**0**	**59**	**$200**	**$3.3941**	**$200**

Fiscal Year 2015

	Weather		*Electric*				*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	$
Jul	0	203	0	0	$16	#DIV/0!	$16
Aug	2	234	0	0	$16	#DIV/0!	$16
Sep	79	175	0	0	$16	#DIV/0!	$16
Oct	282	16	0	1	$16	$16.1700	$16
Nov	720	10	0	0	$16	#DIV/0!	$16
Dec	896	0	0	0	$16	#DIV/0!	$16
Jan	1,243	0	0	0	$17	#DIV/0!	$17
Feb	1,354	0	0	18	$23	$1.2633	$23
Mar	1,019	0	0	44	$28	$0.6311	$28
Apr	511	0	0	0	$19	#DIV/0!	$19
May	99	21	0	0	$19	#DIV/0!	$19
Jun	54	78	0	11	$21	$1.9445	$21
Totals	**6,259**	**737**	**0**	**74**	**$224**	**$3.0236**	**$224**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	$
Jul	0	281	0	0	$16	#DIV/0!	$16
Aug	21	200	0	0	$16	#DIV/0!	$16
Sep	119	63	0	58	$24	$0.4157	$24
Oct	409	0	0	0	$16	#DIV/0!	$16
Nov	644	0	0	0	$16	#DIV/0!	$16
Dec	1,114	0	0	1	$16	$16.1400	$16
Jan	1,145	0	0	0	$16	#DIV/0!	$16
Feb	1,007	0	0	0	$16	#DIV/0!	$16
Mar	778	0	0	0	$16	#DIV/0!	$16
Apr	450	1	0	0	$16	#DIV/0!	$16
May	167	27	0	0	$16	#DIV/0!	$16
Jun	65	133	0	0	$16	#DIV/0!	$16
Totals	**5,920**	**706**	**0**	**59**	**$200**	**$3.3941**	**$200**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	$
Jul	0	281	0	0	$16	#DIV/0!	$16
Aug	21	200	0	0	$16	#DIV/0!	$16
Sep	119	63	0	0	$16	#DIV/0!	$16
Oct	409	0	0	1	$16	$16.1700	$16
Nov	644	0	0	0	$16	#DIV/0!	$16
Dec	1,114	0	0	0	$16	#DIV/0!	$16
Jan	1,145	0	0	0	$17	#DIV/0!	$17
Feb	1,007	0	0	18	$23	$1.2633	$23
Mar	778	0	0	44	$28	$0.6311	$28
Apr	450	1	0	0	$19	#DIV/0!	$19
May	167	27	0	0	$19	#DIV/0!	$19
Jun	65	133	0	11	$21	$1.9445	$21
Totals	**5,920**	**706**	**0**	**74**	**$224**	**$3.0236**	**$224**

City of Bristol, CT

Utility Data Summary

Pump Control - Peck Lane

Delivery: Eversource
Account #: 51078993052
Meter #: 889149882
Tariff Rate: Rate 030
Supplier: Transcanada

Supplier Account #:

Fiscal Year 2014

	Weather		*Electric*				*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	$
Jul	2	425	36	5,490	$1,111	$0.2023	$1,111
Aug	0	189	36	5,660	$1,134	$0.2004	$1,134
Sep	99	121	67	5,220	$1,501	$0.2875	$1,501
Oct	310	6	44	8,380	$1,560	$0.1861	$1,560
Nov	663	0	47	11,500	$1,952	$0.1697	$1,952
Dec	1,001	0	78	13,990	$2,644	$0.1890	$2,644
Jan	1,206	0	50	13,010	$2,209	$0.1698	$2,209
Feb	1,056	0	50	12,300	$2,090	$0.1700	$2,090
Mar	1,007	0	50	10,770	$1,910	$0.1774	$1,910
Apr	508	0	50	8,170	$1,601	$0.1960	$1,601
May	191	11	68	6,840	$1,665	$0.2434	$1,665
Jun	11	81	39	5,380	$1,139	$0.2117	$1,139
Totals	**6,054**	**833**	**616**	**106,710**	**$20,515**	**$0.1923**	**$20,515**

Fiscal Year 2015

	Weather		*Electric*				*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	$
Jul	0	299	35	6,380	$1,169	$0.1833	$1,169
Aug	2	142	66	5,600	$1,438	$0.2567	$1,438
Sep	79	124	36	5,620	$620	$0.1104	$620
Oct	282	17	42	5,070	$684	$0.1349	$684
Nov	720	0	43	8,020	$787	$0.0982	$787
Dec	896	0	76	10,470	$1,257	$0.1201	$1,257
Jan	1,243	0	50	10,750	$1,017	$0.0946	$1,017
Feb	1,354	0	50	13,110	$1,050	$0.0801	$1,050
Mar	1,019	0	50	10,810	$1,022	$0.0946	$1,022
Apr	511	0	60	9,090	$1,180	$0.1298	$1,180
May	99	63	42	6,330	$827	$0.1306	$827
Jun	54	138	65	5,650	$1,224	$0.2167	$1,224
Totals	**6,259**	**783**	**613**	**96,900**	**$12,277**	**$0.1267**	**$12,277**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	$
Jul	0	281	36	5,490	$1,111	$0.2023	$1,111
Aug	21	200	36	5,660	$1,134	$0.2004	$1,134
Sep	119	63	67	5,220	$1,501	$0.2875	$1,501
Oct	409	0	44	8,380	$1,560	$0.1861	$1,560
Nov	644	0	47	11,500	$1,952	$0.1697	$1,952
Dec	1,114	0	78	13,990	$2,644	$0.1890	$2,644
Jan	1,145	0	50	13,010	$2,209	$0.1698	$2,209
Feb	1,007	0	50	12,300	$2,090	$0.1700	$2,090
Mar	778	0	50	10,770	$1,910	$0.1774	$1,910
Apr	450	1	50	8,170	$1,601	$0.1960	$1,601
May	167	27	68	6,840	$1,665	$0.2434	$1,665
Jun	65	133	39	5,380	$1,139	$0.2117	$1,139
Totals	**5,920**	**706**	**616**	**106,710**	**$20,515**	**$0.1923**	**$20,515**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	$
Jul	0	281	35	6,380	$1,169	$0.1833	$1,169
Aug	21	200	66	5,600	$1,438	$0.2567	$1,438
Sep	119	63	36	5,620	$620	$0.1104	$620
Oct	409	0	42	5,070	$684	$0.1349	$684
Nov	644	0	43	8,020	$787	$0.0982	$787
Dec	1,114	0	76	10,470	$1,257	$0.1201	$1,257
Jan	1,145	0	50	10,750	$1,017	$0.0946	$1,017
Feb	1,007	0	50	13,110	$1,050	$0.0801	$1,050
Mar	778	0	50	10,810	$1,022	$0.0946	$1,022
Apr	450	1	60	9,090	$1,180	$0.1298	$1,180
May	167	27	42	6,330	$827	$0.1306	$827
Jun	65	133	65	5,650	$1,224	$0.2167	$1,224
Totals	**5,920**	**706**	**613**	**96,900**	**$12,277**	**$0.1267**	**$12,277**

City of Bristol, CT

Utility Data Summary

Pump Control & Generator - Hill St.

Delivery: Eversource
Account #: 51383853066
Meter #: 892240692
Tariff Rate: Rate 030
Supplier: Transcanada

Supplier East River Energy
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*#2 Fuel Oil*			*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	$
Jul	2	373	100	9,280	$2,363	$0.2547	0	$0	$0.0000	$2,363
Aug	0	252	101	8,640	$2,386	$0.2762	0	$0	$0.0000	$2,386
Sep	99	175	99	9,760	$2,195	$0.2249	0	$0	$0.0000	$2,195
Oct	310	6	53	4,800	$1,422	$0.2963	0	$0	$0.0000	$1,422
Nov	663	0	56	4,320	$1,280	$0.2962	0	$0	$0.0000	$1,280
Dec	1,001	0	57	5,600	$1,455	$0.2599	209	$640	$3.0569	$2,095
Jan	1,206	0	62	6,720	$1,759	$0.2617	324	$990	$3.0569	$2,749
Feb	1,056	0	57	6,560	$1,554	$0.2369	248	$847	$3.4131	$2,401
Mar	1,007	0	59	6,240	$1,402	$0.2246	220	$743	$3.3800	$2,144
Apr	508	0	57	5,120	$1,260	$0.2461	309	$985	$3.1909	$2,245
May	191	11	53	6,720	$1,355	$0.2016	0	$0	$0.0000	$1,355
Jun	11	37	152	9,760	$2,874	$0.2944	0	$0	$0.0000	$2,874
Totals	**6,054**	**854**	**904**	**83,520**	**$21,305**	**$0.2551**	**1,310**	**$4,205**	**$3.2102**	**$25,510**

Fiscal Year 2015

	Weather		*Electric*				*#2 Fuel Oil*			*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	$
Jul	0	266	153	12,160	$3,279	$0.2697	0	$0	$0.0000	$3,279
Aug	2	187	52	9,440	$1,715	$0.1817	0	$0	$0.0000	$1,715
Sep	79	152	53	8,960	$1,664	$0.1857	0	$0	$0.0000	$1,664
Oct	282	20	53	5,120	$808	$0.1577	150	$455	$3.0323	$1,263
Nov	720	1	53	4,960	$802	$0.1618	143	$435	$3.0323	$1,237
Dec	896	0	56	5,920	$879	$0.1484	165	$499	$3.0323	$1,378
Jan	1,243	0	59	6,880	$1,051	$0.1528	339	$1,028	$3.0323	$2,079
Feb	1,354	0	110	6,720	$2,052	$0.3054	382	$1,159	$3.0323	$3,211
Mar	1,019	0	111	6,080	$2,052	$0.3375	231	$701	$3.0323	$2,753
Apr	511	0	153	6,880	$2,814	$0.4091	271	$820	$3.0323	$3,635
May	99	46	152	6,880	$2,800	$0.4070	0	$0	$0.0000	$2,800
Jun	54	103	148	8,480	$2,743	$0.3235	0	$0	$0.0000	$2,743
Totals	**6,259**	**775**	**1,151**	**88,480**	**$22,661**	**$0.2561**	**1,681**	**$5,097**	**$3.0323**	**$27,757**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	$
Jul	0	281	100	9,280	$2,363	$0.2547	0	$0	$3.2102	$2,363
Aug	21	200	101	8,640	$2,386	$0.2762	5	$15	$3.2102	$2,401
Sep	119	63	99	9,760	$2,195	$0.2249	26	$83	$3.2102	$2,278
Oct	409	0	53	4,800	$1,422	$0.2963	88	$284	$3.2102	$1,706
Nov	644	0	56	4,320	$1,280	$0.2962	139	$447	$3.2102	$1,727
Dec	1,114	0	57	5,600	$1,455	$0.2599	241	$774	$3.2102	$2,230
Jan	1,145	0	62	6,720	$1,759	$0.2617	248	$796	$3.2102	$2,554
Feb	1,007	0	57	6,560	$1,554	$0.2369	218	$699	$3.2102	$2,253
Mar	778	0	59	6,240	$1,402	$0.2246	168	$540	$3.2102	$1,942
Apr	450	1	57	5,120	$1,260	$0.2461	97	$313	$3.2102	$1,573
May	167	27	53	6,720	$1,355	$0.2016	36	$116	$3.2102	$1,471
Jun	65	133	152	9,760	$2,874	$0.2944	14	$45	$3.2102	$2,919
Totals	**5,920**	**706**	**904**	**83,520**	**$21,305**	**$0.2551**	**1,281**	**$4,112**	**$3.2102**	**$25,417**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	$
Jul	0	281	153	12,160	$3,279	$0.2697	0	$0	$3.0323	$3,279
Aug	21	200	52	9,440	$1,715	$0.1817	6	$17	$3.0323	$1,733
Sep	119	63	53	8,960	$1,664	$0.1857	32	$97	$3.0323	$1,761
Oct	409	0	53	5,120	$808	$0.1577	110	$333	$3.0323	$1,140
Nov	644	0	53	4,960	$802	$0.1618	173	$525	$3.0323	$1,327
Dec	1,114	0	56	5,920	$879	$0.1484	299	$907	$3.0323	$1,786
Jan	1,145	0	59	6,880	$1,051	$0.1528	308	$933	$3.0323	$1,984
Feb	1,007	0	110	6,720	$2,052	$0.3054	270	$820	$3.0323	$2,872
Mar	778	0	111	6,080	$2,052	$0.3375	209	$633	$3.0323	$2,685
Apr	450	1	153	6,880	$2,814	$0.4091	121	$366	$3.0323	$3,181
May	167	27	152	6,880	$2,800	$0.4070	45	$136	$3.0323	$2,936
Jun	65	133	148	8,480	$2,743	$0.3235	17	$53	$3.0323	$2,796
Totals	**5,920**	**706**	**1,151**	**88,480**	**$22,661**	**$0.2561**	**1,590**	**$4,820**	**$3.0323**	**$27,481**

City of Bristol, CT

Utility Data Summary

Pump and Control - Wolcott St

Delivery: Eversource
Account #: 51142234020
Meter #: 890527152
Tariff Rate: Rate 030
Supplier: Transcanada

Supplier Account #:

Fiscal Year 2014

	Weather		*Electric*				*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	$
Jul	2	425	36	2,060	$713	$0.3463	$713
Aug	0	189	36	2,331	$757	$0.3249	$757
Sep	99	121	35	1,873	$694	$0.3707	$694
Oct	310	6	36	1,990	$709	$0.3563	$709
Nov	663	0	37	3,137	$855	$0.2726	$855
Dec	1,001	0	39	4,283	$1,021	$0.2384	$1,021
Jan	1,206	0	41	4,752	$1,100	$0.2316	$1,100
Feb	1,056	0	41	4,510	$1,059	$0.2348	$1,059
Mar	1,007	0	41	4,066	$1,009	$0.2482	$1,009
Apr	508	0	40	3,263	$895	$0.2741	$895
May	191	11	37	2,859	$818	$0.2862	$818
Jun	11	81	36	2,093	$710	$0.3394	$710
Totals	**6,054**	**833**	**455**	**37,217**	**$10,342**	**$0.2779**	**$10,342**

Fiscal Year 2015

	Weather		*Electric*				*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	$
Jul	0	299	36	2,374	$715	$0.3013	$715
Aug	2	142	36	2,117	$681	$0.3215	$681
Sep	79	124	36	1,816	$499	$0.2747	$499
Oct	282	17	36	1,988	$509	$0.2561	$509
Nov	720	0	39	3,219	$586	$0.1820	$586
Dec	896	0	39	4,179	$613	$0.1468	$613
Jan	1,243	0	40	4,328	$757	$0.1749	$757
Feb	1,354	0	41	5,053	$802	$0.1586	$802
Mar	1,019	0	40	3,886	$769	$0.1978	$769
Apr	511	0	68	3,319	$1,258	$0.3791	$1,258
May	99	63	35	2,062	$664	$0.3220	$664
Jun	54	138	36	2,166	$669	$0.3087	$669
Totals	**6,259**	**783**	**481**	**36,507**	**$8,521**	**$0.2334**	**$8,521**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	$
Jul	0	281	36	2,060	$713	$0.3463	$713
Aug	21	200	36	2,331	$757	$0.3249	$757
Sep	119	63	35	1,873	$694	$0.3707	$694
Oct	409	0	36	1,990	$709	$0.3563	$709
Nov	644	0	37	3,137	$855	$0.2726	$855
Dec	1,114	0	39	4,283	$1,021	$0.2384	$1,021
Jan	1,145	0	41	4,752	$1,100	$0.2316	$1,100
Feb	1,007	0	41	4,510	$1,059	$0.2348	$1,059
Mar	778	0	41	4,066	$1,009	$0.2482	$1,009
Apr	450	1	40	3,263	$895	$0.2741	$895
May	167	27	37	2,859	$818	$0.2862	$818
Jun	65	133	36	2,093	$710	$0.3394	$710
Totals	**5,920**	**706**	**455**	**37,217**	**$10,342**	**$0.2779**	**$10,342**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	$
Jul	0	281	36	2,374	$715	$0.3013	$715
Aug	21	200	36	2,117	$681	$0.3215	$681
Sep	119	63	36	1,816	$499	$0.2747	$499
Oct	409	0	36	1,988	$509	$0.2561	$509
Nov	644	0	39	3,219	$586	$0.1820	$586
Dec	1,114	0	39	4,179	$613	$0.1468	$613
Jan	1,145	0	40	4,328	$757	$0.1749	$757
Feb	1,007	0	41	5,053	$802	$0.1586	$802
Mar	778	0	40	3,886	$769	$0.1978	$769
Apr	450	1	68	3,319	$1,258	$0.3791	$1,258
May	167	27	35	2,062	$664	$0.3220	$664
Jun	65	133	36	2,166	$669	$0.3087	$669
Totals	**5,920**	**706**	**481**	**36,507**	**$8,521**	**$0.2334**	**$8,521**

City of Bristol, CT

Utility Data Summary

Police Court & Parking Garage

Delivery: Eversource
Account #: 51599553047
Meter #: 891790242
Tariff Rate: Rate 037
Supplier: Liberty Power Holdings

Supplier East River Energy
Account #: N/A

Water Service: Bristol Water Department
Account #: 01-3766000
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	2	373	248	113,040	$16,907	$0.1496	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$16,907
Aug	0	252	248	126,000	$17,346	$0.1377	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$17,346
Sep	99	175	248	120,960	$16,029	$0.1325	0	$0	$0.0000	0	39,200	$1,030	$831	$1,861	$0.05	$17,890
Oct	310	6	194	82,800	$12,123	$0.1464	1,500	$4,585	$3.0569	208	0	$0	$0	$0	$0.00	$16,708
Nov	663	0	153	80,640	$11,753	$0.1457	2,650	$8,101	$3.0569	368	0	$0	$0	$0	$0.00	$19,853
Dec	1,001	0	187	87,840	$14,421	$0.1642	6,350	$19,411	$3.0569	881	24,150	$682	$531	$1,213	$0.05	$35,045
Jan	1,206	0	192	87,120	$14,516	$0.1666	7,000	$21,398	$3.0569	971	0	$0	$0	$0	$0.00	$35,915
Feb	1,056	0	187	82,800	$14,879	$0.1797	7,230	$23,812	$3.2935	1,003	0	$0	$0	$0	$0.00	$38,691
Mar	1,007	0	184	86,400	$12,780	$0.1479	5,250	$17,298	$3.2949	728	13,250	$430	$313	$743	$0.06	$30,822
Apr	508	0	171	79,920	$12,093	$0.1513	2,700	$8,624	$3.1940	374	0	$0	$0	$0	$0.00	$20,717
May	191	11	163	75,600	$13,113	$0.1735	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$13,113
Jun	11	37	216	100,080	$16,754	$0.1674	0	$0	$0.0000	0	12,050	$402	$289	$692	$0.06	$17,445
Totals	**6,054**	**854**	**2,390**	**1,123,200**	**$172,713**	**$0.1538**	**32,680**	**$103,230**	**$3.1588**	**4,533**	**88,650**	**$2,544**	**$1,964**	**$4,508**	**$0.05**	**$280,452**

Fiscal Year 2015

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	266	260	120,240	$18,074	$0.1503	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$18,074
Aug	2	187	248	116,640	$17,290	$0.1482	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$17,290
Sep	79	152	251	109,440	$16,486	$0.1506	0	$0	$0.0000	0	33,250	$892	$756	$1,648	$0.05	$18,134
Oct	282	20	259	80,640	$4,639	$0.0575	3,000	$9,097	$3.0323	416	0	$0	$0	$0	$0.00	$13,737
Nov	720	1	202	84,240	$4,481	$0.0532	2,500	$7,581	$3.0323	347	0	$0	$0	$0	$0.00	$12,062
Dec	896	0	177	82,800	$4,396	$0.0531	5,150	$15,616	$3.0323	714	27,210	$753	$628	$1,381	$0.05	$21,393
Jan	1,243	0	177	89,280	$14,311	$0.1603	6,175	$18,724	$3.0323	856	0	$0	$0	$0	$0.00	$33,035
Feb	1,354	0	187	88,560	$11,181	$0.1262	7,330	$22,227	$3.0323	1,017	0	$0	$0	$0	$0.00	$33,407
Mar	1,019	0	183	82,800	$10,624	$0.1283	7,600	$23,045	$3.0323	1,054	13,300	$431	$334	$765	$0.06	$34,435
Apr	511	0	166	82,800	$10,571	$0.1277	3,030	$9,188	$3.0323	420	0	$0	$0	$0	$0.00	$19,758
May	99	46	234	91,440	$11,584	$0.1267	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$11,584
Jun	54	103	234	100,080	$12,464	$0.1245	0	$0	$0.0000	0	13,150	$428	$331	$759	$0.06	$13,223
Totals	**6,259**	**775**	**2,577**	**1,128,960**	**$136,100**	**$0.1206**	**34,785**	**$105,479**	**$3.0323**	**4,825**	**86,910**	**$2,504**	**$2,050**	**$4,553**	**$0.05**	**$246,132**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	248	113,040	$16,907	$0.1496	0	$1	$3.1588	0	0	$0	$0	$0	$0.00	$16,908
Aug	21	200	248	126,000	$17,346	$0.1377	115	$362	$3.1588	16	0	$0	$0	$0	$0.00	$17,708
Sep	119	63	248	120,960	$16,029	$0.1325	645	$2,037	$3.1588	89	39,200	$1,030	$831	$1,861	$0.05	$19,927
Oct	409	0	194	82,800	$12,123	$0.1464	2,206	$6,969	$3.1588	306	0	$0	$0	$0	$0.00	$19,092
Nov	644	0	153	80,640	$11,753	$0.1457	3,477	$10,984	$3.1588	482	0	$0	$0	$0	$0.00	$22,737
Dec	1,114	0	187	87,840	$14,421	$0.1642	6,016	$19,003	$3.1588	834	24,150	$682	$531	$1,213	$0.05	$34,636
Jan	1,145	0	192	87,120	$14,516	$0.1666	6,182	$19,528	$3.1588	857	0	$0	$0	$0	$0.00	$34,045
Feb	1,007	0	187	82,800	$14,879	$0.1797	5,435	$17,167	$3.1588	754	0	$0	$0	$0	$0.00	$32,046
Mar	778	0	184	86,400	$12,780	$0.1479	4,198	$13,261	$3.1588	582	13,250	$430	$313	$743	$0.06	$26,785
Apr	450	1	171	79,920	$12,093	$0.1513	2,429	$7,673	$3.1588	337	0	$0	$0	$0	$0.00	$19,766
May	167	27	163	75,600	$13,113	$0.1735	903	$2,853	$3.1588	125	0	$0	$0	$0	$0.00	$15,966
Jun	65	133	216	100,080	$16,754	$0.1674	349	$1,102	$3.1588	48	12,050	$402	$289	$692	$0.06	$18,548
Totals	**5,920**	**706**	**2,390**	**1,123,200**	**$172,713**	**$0.1538**	**31,956**	**$100,942**	**$3.1588**	**4,432**	**88,650**	**$2,544**	**$1,964**	**$4,508**	**$0.05**	**$278,163**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	260	120,240	$18,074	$0.1503	0	$1	$3.0323	0	0	$0	$0	$0	$0.00	$18,075
Aug	21	200	248	116,640	$17,290	$0.1482	118	$358	$3.0323	16	0	$0	$0	$0	$0.00	$17,648
Sep	119	63	251	109,440	$16,486	$0.1506	664	$2,014	$3.0323	92	33,250	$892	$756	$1,648	$0.05	$20,147
Oct	409	0	259	80,640	$4,639	$0.0575	2,272	$6,888	$3.0323	315	0	$0	$0	$0	$0.00	$11,527
Nov	644	0	202	84,240	$4,481	$0.0532	3,580	$10,856	$3.0323	497	0	$0	$0	$0	$0.00	$15,337
Dec	1,114	0	177	82,800	$4,396	$0.0531	6,194	$18,781	$3.0323	859	27,210	$753	$628	$1,381	$0.05	$24,558
Jan	1,145	0	177	89,280	$14,311	$0.1603	6,365	$19,300	$3.0323	883	0	$0	$0	$0	$0.00	$33,610
Feb	1,007	0	187	88,560	$11,181	$0.1262	5,595	$16,966	$3.0323	776	0	$0	$0	$0	$0.00	$28,147
Mar	778	0	183	82,800	$10,624	$0.1283	4,322	$13,106	$3.0323	599	13,300	$431	$334	$765	$0.06	$24,495
Apr	450	1	166	82,800	$10,571	$0.1277	2,501	$7,584	$3.0323	347	0	$0	$0	$0	$0.00	$18,154
May	167	27	234	91,440	$11,584	$0.1267	930	$2,819	$3.0323	129	0	$0	$0	$0	$0.00	$14,404
Jun	65	133	234	100,080	$12,464	$0.1245	359	$1,089	$3.0323	50	13,150	$428	$331	$759	$0.06	$14,312
Totals	**5,920**	**706**	**2,577**	**1,128,960**	**$136,100**	**$0.1206**	**32,900**	**$99,762**	**$3.0323**	**4,563**	**86,910**	**$2,504**	**$2,050**	**$4,553**	**$0.05**	**$240,416**

City of Bristol, CT

Utility Data Summary

Rockwell Park & Pavilion

Delivery: Eversource
Account #: 51186753091
Meter #: 892336942
Tariff Rate: Rate 030
Supplier: Liberty Power Holdings

Supplier East River Energy
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	$
Jul	2	373	9	1,874	$326	$0.1741	0	$0	$0.0000	0	$326
Aug	0	252	9	1,806	$319	$0.1764	0	$0	$0.0000	0	$319
Sep	99	175	8	1,605	$288	$0.1792	0	$0	$0.0000	0	$288
Oct	310	6	5	1,346	$228	$0.1695	0	$0	$0.0000	0	$228
Nov	663	0	6	1,435	$240	$0.1675	847	$2,588	$3.0569	117	$2,828
Dec	1,001	0	7	1,951	$310	$0.1591	334	$1,021	$3.0569	46	$1,332
Jan	1,206	0	8	2,438	$409	$0.1676	432	$1,320	$3.0569	60	$1,729
Feb	1,056	0	10	2,740	$478	$0.1745	597	$1,824	$3.0569	83	$2,302
Mar	1,007	0	8	2,364	$411	$0.1737	786	$2,657	$3.3800	109	$3,068
Apr	508	0	8	1,775	$338	$0.1901	976	$3,120	$3.1954	135	$3,457
May	191	11	6	1,838	$324	$0.1764	0	$0	$0.0000	0	$324
Jun	11	37	7	1,821	$327	$0.1796	0	$0	$0.0000	0	$327
Totals	**6,054**	**854**	**89**	**22,993**	**$3,997**	**$0.1738**	**3,972**	**$12,530**	**$3.1549**	**551**	**$16,527**

Fiscal Year 2015

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	$
Jul	0	266	9	2,234	$416	$0.1863	0	$0	$0.0000	0	$416
Aug	2	187	9	1,825	$360	$0.1971	0	$0	$0.0000	0	$360
Sep	79	152	8	1,678	$334	$0.1992	0	$0	$0.0000	0	$334
Oct	282	20	8	1,451	$305	$0.2099	118	$358	$3.0323	16	$663
Nov	720	1	8	1,731	$339	$0.1958	468	$1,418	$3.0323	65	$1,757
Dec	896	0	6	1,635	$306	$0.1871	493	$1,494	$3.0323	68	$1,800
Jan	1,243	0	6	1,816	$339	$0.1865	685	$2,076	$3.0323	95	$2,415
Feb	1,354	0	6	2,005	$294	$0.1467	1,367	$4,144	$3.0323	190	$4,438
Mar	1,019	0	8	1,760	$308	$0.1753	515	$1,562	$3.0323	71	$1,870
Apr	511	0	8	1,618	$296	$0.1830	591	$1,793	$3.0323	82	$2,089
May	99	46	5	1,592	$240	$0.1509	0	$0	$0.0000	0	$240
Jun	54	103	7	1,602	$266	$0.1661	0	$0	$0.0000	0	$266
Totals	**6,259**	**775**	**89**	**20,947**	**$3,803**	**$0.1816**	**4,236**	**$12,845**	**$3.0323**	**588**	**$16,649**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	$
Jul	0	281	9	1,874	$326	$0.1741	0	$0	$3.1549	0	$326
Aug	21	200	9	1,806	$319	$0.1764	14	$44	$3.1549	2	$363
Sep	119	63	8	1,605	$288	$0.1792	78	$247	$3.1549	11	$535
Oct	409	0	5	1,346	$228	$0.1695	268	$846	$3.1549	37	$1,074
Nov	644	0	6	1,435	$240	$0.1675	423	$1,333	$3.1549	59	$1,574
Dec	1,114	0	7	1,951	$310	$0.1591	731	$2,307	$3.1549	101	$2,617
Jan	1,145	0	8	2,438	$409	$0.1676	751	$2,370	$3.1549	104	$2,779
Feb	1,007	0	10	2,740	$478	$0.1745	660	$2,084	$3.1549	92	$2,562
Mar	778	0	8	2,364	$411	$0.1737	510	$1,610	$3.1549	71	$2,020
Apr	450	1	8	1,775	$338	$0.1901	295	$931	$3.1549	41	$1,269
May	167	27	6	1,838	$324	$0.1764	110	$346	$3.1549	15	$670
Jun	65	133	7	1,821	$327	$0.1796	42	$134	$3.1549	6	$461
Totals	**5,920**	**706**	**89**	**22,993**	**$3,997**	**$0.1738**	**3,884**	**$12,252**	**$3.1549**	**539**	**$16,249**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	$
Jul	0	281	9	2,234	$416	$0.1863	0	$0	$3.0323	0	$416
Aug	21	200	9	1,825	$360	$0.1971	14	$44	$3.0323	2	$403
Sep	119	63	8	1,678	$334	$0.1992	81	$245	$3.0323	11	$580
Oct	409	0	8	1,451	$305	$0.2099	277	$839	$3.0323	38	$1,143
Nov	644	0	8	1,731	$339	$0.1958	436	$1,322	$3.0323	60	$1,661
Dec	1,114	0	6	1,635	$306	$0.1871	754	$2,287	$3.0323	105	$2,593
Jan	1,145	0	6	1,816	$339	$0.1865	775	$2,350	$3.0323	108	$2,689
Feb	1,007	0	6	2,005	$294	$0.1467	681	$2,066	$3.0323	95	$2,360
Mar	778	0	8	1,760	$308	$0.1753	526	$1,596	$3.0323	73	$1,905
Apr	450	1	8	1,618	$296	$0.1830	305	$924	$3.0323	42	$1,220
May	167	27	5	1,592	$240	$0.1509	113	$343	$3.0323	16	$584
Jun	65	133	7	1,602	$266	$0.1661	44	$133	$3.0323	6	$399
Totals	**5,920**	**706**	**89**	**20,947**	**$3,803**	**$0.1816**	**4,007**	**$12,149**	**$3.0323**	**556**	**$15,952**

City of Bristol, CT

Utility Data Summary

Muzzy Field

1.000	CCF

Delivery: Eversource
Account #: 51555853076
Meter #: 891980632
Tariff Rate: Rate 027, Rate 030
Supplier: Liberty Power Holdings

Supplier
Delivery: Eversource
Account #: **Account #:** 57999450059
Meter #: 0507659
Tariff Rate: R10
Supplier: Eversource

Water Service: Bristol Water Department
Account #: 01-02745000 &0114640000
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	373	106	6,560	$1,978	$0.3015	1	$48	$47.5500	0	0	$0	$0	$0	$0.00	$2,025
Aug	2	252	106	2,400	$1,815	$0.7564	0	$47	$0.0000	0	0	$0	$0	$0	$0.00	$1,862
Sep	39	175	96	1,400	$1,403	$1.0022	0	$47	$0.0000	0	3,985	$296	$163	$459	$0.12	$1,910
Oct	155	6	109	3,302	$1,859	$0.5629	0	$47	$0.0000	0	0	$0	$0	$0	$0.00	$1,906
Nov	505	0	120	5,242	$2,327	$0.4439	1	$46	$45.8900	0	0	$0	$0	$0	$0.00	$2,373
Dec	945	0	118	4,408	$2,014	$0.4568	0	$46	$0.0000	0	5,100	$322	$186	$507	$0.10	$2,568
Jan	1,051	0	8	545	$391	$0.7181	0	$46	$0.0000	0	0	$0	$0	$0	$0.00	$438
Feb	1,285	0	1	400	$248	$0.6195	0	$46	$0.0000	0	0	$0	$0	$0	$0.00	$294
Mar	984	0	1	520	$274	$0.5281	0	$46	$0.0000	0	675	$220	$132	$351	$0.52	$672
Apr	622	0	22	640	$487	$0.7607	0	$46	$0.0000	0	0	$0	$0	$0	$0.00	$533
May	379	11	102	1,440	$1,369	$0.9505	0	$46	$0.0000	0	0	$0	$0	$0	$0.00	$1,415
Jun	87	37	106	6,320	$1,886	$0.2983	10	$51	$5.0820	1	1,400	$236	$132	$368	$0.26	$2,304
Totals	**6,054**	**854**	**894**	**33,176**	**$16,050**	**$0.4838**	**12**	**$564**	**$46.9900**	**1**	**11,160**	**$1,074**	**$612**	**$1,686**	**$0.15**	**$18,300**

Fiscal Year 2015

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	266	105	6,480	$1,916	$0.2957	8	$57	$7.0750	1	0	$0	$0	$0	$0.00	$1,973
Aug	2	187	104	5,280	$1,735	$0.3286	7	$54	$7.6614	1	0	$0	$0	$0	$0.00	$1,789
Sep	33	152	38	3,040	$778	$0.2559	7	$54	$7.7029	1	2,875	$270	$152	$422	$0.15	$1,254
Oct	167	20	113	4,040	$1,698	$0.4202	8	$55	$6.8950	1	0	$0	$0	$0	$0.00	$1,753
Nov	518	1	121	5,480	$1,994	$0.3639	10	$57	$5.6580	1	0	$0	$0	$0	$0.00	$2,051
Dec	877	0	32	2,880	$682	$0.2368	6	$53	$8.8333	1	9,565	$425	$293	$718	$0.08	$1,453
Jan	1,188	0	4	1,840	$337	$0.1829	0	$47	$0.0000	0	0	$0	$0	$0	$0.00	$383
Feb	1,307	0	6	1,920	$310	$0.1613	0	$47	$0.0000	0	0	$0	$0	$0	$0.00	$357
Mar	1,086	0	18	3,440	$639	$0.1859	0	$47	$0.0000	0	1,025	$228	$133	$361	$0.35	$1,047
Apr	753	0	44	5,920	$870	$0.1470	0	$47	$0.0000	0	0	$0	$0	$0	$0.00	$917
May	241	46	114	3,480	$2,076	$0.5966	4	$50	$12.5075	0	0	$0	$0	$0	$0.00	$2,126
Jun	81	103	112	6,840	$2,365	$0.3458	12	$56	$4.6458	1	1,715	$244	$147	$391	$0.23	$2,811
Totals	**6,253**	**775**	**810**	**50,640**	**$15,400**	**$0.3041**	**62**	**$622**	**$10.0285**	**6**	**15,180**	**$1,167**	**$725**	**$1,892**	**$0.12**	**$17,914**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	106	6,560	$1,978	$0.3015	0	0.006287066	$46.9900	0	0	$0	$0	$0	$0.00	$1,978
Aug	21	200	106	2,400	$1,815	$0.7564	0	$2	$46.9900	0	0	$0	$0	$0	$0.00	$1,817
Sep	119	63	96	1,400	$1,403	$1.0022	0	$11	$46.9900	0	3,985	$296	$163	$459	$0.12	$1,874
Oct	409	0	109	3,302	$1,859	$0.5629	1	$38	$46.9900	0	0	$0	$0	$0	$0.00	$1,897
Nov	644	0	120	5,242	$2,327	$0.4439	1	$60	$46.9900	0	0	$0	$0	$0	$0.00	$2,387
Dec	1,114	0	118	4,408	$2,014	$0.4568	2	$104	$46.9900	0	5,100	$322	$186	$507	$0.10	$2,625
Jan	1,145	0	8	545	$391	$0.7181	2	$107	$46.9900	0	0	$0	$0	$0	$0.00	$498
Feb	1,007	0	1	400	$248	$0.6195	2	$94	$46.9900	0	0	$0	$0	$0	$0.00	$341
Mar	778	0	1	520	$274	$0.5281	2	$72	$46.9900	0	675	$220	$132	$351	$0.52	$698
Apr	450	1	22	640	$487	$0.7607	1	$42	$46.9900	0	0	$0	$0	$0	$0.00	$529
May	167	27	102	1,440	$1,369	$0.9505	0	$16	$46.9900	0	0	$0	$0	$0	$0.00	$1,384
Jun	65	133	106	6,320	$1,886	$0.2983	0	$6	$46.9900	0	1,400	$236	$132	$368	$0.26	$2,260
Totals	**5,920**	**706**	**894**	**33,176**	**$16,050**	**$0.4838**	**12**	**$551**	**$46.9900**	**1**	**11,160**	**$1,074**	**$612**	**$1,686**	**$0.15**	**$18,287**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	105	6,480	$1,916	$0.2957	0	0.006711894	$10.0285	0	0	$0	$0	$0	$0.00	$1,916
Aug	21	200	104	5,280	$1,735	$0.3286	0	$2	$10.0285	0	0	$0	$0	$0	$0.00	$1,737
Sep	119	63	38	3,040	$778	$0.2559	1	$12	$10.0285	0	2,875	$270	$152	$422	$0.15	$1,212
Oct	409	0	113	4,040	$1,698	$0.4202	4	$41	$10.0285	0	0	$0	$0	$0	$0.00	$1,738
Nov	644	0	121	5,480	$1,994	$0.3639	6	$64	$10.0285	1	0	$0	$0	$0	$0.00	$2,058
Dec	1,114	0	32	2,880	$682	$0.2368	11	$111	$10.0285	1	9,565	$425	$293	$718	$0.08	$1,511
Jan	1,145	0	4	1,840	$337	$0.1829	11	$114	$10.0285	1	0	$0	$0	$0	$0.00	$450
Feb	1,007	0	6	1,920	$310	$0.1613	10	$100	$10.0285	1	0	$0	$0	$0	$0.00	$410
Mar	778	0	18	3,440	$639	$0.1859	8	$77	$10.0285	1	1,025	$228	$133	$361	$0.35	$1,078
Apr	450	1	44	5,920	$870	$0.1470	4	$45	$10.0285	0	0	$0	$0	$0	$0.00	$915
May	167	27	114	3,480	$2,076	$0.5966	2	$17	$10.0285	0	0	$0	$0	$0	$0.00	$2,093
Jun	65	133	112	6,840	$2,365	$0.3458	1	$6	$10.0285	0	1,715	$244	$147	$391	$0.23	$2,762
Totals	**5,920**	**706**	**810**	**50,640**	**$15,400**	**$0.3041**	**59**	**$589**	**$10.0285**	**6**	**15,180**	**$1,167**	**$725**	**$1,892**	**$0.12**	**$17,880**

City of Bristol, CT

Utility Data Summary

Ski Lodge

Delivery: Eversource
Account #: 51601063027
Meter #: 891352502
Tariff Rate: Rate 030
Supplier: Liberty Power Holdings

Supplier/ater Service: Bristol Water Department
Account #: **Account #:** 03-04315000
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	2	329	2	176	$57	$0.3263	0	$0	$0	$0	$0.00	$57
Aug	0	288	3	159	$70	$0.4411	2,445	$76	$64	$141	$0.06	$211
Sep	99	188	2	189	$59	$0.3112	0	$0	$0	$0	$0.00	$59
Oct	310	10	2	161	$56	$0.3467	0	$0	$0	$0	$0.00	$56
Nov	663	0	8	495	$168	$0.3400	2,205	$71	$59	$130	$0.06	$298
Dec	1,001	0	8	2,654	$397	$0.1494	0	$0	$0	$0	$0.00	$397
Jan	1,206	0	9	4,094	$602	$0.1472	0	$0	$0	$0	$0.00	$602
Feb	1,056	0	8	2,440	$426	$0.1748	280	$26	$39	$66	$0.23	$492
Mar	1,007	0	4	2,521	$380	$0.1509	0	$0	$0	$0	$0.00	$380
Apr	508	0	4	2,295	$351	$0.1527	0	$0	$0	$0	$0.00	$351
May	191	9	2	153	$58	$0.3777	505	$32	$39	$71	$0.14	$129
Jun	11	32	2	122	$54	$0.4418	0	$0	$0	$0	$0.00	$54
Totals	**6,054**	**856**	**51**	**15,459**	**$2,678**	**$0.1733**	**5,435**	**$206**	**$202**	**$407**	**$0.07**	**$3,086**

Fiscal Year 2015

	Weather		*Electric*				*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	246	2	178	$61	$0.3448	0	$0	$0	$0	$0.00	$61
Aug	2	200	2	127	$55	$0.4346	1,900	$64	$57	$121	$0.06	$176
Sep	79	166	2	149	$58	$0.3898	0	$0	$0	$0	$0.00	$58
Oct	282	12	2	142	$57	$0.4025	0	$0	$0	$0	$0.00	$57
Nov	720	9	7	1,548	$297	$0.1918	2,150	$70	$63	$132	$0.06	$429
Dec	896	0	7	2,524	$431	$0.1708	0	$0	$0	$0	$0.00	$431
Jan	1,243	0	7	3,313	$548	$0.1653	0	$0	$0	$0	$0.00	$548
Feb	1,354	0	8	4,501	$539	$0.1197	165	$24	$38	$62	$0.38	$601
Mar	1,019	0	8	4,344	$525	$0.1209	0	$0	$0	$0	$0.00	$525
Apr	511	0	5	2,776	$338	$0.1218	0	$0	$0	$0	$0.00	$338
May	99	38	4	675	$137	$0.2031	130	$23	$38	$61	$0.47	$198
Jun	54	77	2	87	$52	$0.5960	0	$0	$0	$0	$0.00	$52
Totals	**6,259**	**748**	**53**	**20,364**	**$3,098**	**$0.1522**	**4,345**	**$180**	**$197**	**$377**	**$0.09**	**$3,476**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	2	176	$57	$0.3263	0	$0	$0	$0	$0.00	$57
Aug	21	200	3	159	$70	$0.4411	2,445	$76	$64	$141	$0.06	$211
Sep	119	63	2	189	$59	$0.3112	0	$0	$0	$0	$0.00	$59
Oct	409	0	2	161	$56	$0.3467	0	$0	$0	$0	$0.00	$56
Nov	644	0	8	495	$168	$0.3400	2,205	$71	$59	$130	$0.06	$298
Dec	1,114	0	8	2,654	$397	$0.1494	0	$0	$0	$0	$0.00	$397
Jan	1,145	0	9	4,094	$602	$0.1472	0	$0	$0	$0	$0.00	$602
Feb	1,007	0	8	2,440	$426	$0.1748	280	$26	$39	$66	$0.23	$492
Mar	778	0	4	2,521	$380	$0.1509	0	$0	$0	$0	$0.00	$380
Apr	450	1	4	2,295	$351	$0.1527	0	$0	$0	$0	$0.00	$351
May	167	27	2	153	$58	$0.3777	505	$32	$39	$71	$0.14	$129
Jun	65	133	2	122	$54	$0.4418	0	$0	$0	$0	$0.00	$54
Totals	**5,920**	**706**	**51**	**15,459**	**$2,678**	**$0.1733**	**5,435**	**$206**	**$202**	**$407**	**$0.07**	**$3,086**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	2	178	$61	$0.3448	0	$0	$0	$0	$0.00	$61
Aug	21	200	2	127	$55	$0.4346	1,900	$64	$57	$121	$0.06	$176
Sep	119	63	2	149	$58	$0.3898	0	$0	$0	$0	$0.00	$58
Oct	409	0	2	142	$57	$0.4025	0	$0	$0	$0	$0.00	$57
Nov	644	0	7	1,548	$297	$0.1918	2,150	$70	$63	$132	$0.06	$429
Dec	1,114	0	7	2,524	$431	$0.1708	0	$0	$0	$0	$0.00	$431
Jan	1,145	0	7	3,313	$548	$0.1653	0	$0	$0	$0	$0.00	$548
Feb	1,007	0	8	4,501	$539	$0.1197	165	$24	$38	$62	$0.38	$601
Mar	778	0	8	4,344	$525	$0.1209	0	$0	$0	$0	$0.00	$525
Apr	450	1	5	2,776	$338	$0.1218	0	$0	$0	$0	$0.00	$338
May	167	27	4	675	$137	$0.2031	130	$23	$38	$61	$0.47	$198
Jun	65	133	2	87	$52	$0.5960	0	$0	$0	$0	$0.00	$52
Totals	**5,920**	**706**	**53**	**20,364**	**$3,098**	**$0.1522**	**4,345**	**$180**	**$197**	**$377**	**$0.09**	**$3,476**

City of Bristol, CT

Utility Data Summary

Page Park Pavilion

Delivery: Eversource
Account #: 51502063019
Meter #: 892259342
Tariff Rate: Rate 030
Supplier: Liberty Power Holdings

Supplier East River Energy
Account #: N/A

Water Service: Bristol Water Department
Account #: 03-00118000
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	2	373	1	113	$51	$0.4483	368	$1,124	$3.0569	51	0	$0	$0	$0	$0.00	$1,174
Aug	0	252	6	484	$147	$0.3044	0	$0	$0.0000	0	18	$53	$50	$103	$5.72	$250
Sep	99	175	0	43	$43	$1.0030	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$43
Oct	310	6	2	283	$69	$0.2436	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$69
Nov	663	0	6	360	$133	$0.3685	400	$1,223	$3.0569	55	20	$53	$50	$103	$5.17	$1,459
Dec	1,001	0	2	358	$77	$0.2151	457	$1,396	$3.0569	63	0	$0	$0	$0	$0.00	$1,473
Jan	1,206	0	2	364	$83	$0.2279	662	$2,022	$3.0569	92	0	$0	$0	$0	$0.00	$2,105
Feb	1,056	0	6	505	$147	$0.2916	611	$1,961	$3.2110	85	215	$58	$50	$108	$0.50	$2,216
Mar	1,007	0	3	318	$90	$0.2826	569	$1,874	$3.2941	79	0	$0	$0	$0	$0.00	$1,964
Apr	508	0	2	254	$71	$0.2777	397	$1,265	$3.1884	55	0	$0	$0	$0	$0.00	$1,335
May	191	11	3	159	$74	$0.4627	0	$0	$0.0000	0	15	$53	$50	$103	$6.88	$177
Jun	11	37	1	243	$69	$0.2846	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$69
Totals	**6,054**	**854**	**34**	**3,484**	**$1,053**	**$0.3023**	**3,462**	**$10,864**	**$3.1381**	**480**	**268**	**$218**	**$199**	**$417**	**$1.56**	**$12,334**

Fiscal Year 2015

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	266	2	214	$69	$0.3205	213	$646	$3.0323	30	0	$0	$0	$0	$0.00	$714
Aug	2	187	2	289	$76	$0.2646	0	$0	$0.0000	0	5	$53	$50	$103	$20.55	$179
Sep	79	152	1	138	$57	$0.4104	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$57
Oct	282	20	2	189	$63	$0.3350	291	$882	$3.0323	40	0	$0	$0	$0	$0.00	$945
Nov	720	1	2	293	$77	$0.2628	318	$965	$3.0323	44	25	$54	$50	$103	$4.13	$1,146
Dec	896	0	2	321	$81	$0.2513	563	$1,708	$3.0323	78	0	$0	$0	$0	$0.00	$1,788
Jan	1,243	0	1	368	$91	$0.2462	901	$2,732	$3.0323	125	0	$0	$0	$0	$0.00	$2,822
Feb	1,354	0	2	379	$77	$0.2040	911	$2,764	$3.0323	126	10	$53	$50	$103	$10.28	$2,944
Mar	1,019	0	2	378	$81	$0.2138	417	$1,264	$3.0323	58	0	$0	$0	$0	$0.00	$1,344
Apr	511	0	2	318	$72	$0.2264	594	$1,801	$3.0323	82	0	$0	$0	$0	$0.00	$1,873
May	99	46	5	208	$111	$0.5317	0	$0	$0.0000	0	15	$53	$50	$103	$6.86	$214
Jun	54	103	1	90	$52	$0.5790	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$52
Totals	**6,259**	**775**	**23**	**3,185**	**$906**	**$0.2845**	**4,208**	**$12,761**	**$3.0323**	**584**	**55**	**$213**	**$198**	**$412**	**$7.49**	**$14,079**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	1	113	$51	$0.4483	0	$0	$3.1381	0	0	$0	$0	$0	$0.00	$51
Aug	21	200	6	484	$147	$0.3044	12	$38	$3.1381	2	18	$53	$50	$103	$5.72	$288
Sep	119	63	0	43	$43	$1.0030	68	$214	$3.1381	9	0	$0	$0	$0	$0.00	$258
Oct	409	0	2	283	$69	$0.2436	234	$733	$3.1381	32	0	$0	$0	$0	$0.00	$802
Nov	644	0	6	360	$133	$0.3685	368	$1,156	$3.1381	51	20	$53	$50	$103	$5.17	$1,392
Dec	1,114	0	2	358	$77	$0.2151	637	$2,000	$3.1381	88	0	$0	$0	$0	$0.00	$2,077
Jan	1,145	0	2	364	$83	$0.2279	655	$2,055	$3.1381	91	0	$0	$0	$0	$0.00	$2,138
Feb	1,007	0	6	505	$147	$0.2916	576	$1,807	$3.1381	80	215	$58	$50	$108	$0.50	$2,062
Mar	778	0	3	318	$90	$0.2826	445	$1,396	$3.1381	62	0	$0	$0	$0	$0.00	$1,485
Apr	450	1	2	254	$71	$0.2777	257	$808	$3.1381	36	0	$0	$0	$0	$0.00	$878
May	167	27	3	159	$74	$0.4627	96	$300	$3.1381	13	15	$53	$50	$103	$6.88	$477
Jun	65	133	1	243	$69	$0.2846	37	$116	$3.1381	5	0	$0	$0	$0	$0.00	$185
Totals	**5,920**	**706**	**34**	**3,484**	**$1,053**	**$0.3023**	**3,385**	**$10,623**	**$3.1381**	**470**	**268**	**$218**	**$199**	**$417**	**$1.56**	**$12,093**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	2	214	$69	$0.3205	0	$0	$3.0323	0	0	$0	$0	$0	$0.00	$69
Aug	21	200	2	289	$76	$0.2646	14	$43	$3.0323	2	5	$53	$50	$103	$20.55	$223
Sep	119	63	1	138	$57	$0.4104	80	$244	$3.0323	11	0	$0	$0	$0	$0.00	$300
Oct	409	0	2	189	$63	$0.3350	275	$833	$3.0323	38	0	$0	$0	$0	$0.00	$897
Nov	644	0	2	293	$77	$0.2628	433	$1,313	$3.0323	60	25	$54	$50	$103	$4.13	$1,494
Dec	1,114	0	2	321	$81	$0.2513	749	$2,272	$3.0323	104	0	$0	$0	$0	$0.00	$2,353
Jan	1,145	0	1	368	$91	$0.2462	770	$2,335	$3.0323	107	0	$0	$0	$0	$0.00	$2,426
Feb	1,007	0	2	379	$77	$0.2040	677	$2,053	$3.0323	94	10	$53	$50	$103	$10.28	$2,233
Mar	778	0	2	378	$81	$0.2138	523	$1,586	$3.0323	73	0	$0	$0	$0	$0.00	$1,666
Apr	450	1	2	318	$72	$0.2264	303	$917	$3.0323	42	0	$0	$0	$0	$0.00	$989
May	167	27	5	208	$111	$0.5317	112	$341	$3.0323	16	15	$53	$50	$103	$6.86	$555
Jun	65	133	1	90	$52	$0.5790	43	$132	$3.0323	6	0	$0	$0	$0	$0.00	$184
Totals	**5,920**	**706**	**23**	**3,185**	**$906**	**$0.2845**	**3,980**	**$12,069**	**$3.0323**	**552**	**55**	**$213**	**$198**	**$412**	**$7.49**	**$13,387**

City of Bristol, CT

Utility Data Summary

Recreation Building

1.000	CCF

Delivery: Eversource
Account #: 51714004066
Meter #: 892259312
Tariff Rate: Rate 030
Supplier: Liberty Power Holdings

Supplier
Delivery: yankeegas
Account #:
Account #: 57011740081
Meter #: 425611
Tariff Rate: R10
Supplier: yankeegas

Water Service: Bristol Water Department
Account #: N/A
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	2	446	1	61	$45	$0.7387	9	$71	$7.8800	1	0	$0	$0	$0	$0.00	$116
Aug	0	178	1	94	$49	$0.5171	8	$71	$8.8163	1	0	$0	$0	$0	$0.00	$119
Sep	99	143	1	92	$48	$0.5260	8	$71	$8.8163	1	0	$0	$0	$0	$0.00	$119
Oct	310	6	1	52	$44	$0.8481	8	$71	$8.8163	1	0	$0	$0	$0	$0.00	$115
Nov	663	0	1	85	$48	$0.5604	56	$87	$1.5582	6	0	$0	$0	$0	$0.00	$135
Dec	1,001	0	1	552	$98	$0.1773	145	$125	$0.8597	15	0	$0	$0	$0	$0.00	$223
Jan	1,206	0	1	93	$50	$0.5327	176	$142	$0.8072	18	0	$0	$0	$0	$0.00	$192
Feb	1,056	0	2	156	$61	$0.3890	251	$166	$0.6612	26	0	$0	$0	$0	$0.00	$227
Mar	1,007	0	1	56	$46	$0.8138	185	$145	$0.7864	19	0	$0	$0	$0	$0.00	$191
Apr	508	0	1	40	$44	$1.0888	107	$112	$1.0504	11	0	$0	$0	$0	$0.00	$156
May	191	11	1	38	$43	$1.1397	48	$87	$1.8198	5	0	$0	$0	$0	$0.00	$131
Jun	11	72	1	26	$58	$2.2288	12	$72	$6.0067	1	0	$0	$0	$0	$0.00	$130
Totals	**6,054**	**856**	**11**	**1,345**	**$632**	**$0.4701**	**1,013**	**$1,220**	**$1.2041**	**104**	**0**	**$0**	**$0**	**$0**	**$0.00**	**$1,852**

Fiscal Year 2015

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	266	1	13	$24	$1.8492	8	$75	$9.3838	1	0	$0	$0	$0	$0.00	$99
Aug	2	187	5	124	$93	$0.7506	5	$72	$14.3800	1	0	$0	$0	$0	$0.00	$165
Sep	79	152	1	44	$44	$1.0064	2	$69	$34.5150	0	0	$0	$0	$0	$0.00	$113
Oct	282	20	1	17	$41	$2.3959	14	$82	$5.8321	1	0	$0	$0	$0	$0.00	$122
Nov	720	1	2	80	$49	$0.6126	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$49
Dec	896	0	2	151	$75	$0.4948	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$75
Jan	1,243	0	2	51	$32	$0.6316	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$32
Feb	1,354	0	2	72	$51	$0.7018	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$51
Mar	1,019	0	1	90	$52	$0.5790	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$52
Apr	511	0	1	46	$48	$1.0493	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$48
May	99	46	0	16	$46	$2.8525	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$46
Jun	54	103	1	24	$46	$1.9308	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$46
Totals	**6,259**	**775**	**17**	**728**	**$601**	**$0.8255**	**29**	**$298**	**$10.2638**	**3**	**0**	**$0**	**$0**	**$0**	**$0.00**	**$899**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	1	61	$45	$0.7387	0	0.013599678	$1.2041	0	0	$0	$0	$0	$0.00	$45
Aug	21	200	1	94	$49	$0.5171	4	$4	$1.2041	0	0	$0	$0	$0	$0.00	$53
Sep	119	63	1	92	$48	$0.5260	20	$24	$1.2041	2	0	$0	$0	$0	$0.00	$72
Oct	409	0	1	52	$44	$0.8481	68	$82	$1.2041	7	0	$0	$0	$0	$0.00	$126
Nov	644	0	1	85	$48	$0.5604	108	$130	$1.2041	11	0	$0	$0	$0	$0.00	$177
Dec	1,114	0	1	552	$98	$0.1773	186	$225	$1.2041	19	0	$0	$0	$0	$0.00	$322
Jan	1,145	0	1	93	$50	$0.5327	192	$231	$1.2041	20	0	$0	$0	$0	$0.00	$280
Feb	1,007	0	2	156	$61	$0.3890	168	$203	$1.2041	17	0	$0	$0	$0	$0.00	$264
Mar	778	0	1	56	$46	$0.8138	130	$157	$1.2041	13	0	$0	$0	$0	$0.00	$202
Apr	450	1	1	40	$44	$1.0888	75	$91	$1.2041	8	0	$0	$0	$0	$0.00	$134
May	167	27	1	38	$43	$1.1397	28	$34	$1.2041	3	0	$0	$0	$0	$0.00	$77
Jun	65	133	1	26	$58	$2.2288	11	$13	$1.2041	1	0	$0	$0	$0	$0.00	$71
Totals	**5,920**	**706**	**11**	**1,345**	**$632**	**$0.4701**	**991**	**$1,193**	**$1.2041**	**102**	**0**	**$0**	**$0**	**$0**	**$0.00**	**$1,825**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	1	13	$24	$1.8492	0	0.003209998	$10.2638	0	0	$0	$0	$0	$0.00	$24
Aug	21	200	5	124	$93	$0.7506	0	$1	$10.2638	0	0	$0	$0	$0	$0.00	$94
Sep	119	63	1	44	$44	$1.0064	1	$6	$10.2638	0	0	$0	$0	$0	$0.00	$50
Oct	409	0	1	17	$41	$2.3959	2	$19	$10.2638	0	0	$0	$0	$0	$0.00	$60
Nov	644	0	2	80	$49	$0.6126	3	$31	$10.2638	0	0	$0	$0	$0	$0.00	$80
Dec	1,114	0	2	151	$75	$0.4948	5	$53	$10.2638	1	0	$0	$0	$0	$0.00	$128
Jan	1,145	0	2	51	$32	$0.6316	5	$54	$10.2638	1	0	$0	$0	$0	$0.00	$87
Feb	1,007	0	2	72	$51	$0.7018	5	$48	$10.2638	0	0	$0	$0	$0	$0.00	$98
Mar	778	0	1	90	$52	$0.5790	4	$37	$10.2638	0	0	$0	$0	$0	$0.00	$89
Apr	450	1	1	46	$48	$1.0493	2	$21	$10.2638	0	0	$0	$0	$0	$0.00	$70
May	167	27	0	16	$46	$2.8525	1	$8	$10.2638	0	0	$0	$0	$0	$0.00	$54
Jun	65	133	1	24	$46	$1.9308	0	$3	$10.2638	0	0	$0	$0	$0	$0.00	$49
Totals	**5,920**	**706**	**17**	**728**	**$601**	**$0.8255**	**27**	**$282**	**$10.2638**	**3**	**0**	**$0**	**$0**	**$0**	**$0.00**	**$882**

City of Bristol, CT

Utility Data Summary

Dennis Malone Aquatic Center

1.000	CCF

Delivery: Eversource
Account #: 51612893040
Meter #: 890337932
Tariff Rate: Rate 030
Supplier: Liberty Power Holdings

Supplier
Delivery: N/A
Account #: 57871670048
Meter #: 0525751
Tariff Rate: R30
Supplier: N/A

Water Service: Bristol Water Department
Account #: 03-16864000
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	2	282	75	25,920	$3,748	$0.1446	442	$729	$1.6486	45	0	$0	$0	$0	$0.00	$4,477
Aug	0	324	78	24,240	$3,646	$0.1504	867	$769	$0.8865	89	20,150	$589	$451	$1,040	$0.05	$5,455
Sep	99	171	74	25,600	$3,746	$0.1463	1,192	$799	$0.6704	122	0	$0	$0	$0	$0.00	$4,545
Oct	310	40	71	34,400	$4,654	$0.1353	1,788	$855	$0.4782	183	0	$0	$0	$0	$0.00	$5,509
Nov	663	0	69	37,360	$4,937	$0.1321	2,402	$1,065	$0.4436	246	16,050	$495	$369	$864	$0.05	$6,866
Dec	1,001	0	73	24,960	$3,657	$0.1465	2,773	$1,089	$0.3926	284	0	$0	$0	$0	$0.00	$4,746
Jan	1,206	0	73	22,080	$3,503	$0.1587	3,056	$1,193	$0.3903	313	0	$0	$0	$0	$0.00	$4,696
Feb	1,056	0	75	24,320	$4,021	$0.1653	3,192	$1,204	$0.3771	327	21,750	$626	$483	$1,109	$0.05	$6,334
Mar	1,007	0	64	21,600	$3,537	$0.1637	3,068	$1,194	$0.3891	314	0	$0	$0	$0	$0.00	$4,730
Apr	508	0	65	26,240	$4,142	$0.1579	2,286	$1,121	$0.4905	234	0	$0	$0	$0	$0.00	$5,263
May	191	0	53	21,040	$3,330	$0.1583	1,620	$1,038	$0.6407	166	21,300	$616	$474	$1,090	$0.05	$5,458
Jun	11	36	71	45,120	$6,593	$0.1461	1,043	$966	$0.9260	107	0	$0	$0	$0	$0.00	$7,559
Totals	**6,054**	**853**	**841**	**332,880**	**$49,513**	**$0.1487**	**23,729**	**$12,021**	**$0.5066**	**2,432**	**79,250**	**$2,327**	**$1,777**	**$4,104**	**$0.05**	**$65,637**

Fiscal Year 2015

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	203	73	45,920	$6,785	$0.1478	922	$1,438	$1.5597	95	0	$0	$0	$0	$0.00	$8,223
Aug	2	234	75	49,120	$7,361	$0.1499	1,007	$1,430	$1.4196	103	17,450	$527	$422	$949	$0.05	$9,740
Sep	79	174	72	33,040	$5,214	$0.1578	1,192	$1,590	$1.3343	122	0	$0	$0	$0	$0.00	$6,804
Oct	282	17	71	42,000	$6,384	$0.1520	1,206	$1,631	$1.3523	124	0	$0	$0	$0	$0.00	$8,015
Nov	720	10	67	36,640	$5,635	$0.1538	2,429	$2,135	$0.8791	249	16,250	$499	$394	$893	$0.05	$8,663
Dec	896	0	83	41,760	$6,495	$0.1555	3,111	$2,689	$0.8642	319	0	$0	$0	$0	$0.00	$9,183
Jan	1,243	0	79	30,240	$5,111	$0.1690	3,806	$3,396	$0.8923	390	0	$0	$0	$0	$0.00	$8,507
Feb	1,354	0	60	27,440	$3,478	$0.1267	3,657	$3,021	$0.8262	375	20,600	$600	$489	$1,088	$0.05	$7,587
Mar	1,019	0	64	29,680	$3,748	$0.1263	3,485	$2,675	$0.7677	357	0	$0	$0	$0	$0.00	$6,423
Apr	511	0	48	23,760	$2,937	$0.1236	2,484	$2,097	$0.8443	255	0	$0	$0	$0	$0.00	$5,034
May	99	21	40	20,880	$2,536	$0.1214	1,485	$1,477	$0.9944	152	18,600	$554	$446	$1,000	$0.05	$5,012
Jun	54	78	49	20,400	$2,667	$0.1307	1,543	$1,401	$0.9082	158	0	$0	$0	$0	$0.00	$4,068
Totals	**6,259**	**737**	**781**	**400,880**	**$58,349**	**$0.1456**	**26,327**	**$24,981**	**$0.9489**	**2,699**	**72,900**	**$2,180**	**$1,750**	**$3,930**	**$0.05**	**$87,260**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	75	25,920	$3,748	$0.1446	0	0.13402775	$0.5066	0	0	$0	$0	$0	$0.00	$3,748
Aug	21	200	78	24,240	$3,646	$0.1504	83	$42	$0.5066	9	20,150	$589	$451	$1,040	$0.05	$4,728
Sep	119	63	74	25,600	$3,746	$0.1463	468	$237	$0.5066	48	0	$0	$0	$0	$0.00	$3,983
Oct	409	0	71	34,400	$4,654	$0.1353	1,602	$812	$0.5066	164	0	$0	$0	$0	$0.00	$5,466
Nov	644	0	69	37,360	$4,937	$0.1321	2,525	$1,279	$0.5066	259	16,050	$495	$369	$864	$0.05	$7,080
Dec	1,114	0	73	24,960	$3,657	$0.1465	4,368	$2,213	$0.5066	448	0	$0	$0	$0	$0.00	$5,870
Jan	1,145	0	73	22,080	$3,503	$0.1587	4,489	$2,274	$0.5066	460	0	$0	$0	$0	$0.00	$5,777
Feb	1,007	0	75	24,320	$4,021	$0.1653	3,946	$1,999	$0.5066	404	21,750	$626	$483	$1,109	$0.05	$7,130
Mar	778	0	64	21,600	$3,537	$0.1637	3,048	$1,544	$0.5066	312	0	$0	$0	$0	$0.00	$5,081
Apr	450	1	65	26,240	$4,142	$0.1579	1,764	$894	$0.5066	181	0	$0	$0	$0	$0.00	$5,036
May	167	27	53	21,040	$3,330	$0.1583	656	$332	$0.5066	67	21,300	$616	$474	$1,090	$0.05	$4,752
Jun	65	133	71	45,120	$6,593	$0.1461	253	$128	$0.5066	26	0	$0	$0	$0	$0.00	$6,721
Totals	**5,920**	**706**	**841**	**332,880**	**$49,513**	**$0.1487**	**23,203**	**$11,754**	**$0.5066**	**2,378**	**79,250**	**$2,327**	**$1,777**	**$4,104**	**$0.05**	**$65,371**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	73	45,920	$6,785	$0.1478	0	0.269405021	$0.9489	0	0	$0	$0	$0	$0.00	$6,785
Aug	21	200	75	49,120	$7,361	$0.1499	89	$85	$0.9489	9	17,450	$527	$422	$949	$0.05	$8,395
Sep	119	63	72	33,040	$5,214	$0.1578	503	$477	$0.9489	52	0	$0	$0	$0	$0.00	$5,690
Oct	409	0	71	42,000	$6,384	$0.1520	1,719	$1,631	$0.9489	176	0	$0	$0	$0	$0.00	$8,015
Nov	644	0	67	36,640	$5,635	$0.1538	2,710	$2,571	$0.9489	278	16,250	$499	$394	$893	$0.05	$9,099
Dec	1,114	0	83	41,760	$6,495	$0.1555	4,688	$4,448	$0.9489	480	0	$0	$0	$0	$0.00	$10,943
Jan	1,145	0	79	30,240	$5,111	$0.1690	4,817	$4,571	$0.9489	494	0	$0	$0	$0	$0.00	$9,682
Feb	1,007	0	60	27,440	$3,478	$0.1267	4,235	$4,018	$0.9489	434	20,600	$600	$489	$1,088	$0.05	$8,584
Mar	778	0	64	29,680	$3,748	$0.1263	3,271	$3,104	$0.9489	335	0	$0	$0	$0	$0.00	$6,852
Apr	450	1	48	23,760	$2,937	$0.1236	1,893	$1,796	$0.9489	194	0	$0	$0	$0	$0.00	$4,733
May	167	27	40	20,880	$2,536	$0.1214	704	$668	$0.9489	72	18,600	$554	$446	$1,000	$0.05	$4,203
Jun	65	133	49	20,400	$2,667	$0.1307	272	$258	$0.9489	28	0	$0	$0	$0	$0.00	$2,925
Totals	**5,920**	**706**	**781**	**400,880**	**$58,349**	**$0.1456**	**24,900**	**$23,627**	**$0.9489**	**2,552**	**72,900**	**$2,180**	**$1,750**	**$3,930**	**$0.05**	**$85,906**

City of Bristol, CT

Utility Data Summary

Fire Head Quarters

Delivery: Eversource
Account #: 51497553024
Meter #: 890376902
Tariff Rate: Rate 030
Supplier: Liberty Power Holdings

Supplier East River Energy
Account #: N/A

Water Service: Bristol Water Department
Account #: 01-10081000
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	2	373	27	12,360	$2,037	$0.1648	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$2,037
Aug	0	252	28	11,960	$2,022	$0.1691	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$2,022
Sep	99	175	28	10,400	$1,776	$0.1708	0	$0	$0.0000	0	7,850	$283	$198	$481	$0.06	$2,257
Oct	310	6	22	7,600	$1,350	$0.1776	1,200	$3,669	$3.0569	166	0	$0	$0	$0	$0.00	$5,018
Nov	663	0	22	8,200	$1,431	$0.1745	500	$1,528	$3.0569	69	0	$0	$0	$0	$0.00	$2,959
Dec	1,001	0	22	9,400	$1,560	$0.1659	717	$2,192	$3.0569	99	7,200	$268	$185	$453	$0.06	$4,205
Jan	1,206	0	27	9,600	$1,691	$0.1761	1,400	$4,280	$3.0569	194	0	$0	$0	$0	$0.00	$5,970
Feb	1,056	0	25	9,880	$1,715	$0.1736	1,000	$3,413	$3.4131	139	0	$0	$0	$0	$0.00	$5,128
Mar	1,007	0	24	8,480	$1,505	$0.1775	450	$1,455	$3.2336	62	6,250	$246	$166	$412	$0.07	$3,372
Apr	508	0	24	7,800	$1,430	$0.1833	850	$2,708	$3.1853	118	0	$0	$0	$0	$0.00	$4,137
May	191	11	22	8,360	$1,490	$0.1782	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$1,490
Jun	11	37	28	10,480	$1,873	$0.1788	0	$0	$0.0000	0	6,250	$246	$166	$412	$0.07	$2,286
Totals	**6,054**	**854**	**301**	**114,520**	**$19,879**	**$0.1736**	**6,117**	**$19,244**	**$3.1460**	**848**	**27,550**	**$1,044**	**$715**	**$1,759**	**$0.06**	**$40,883**

Fiscal Year 2015

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	266	30	13,160	$2,234	$0.1698	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$2,234
Aug	2	187	32	12,440	$2,130	$0.1712	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$2,130
Sep	79	152	28	11,200	$1,918	$0.1713	0	$0	$0.0000	0	6,700	$257	$186	$443	$0.07	$2,361
Oct	282	20	26	8,280	$595	$0.0718	698	$2,115	$3.0323	97	0	$0	$0	$0	$0.00	$2,710
Nov	720	1	22	9,240	$571	$0.0618	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$571
Dec	896	0	25	8,640	$588	$0.0681	600	$1,819	$3.0323	83	6,100	$243	$174	$417	$0.07	$2,824
Jan	1,243	0	25	9,560	$1,651	$0.1727	1,400	$4,245	$3.0323	194	0	$0	$0	$0	$0.00	$5,896
Feb	1,354	0	23	8,600	$1,170	$0.1360	1,100	$3,336	$3.0323	153	0	$0	$0	$0	$0.00	$4,505
Mar	1,019	0	22	7,760	$1,071	$0.1380	1,000	$3,032	$3.0323	139	6,000	$241	$172	$412	$0.07	$4,516
Apr	511	0	23	7,840	$1,107	$0.1412	460	$1,395	$3.0323	64	0	$0	$0	$0	$0.00	$2,502
May	99	46	31	8,640	$1,319	$0.1527	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$1,319
Jun	54	103	30	11,200	$1,520	$0.1357	0	$0	$0.0000	0	7,400	$273	$201	$474	$0.06	$1,994
Totals	**6,259**	**775**	**316**	**116,560**	**$15,874**	**$0.1362**	**5,258**	**$15,943**	**$3.0323**	**729**	**26,200**	**$1,013**	**$733**	**$1,746**	**$0.07**	**$33,562**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	27	12,360	$2,037	$0.1648	0	$0	$3.1460	0	0	$0	$0	$0	$0.00	$2,037
Aug	21	200	28	11,960	$2,022	$0.1691	21	$68	$3.1460	3	0	$0	$0	$0	$0.00	$2,090
Sep	119	63	28	10,400	$1,776	$0.1708	121	$380	$3.1460	17	7,850	$283	$198	$481	$0.06	$2,637
Oct	409	0	22	7,600	$1,350	$0.1776	413	$1,299	$3.1460	57	0	$0	$0	$0	$0.00	$2,649
Nov	644	0	22	8,200	$1,431	$0.1745	651	$2,048	$3.1460	90	0	$0	$0	$0	$0.00	$3,479
Dec	1,114	0	22	9,400	$1,560	$0.1659	1,126	$3,543	$3.1460	156	7,200	$268	$185	$453	$0.06	$5,555
Jan	1,145	0	27	9,600	$1,691	$0.1761	1,157	$3,640	$3.1460	160	0	$0	$0	$0	$0.00	$5,331
Feb	1,007	0	25	9,880	$1,715	$0.1736	1,017	$3,200	$3.1460	141	0	$0	$0	$0	$0.00	$4,916
Mar	778	0	24	8,480	$1,505	$0.1775	786	$2,472	$3.1460	109	6,250	$246	$166	$412	$0.07	$4,389
Apr	450	1	24	7,800	$1,430	$0.1833	455	$1,430	$3.1460	63	0	$0	$0	$0	$0.00	$2,860
May	167	27	22	8,360	$1,490	$0.1782	169	$532	$3.1460	23	0	$0	$0	$0	$0.00	$2,022
Jun	65	133	28	10,480	$1,873	$0.1788	65	$205	$3.1460	9	6,250	$246	$166	$412	$0.07	$2,491
Totals	**5,920**	**706**	**301**	**114,520**	**$19,879**	**$0.1736**	**5,981**	**$18,818**	**$3.1460**	**830**	**27,550**	**$1,044**	**$715**	**$1,759**	**$0.06**	**$40,456**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	30	13,160	$2,234	$0.1698	0	$0	$3.0323	0	0	$0	$0	$0	$0.00	$2,234
Aug	21	200	32	12,440	$2,130	$0.1712	18	$54	$3.0323	2	0	$0	$0	$0	$0.00	$2,184
Sep	119	63	28	11,200	$1,918	$0.1713	100	$304	$3.0323	14	6,700	$257	$186	$443	$0.07	$2,666
Oct	409	0	26	8,280	$595	$0.0718	343	$1,041	$3.0323	48	0	$0	$0	$0	$0.00	$1,636
Nov	644	0	22	9,240	$571	$0.0618	541	$1,641	$3.0323	75	0	$0	$0	$0	$0.00	$2,212
Dec	1,114	0	25	8,640	$588	$0.0681	936	$2,839	$3.0323	130	6,100	$243	$174	$417	$0.07	$3,844
Jan	1,145	0	25	9,560	$1,651	$0.1727	962	$2,917	$3.0323	133	0	$0	$0	$0	$0.00	$4,568
Feb	1,007	0	23	8,600	$1,170	$0.1360	846	$2,564	$3.0323	117	0	$0	$0	$0	$0.00	$3,734
Mar	778	0	22	7,760	$1,071	$0.1380	653	$1,981	$3.0323	91	6,000	$241	$172	$412	$0.07	$3,464
Apr	450	1	23	7,840	$1,107	$0.1412	378	$1,146	$3.0323	52	0	$0	$0	$0	$0.00	$2,253
May	167	27	31	8,640	$1,319	$0.1527	141	$426	$3.0323	19	0	$0	$0	$0	$0.00	$1,746
Jun	65	133	30	11,200	$1,520	$0.1357	54	$165	$3.0323	8	7,400	$273	$201	$474	$0.06	$2,158
Totals	**5,920**	**706**	**316**	**116,560**	**$15,874**	**$0.1362**	**4,973**	**$15,079**	**$3.0323**	**690**	**26,200**	**$1,013**	**$733**	**$1,746**	**$0.07**	**$32,698**

City of Bristol, CT

Utility Data Summary

Engine 2

Delivery: Eversource
Account #: 51119853083
Meter #: 891340682
Tariff Rate: Rate 030
Supplier: Liberty Power Holdings

Supplier East River Energy
Account #: N/A

Water Service: Bristol Water Department
Account #: 01-11568000
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	2	373	16	3,714	$726	$0.1955	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$726
Aug	0	252	15	3,669	$711	$0.1937	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$711
Sep	99	175	17	3,198	$667	$0.2087	0	$0	$0.0000	0	4,805	$191	$131	$322	$0.07	$989
Oct	310	6	14	2,652	$556	$0.2098	317	$968	$3.0569	44	0	$0	$0	$0	$0.00	$1,525
Nov	663	0	14	2,925	$598	$0.2046	217	$665	$3.0569	30	0	$0	$0	$0	$0.00	$1,263
Dec	1,001	0	15	3,775	$713	$0.1889	436	$1,334	$3.0569	61	4,480	$183	$124	$308	$0.07	$2,355
Jan	1,206	0	16	3,504	$699	$0.1995	451	$1,377	$3.0569	62	0	$0	$0	$0	$0.00	$2,077
Feb	1,056	0	22	4,278	$879	$0.2054	693	$2,365	$3.4131	96	0	$0	$0	$0	$0.00	$3,244
Mar	1,007	0	16	3,064	$642	$0.2095	362	$1,223	$3.3800	50	3,050	$150	$96	$246	$0.08	$2,111
Apr	508	0	15	2,985	$628	$0.2104	493	$1,574	$3.1909	68	0	$0	$0	$0	$0.00	$2,202
May	191	11	13	2,930	$594	$0.2028	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$594
Jun	11	37	14	3,058	$631	$0.2063	0	$0	$0.0000	0	2,620	$141	$87	$228	$0.09	$859
Totals	**6,054**	**854**	**187**	**39,752**	**$8,045**	**$0.2024**	**2,969**	**$9,507**	**$3.2017**	**412**	**14,955**	**$665**	**$439**	**$1,104**	**$0.07**	**$18,656**

Fiscal Year 2015

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	266	15	3,504	$687	$0.1961	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$687
Aug	2	187	13	3,163	$615	$0.1945	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$615
Sep	79	152	15	2,949	$605	$0.2051	0	$0	$0.0000	0	2,630	$141	$94	$235	$0.09	$839
Oct	282	20	15	2,490	$268	$0.1077	364	$1,103	$3.0323	50	0	$0	$0	$0	$0.00	$1,371
Nov	720	1	17	3,112	$319	$0.1026	296	$898	$3.0323	41	0	$0	$0	$0	$0.00	$1,217
Dec	896	0	13	3,189	$275	$0.0863	287	$871	$3.0323	40	2,670	$142	$95	$236	$0.09	$1,382
Jan	1,243	0	16	4,100	$793	$0.1933	618	$1,875	$3.0323	86	0	$0	$0	$0	$0.00	$2,667
Feb	1,354	0	14	3,542	$575	$0.1622	717	$2,174	$3.0323	99	0	$0	$0	$0	$0.00	$2,749
Mar	1,019	0	16	3,311	$578	$0.1745	353	$1,069	$3.0323	49	2,340	$134	$88	$222	$0.09	$1,869
Apr	511	0	17	3,334	$601	$0.1803	435	$1,318	$3.0323	60	0	$0	$0	$0	$0.00	$1,919
May	99	46	14	3,046	$526	$0.1727	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$526
Jun	54	103	14	2,799	$496	$0.1770	0	$0	$0.0000	0	2,340	$134	$88	$222	$0.09	$717
Totals	**6,259**	**775**	**177**	**38,539**	**$6,337**	**$0.1644**	**3,069**	**$9,307**	**$3.0323**	**426**	**9,980**	**$551**	**$364**	**$914**	**$0.09**	**$16,559**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	16	3,714	$726	$0.1955	0	$0	$3.2017	0	0	$0	$0	$0	$0.00	$726
Aug	21	200	15	3,669	$711	$0.1937	10	$33	$3.2017	1	0	$0	$0	$0	$0.00	$744
Sep	119	63	17	3,198	$667	$0.2087	59	$188	$3.2017	8	4,805	$191	$131	$322	$0.07	$1,177
Oct	409	0	14	2,652	$556	$0.2098	200	$642	$3.2017	28	0	$0	$0	$0	$0.00	$1,198
Nov	644	0	14	2,925	$598	$0.2046	316	$1,012	$3.2017	44	0	$0	$0	$0	$0.00	$1,610
Dec	1,114	0	15	3,775	$713	$0.1889	547	$1,750	$3.2017	76	4,480	$183	$124	$308	$0.07	$2,771
Jan	1,145	0	16	3,504	$699	$0.1995	562	$1,798	$3.2017	78	0	$0	$0	$0	$0.00	$2,498
Feb	1,007	0	22	4,278	$879	$0.2054	494	$1,581	$3.2017	68	0	$0	$0	$0	$0.00	$2,460
Mar	778	0	16	3,064	$642	$0.2095	381	$1,221	$3.2017	53	3,050	$150	$96	$246	$0.08	$2,109
Apr	450	1	15	2,985	$628	$0.2104	221	$707	$3.2017	31	0	$0	$0	$0	$0.00	$1,335
May	167	27	13	2,930	$594	$0.2028	82	$263	$3.2017	11	0	$0	$0	$0	$0.00	$857
Jun	65	133	14	3,058	$631	$0.2063	32	$102	$3.2017	4	2,620	$141	$87	$228	$0.09	$960
Totals	**5,920**	**706**	**187**	**39,752**	**$8,045**	**$0.2024**	**2,903**	**$9,296**	**$3.2017**	**403**	**14,955**	**$665**	**$439**	**$1,104**	**$0.07**	**$18,445**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	15	3,504	$687	$0.1961	0	$0	$3.0323	0	0	$0	$0	$0	$0.00	$687
Aug	21	200	13	3,163	$615	$0.1945	10	$32	$3.0323	1	0	$0	$0	$0	$0.00	$647
Sep	119	63	15	2,949	$605	$0.2051	59	$178	$3.0323	8	2,630	$141	$94	$235	$0.09	$1,017
Oct	409	0	15	2,490	$268	$0.1077	200	$608	$3.0323	28	0	$0	$0	$0	$0.00	$876
Nov	644	0	17	3,112	$319	$0.1026	316	$958	$3.0323	44	0	$0	$0	$0	$0.00	$1,277
Dec	1,114	0	13	3,189	$275	$0.0863	546	$1,657	$3.0323	76	2,670	$142	$95	$236	$0.09	$2,169
Jan	1,145	0	16	4,100	$793	$0.1933	562	$1,703	$3.0323	78	0	$0	$0	$0	$0.00	$2,495
Feb	1,007	0	14	3,542	$575	$0.1622	494	$1,497	$3.0323	68	0	$0	$0	$0	$0.00	$2,072
Mar	778	0	16	3,311	$578	$0.1745	381	$1,156	$3.0323	53	2,340	$134	$88	$222	$0.09	$1,956
Apr	450	1	17	3,334	$601	$0.1803	221	$669	$3.0323	31	0	$0	$0	$0	$0.00	$1,270
May	167	27	14	3,046	$526	$0.1727	82	$249	$3.0323	11	0	$0	$0	$0	$0.00	$775
Jun	65	133	14	2,799	$496	$0.1770	32	$96	$3.0323	4	2,340	$134	$88	$222	$0.09	$813
Totals	**5,920**	**706**	**177**	**38,539**	**$6,337**	**$0.1644**	**2,903**	**$8,802**	**$3.0323**	**403**	**9,980**	**$551**	**$364**	**$914**	**$0.09**	**$16,054**

City of Bristol, CT

Utility Data Summary

Engine 3

1.000	CCF

Delivery: Eversource
Account #: 51656753068
Meter #: 891420582
Tariff Rate: Rate 030
Supplier: Liberty Power Holdings

Supplier
Delivery: Eversource
Account #: **Account #:** 57067460022
Meter #: 0520587
Tariff Rate: R10
Supplier: Eversource

Water Service: Bristol Water Department
Account #: 02-09693000
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	13	329	11	3,571	$642	$0.1797	72	$131	$1.8183	7	2,300	$177	$95	$272	$0.12	$1,044
Aug	2	288	12	2,952	$572	$0.1938	65	$128	$1.9720	7	0	$0	$0	$0	$0.00	$700
Sep	24	188	8	2,278	$429	$0.1885	85	$136	$1.6004	9	0	$0	$0	$0	$0.00	$565
Oct	124	10	9	1,568	$350	$0.2232	153	$163	$1.0639	16	2,500	$182	$99	$280	$0.11	$793
Nov	470	0	10	2,014	$418	$0.2074	296	$212	$0.7172	30	0	$0	$0	$0	$0.00	$630
Dec	816	0	12	2,013	$440	$0.2186	469	$248	$0.5291	48	0	$0	$0	$0	$0.00	$688
Jan	1,188	0	12	2,313	$480	$0.2077	660	$322	$0.4879	68	2,150	$174	$92	$265	$0.12	$1,068
Feb	1,121	0	12	2,176	$469	$0.2155	620	$311	$0.5016	64	0	$0	$0	$0	$0.00	$780
Mar	1,054	0	12	2,081	$463	$0.2223	562	$295	$0.5248	58	0	$0	$0	$0	$0.00	$758
Apr	743	0	8	1,740	$358	$0.2059	378	$244	$0.6456	39	2,050	$171	$90	$261	$0.13	$863
May	416	9	8	1,864	$386	$0.2073	218	$200	$0.9164	22	0	$0	$0	$0	$0.00	$586
Jun	96	32	10	1,884	$415	$0.2200	48	$130	$2.7146	5	0	$0	$0	$0	$0.00	$545
Totals	**6,067**	**856**	**124**	**26,454**	**$5,422**	**$0.2050**	**3,626**	**$2,520**	**$0.6951**	**372**	**9,000**	**$704**	**$375**	**$1,079**	**$0.12**	**$9,021**

Fiscal Year 2015

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	246	9	3,081	$566	$0.1836	33	$144	$4.3709	3	2,400	$179	$103	$283	$0.12	$993
Aug	0	200	10	2,552	$496	$0.1942	28	$137	$4.9075	3	0	$0	$0	$0	$0.00	$633
Sep	4	166	9	2,471	$467	$0.1890	28	$139	$4.9479	3	0	$0	$0	$0	$0.00	$606
Oct	137	12	9	1,720	$176	$0.1026	123	$239	$1.9415	13	2,700	$186	$110	$296	$0.11	$711
Nov	452	9	9	1,663	$177	$0.1064	283	$375	$1.3261	29	0	$0	$0	$0	$0.00	$552
Dec	847	0	9	1,831	$180	$0.0983	517	$600	$1.1596	53	0	$0	$0	$0	$0.00	$780
Jan	1,099	0	12	2,493	$516	$0.2070	638	$726	$1.1386	65	2,650	$185	$109	$294	$0.11	$1,536
Feb	1,278	0	12	2,127	$408	$0.1920	711	$742	$1.0435	73	0	$0	$0	$0	$0.00	$1,150
Mar	1,222	0	9	2,043	$340	$0.1666	605	$610	$1.0083	62	0	$0	$0	$0	$0.00	$950
Apr	856	0	9	2,142	$354	$0.1654	429	$460	$1.0714	44	2,450	$181	$105	$285	$0.12	$1,099
May	256	38	9	1,843	$325	$0.1762	144	$228	$1.5838	15	0	$0	$0	$0	$0.00	$553
Jun	101	77	9	2,184	$362	$0.1656	54	$152	$2.8069	6	0	$0	$0	$0	$0.00	$513
Totals	**6,252**	**748**	**115**	**26,150**	**$4,367**	**$0.1670**	**3,593**	**$4,551**	**$1.2667**	**368**	**10,200**	**$732**	**$427**	**$1,158**	**$0.11**	**$10,077**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	11	3,571	$642	$0.1797	0	0.02804126	$0.6951	0	2,300	$177	$95	$272	$0.12	$914
Aug	21	200	12	2,952	$572	$0.1938	13	$9	$0.6951	1	0	$0	$0	$0	$0.00	$581
Sep	119	63	8	2,278	$429	$0.1885	71	$50	$0.6951	7	0	$0	$0	$0	$0.00	$479
Oct	409	0	9	1,568	$350	$0.2232	244	$170	$0.6951	25	2,500	$182	$99	$280	$0.11	$800
Nov	644	0	10	2,014	$418	$0.2074	385	$268	$0.6951	39	0	$0	$0	$0	$0.00	$685
Dec	1,114	0	12	2,013	$440	$0.2186	666	$463	$0.6951	68	0	$0	$0	$0	$0.00	$903
Jan	1,145	0	12	2,313	$480	$0.2077	684	$476	$0.6951	70	2,150	$174	$92	$265	$0.12	$1,221
Feb	1,007	0	12	2,176	$469	$0.2155	602	$418	$0.6951	62	0	$0	$0	$0	$0.00	$887
Mar	778	0	12	2,081	$463	$0.2223	465	$323	$0.6951	48	0	$0	$0	$0	$0.00	$786
Apr	450	1	8	1,740	$358	$0.2059	269	$187	$0.6951	28	2,050	$171	$90	$261	$0.13	$806
May	167	27	8	1,864	$386	$0.2073	100	$70	$0.6951	10	0	$0	$0	$0	$0.00	$456
Jun	65	133	10	1,884	$415	$0.2200	39	$27	$0.6951	4	0	$0	$0	$0	$0.00	$441
Totals	**5,920**	**706**	**124**	**26,454**	**$5,422**	**$0.2050**	**3,538**	**$2,459**	**$0.6951**	**363**	**9,000**	**$704**	**$375**	**$1,079**	**$0.12**	**$8,960**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	9	3,081	$566	$0.1836	0	0.049139179	$1.2667	0	2,400	$179	$103	$283	$0.12	$849
Aug	21	200	10	2,552	$496	$0.1942	12	$15	$1.2667	1	0	$0	$0	$0	$0.00	$511
Sep	119	63	9	2,471	$467	$0.1890	69	$87	$1.2667	7	0	$0	$0	$0	$0.00	$554
Oct	409	0	9	1,720	$176	$0.1026	235	$298	$1.2667	24	2,700	$186	$110	$296	$0.11	$770
Nov	644	0	9	1,663	$177	$0.1064	370	$469	$1.2667	38	0	$0	$0	$0	$0.00	$646
Dec	1,114	0	9	1,831	$180	$0.0983	640	$811	$1.2667	66	0	$0	$0	$0	$0.00	$991
Jan	1,145	0	12	2,493	$516	$0.2070	658	$834	$1.2667	67	2,650	$185	$109	$294	$0.11	$1,644
Feb	1,007	0	12	2,127	$408	$0.1920	579	$733	$1.2667	59	0	$0	$0	$0	$0.00	$1,141
Mar	778	0	9	2,043	$340	$0.1666	447	$566	$1.2667	46	0	$0	$0	$0	$0.00	$906
Apr	450	1	9	2,142	$354	$0.1654	259	$328	$1.2667	27	2,450	$181	$105	$285	$0.12	$967
May	167	27	9	1,843	$325	$0.1762	96	$122	$1.2667	10	0	$0	$0	$0	$0.00	$446
Jun	65	133	9	2,184	$362	$0.1656	37	$47	$1.2667	4	0	$0	$0	$0	$0.00	$409
Totals	**5,920**	**706**	**115**	**26,150**	**$4,367**	**$0.1670**	**3,402**	**$4,310**	**$1.2667**	**349**	**10,200**	**$732**	**$427**	**$1,158**	**$0.11**	**$9,835**

City of Bristol, CT

Utility Data Summary

Engine 5

Delivery: Eversource
Account #: 51127063089
Meter #: 891246982
Tariff Rate: Rate 030
Supplier: Liberty Power Holdings

Supplier East River Energy
Account #: N/A

Water Service: Bristol Water Department
Account #: 03-16897000
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	2	282	12	3,688	$659	$0.1787	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$659
Aug	0	324	12	4,019	$718	$0.1786	0	$0	$0.0000	0	3,045	$150	$96	$246	$0.08	$964
Sep	99	171	12	3,184	$607	$0.1906	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$607
Oct	310	40	10	2,531	$484	$0.1911	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$484
Nov	663	0	9	2,507	$479	$0.1909	0	$0	$0.0000	0	2,620	$141	$87	$228	$0.09	$706
Dec	1,001	0	10	2,959	$542	$0.1832	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$542
Jan	1,206	0	13	3,332	$622	$0.1866	695	$2,125	$3.0569	96	0	$0	$0	$0	$0.00	$2,747
Feb	1,056	0	14	2,790	$575	$0.2061	424	$1,296	$3.0569	59	1,955	$125	$74	$199	$0.10	$2,070
Mar	1,007	0	13	2,528	$533	$0.2108	411	$1,390	$3.3800	57	0	$0	$0	$0	$0.00	$1,923
Apr	508	0	13	2,300	$501	$0.2178	429	$1,368	$3.1916	59	0	$0	$0	$0	$0.00	$1,869
May	191	0	11	2,218	$465	$0.2095	0	$0	$0.0000	0	2,265	$132	$80	$213	$0.09	$677
Jun	11	36	11	2,632	$530	$0.2013	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$530
Totals	**6,054**	**853**	**138**	**34,688**	**$6,713**	**$0.1935**	**1,959**	**$6,179**	**$3.1542**	**272**	**9,885**	**$548**	**$338**	**$886**	**$0.09**	**$13,777**

Fiscal Year 2015

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	203	13	3,413	$655	$0.1920	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$655
Aug	2	234	13	3,558	$664	$0.1865	0	$0	$0.0000	0	2,895	$147	$99	$246	$0.09	$910
Sep	79	174	11	2,934	$555	$0.1891	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$555
Oct	282	17	11	2,182	$219	$0.1003	358	$1,087	$3.0323	50	0	$0	$0	$0	$0.00	$1,306
Nov	720	10	12	2,466	$236	$0.0959	214	$648	$3.0323	30	3,010	$150	$102	$251	$0.08	$1,136
Dec	896	0	11	2,960	$236	$0.0796	232	$705	$3.0323	32	0	$0	$0	$0	$0.00	$940
Jan	1,243	0	15	3,341	$665	$0.1989	337	$1,023	$3.0323	47	0	$0	$0	$0	$0.00	$1,687
Feb	1,354	0	13	2,930	$503	$0.1718	543	$1,645	$3.0323	75	2,110	$129	$83	$212	$0.10	$2,360
Mar	1,019	0	10	2,546	$404	$0.1586	391	$1,185	$3.0323	54	0	$0	$0	$0	$0.00	$1,589
Apr	511	0	13	2,925	$487	$0.1665	318	$963	$3.0323	44	0	$0	$0	$0	$0.00	$1,450
May	99	21	12	2,351	$426	$0.1812	0	$0	$0.0000	0	2,020	$127	$81	$208	$0.10	$634
Jun	54	78	11	2,283	$397	$0.1739	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$397
Totals	**6,259**	**737**	**142**	**33,889**	**$5,446**	**$0.1607**	**2,393**	**$7,256**	**$3.0323**	**332**	**10,035**	**$552**	**$365**	**$917**	**$0.09**	**$13,619**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	12	3,688	$659	$0.1787	0	$0	$3.1542	0	0	$0	$0	$0	$0.00	$659
Aug	21	200	12	4,019	$718	$0.1786	7	$22	$3.1542	1	3,045	$150	$96	$246	$0.08	$986
Sep	119	63	12	3,184	$607	$0.1906	39	$122	$3.1542	5	0	$0	$0	$0	$0.00	$729
Oct	409	0	10	2,531	$484	$0.1911	132	$417	$3.1542	18	0	$0	$0	$0	$0.00	$901
Nov	644	0	9	2,507	$479	$0.1909	208	$657	$3.1542	29	2,620	$141	$87	$228	$0.09	$1,364
Dec	1,114	0	10	2,959	$542	$0.1832	361	$1,137	$3.1542	50	0	$0	$0	$0	$0.00	$1,679
Jan	1,145	0	13	3,332	$622	$0.1866	371	$1,169	$3.1542	51	0	$0	$0	$0	$0.00	$1,791
Feb	1,007	0	14	2,790	$575	$0.2061	326	$1,028	$3.1542	45	1,955	$125	$74	$199	$0.10	$1,802
Mar	778	0	13	2,528	$533	$0.2108	252	$794	$3.1542	35	0	$0	$0	$0	$0.00	$1,327
Apr	450	1	13	2,300	$501	$0.2178	146	$459	$3.1542	20	0	$0	$0	$0	$0.00	$960
May	167	27	11	2,218	$465	$0.2095	54	$171	$3.1542	8	2,265	$132	$80	$213	$0.09	$848
Jun	65	133	11	2,632	$530	$0.2013	21	$66	$3.1542	3	0	$0	$0	$0	$0.00	$596
Totals	**5,920**	**706**	**138**	**34,688**	**$6,713**	**$0.1935**	**1,915**	**$6,042**	**$3.1542**	**266**	**9,885**	**$548**	**$338**	**$886**	**$0.09**	**$13,641**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	13	3,413	$655	$0.1920	0	$0	$3.0323	0	0	$0	$0	$0	$0.00	$655
Aug	21	200	13	3,558	$664	$0.1865	8	$25	$3.0323	1	2,895	$147	$99	$246	$0.09	$934
Sep	119	63	11	2,934	$555	$0.1891	46	$139	$3.0323	6	0	$0	$0	$0	$0.00	$693
Oct	409	0	11	2,182	$219	$0.1003	156	$474	$3.0323	22	0	$0	$0	$0	$0.00	$693
Nov	644	0	12	2,466	$236	$0.0959	246	$747	$3.0323	34	3,010	$150	$102	$251	$0.08	$1,235
Dec	1,114	0	11	2,960	$236	$0.0796	426	$1,292	$3.0323	59	0	$0	$0	$0	$0.00	$1,528
Jan	1,145	0	15	3,341	$665	$0.1989	438	$1,328	$3.0323	61	0	$0	$0	$0	$0.00	$1,992
Feb	1,007	0	13	2,930	$503	$0.1718	385	$1,167	$3.0323	53	2,110	$129	$83	$212	$0.10	$1,882
Mar	778	0	10	2,546	$404	$0.1586	297	$902	$3.0323	41	0	$0	$0	$0	$0.00	$1,305
Apr	450	1	13	2,925	$487	$0.1665	172	$522	$3.0323	24	0	$0	$0	$0	$0.00	$1,009
May	167	27	12	2,351	$426	$0.1812	64	$194	$3.0323	9	2,020	$127	$81	$208	$0.10	$828
Jun	65	133	11	2,283	$397	$0.1739	25	$75	$3.0323	3	0	$0	$0	$0	$0.00	$472
Totals	**5,920**	**706**	**142**	**33,889**	**$5,446**	**$0.1607**	**2,263**	**$6,863**	**$3.0323**	**314**	**10,035**	**$552**	**$365**	**$917**	**$0.09**	**$13,226**

City of Bristol, CT

Utility Data Summary

Beals Senior Center

1.000	CCF

Delivery: Eversource
Account #: 51641753058
Meter #: 891834222
Tariff Rate: Rate 037
Supplier: Eversource

Supplier
Delivery: Eversource
Account #: 57256450065
Meter #: 0356864
Tariff Rate: R30
Supplier: Eversource

Water Service: Bristol Water Department
Account #: 03-08210000
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	2	324	193	73,200	$11,459	$0.1565	143	$920	$6.4340	15	0	$0	$0	$0	$0.00	$12,379
Aug	0	171	285	71,400	$12,567	$0.1760	788	$981	$1.2444	81	9,950	$354	$247	$601	$0.06	$14,149
Sep	99	40	274	62,700	$11,295	$0.1801	1,605	$1,057	$0.6588	165	0	$0	$0	$0	$0.00	$12,352
Oct	310	0	107	3,000	$4,011	$1.3369	1,492	$1,047	$0.7016	153	0	$0	$0	$0	$0.00	$5,057
Nov	663	0	105	10,800	$6,728	$0.6229	3,080	$1,176	$0.3817	316	11,850	$398	$285	$683	$0.06	$8,586
Dec	1,001	0	102	11,400	$6,992	$0.6133	4,372	$1,242	$0.2840	448	0	$0	$0	$0	$0.00	$8,233
Jan	1,206	0	99	10,200	$6,682	$0.6551	5,503	$1,562	$0.2838	564	0	$0	$0	$0	$0.00	$8,244
Feb	1,056	0	93	11,400	$6,987	$0.6129	4,720	$1,499	$0.3176	484	6,800	$281	$184	$466	$0.07	$8,952
Mar	1,007	0	95	9,300	$6,393	$0.6874	4,271	$1,463	$0.3426	438	0	$0	$0	$0	$0.00	$7,856
Apr	508	0	91	9,000	$6,257	$0.6953	1,902	$1,246	$0.6551	195	0	$0	$0	$0	$0.00	$7,503
May	191	36	163	11,100	$7,315	$0.6590	1,098	$1,145	$1.0432	113	4,450	$227	$138	$364	$0.08	$8,824
Jun	11	203	231	19,800	$10,122	$0.5112	812	$1,110	$1.3666	83	0	$0	$0	$0	$0.00	$11,231
Totals	**6,054**	**774**	**1,838**	**303,300**	**$96,806**	**$0.3192**	**29,786**	**$14,448**	**$0.4850**	**3,053**	**33,050**	**$1,259**	**$855**	**$2,114**	**$0.06**	**$113,368**

Fiscal Year 2015

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	234	240	59,100	$10,386	$0.1757	661	$1,440	$2.1789	68	0	$0	$0	$0	$0.00	$11,826
Aug	2	174	253	58,500	$10,329	$0.1766	839	$1,503	$1.7917	86	7,600	$300	$214	$513	$0.07	$12,345
Sep	79	17	205	45,300	$3,678	$0.0812	1,161	$1,744	$1.5018	119	0	$0	$0	$0	$0.00	$5,422
Oct	282	10	197	42,300	$3,549	$0.0839	1,906	$2,266	$1.1886	195	0	$0	$0	$0	$0.00	$5,814
Nov	720	0	113	37,800	$3,211	$0.0849	3,461	$3,017	$0.8716	355	8,250	$315	$227	$542	$0.07	$6,769
Dec	896	0	101	39,000	$7,342	$0.1883	4,556	$3,875	$0.8506	467	0	$0	$0	$0	$0.00	$11,217
Jan	1,243	0	107	36,900	$7,692	$0.2085	6,298	$5,202	$0.8260	646	0	$0	$0	$0	$0.00	$12,894
Feb	1,354	0	109	42,000	$8,401	$0.2000	6,713	$5,239	$0.7804	688	6,850	$282	$198	$480	$0.07	$14,119
Mar	1,019	0	105	41,700	$8,320	$0.1995	4,906	$3,868	$0.7884	503	0	$0	$0	$0	$0.00	$12,188
Apr	511	21	212	41,400	$8,598	$0.2077	2,386	$2,543	$1.0657	245	0	$0	$0	$0	$0.00	$11,141
May	99	78	215	52,800	$10,314	$0.1953	1,158	$1,833	$1.5831	119	8,000	$309	$222	$531	$0.07	$12,678
Jun	54	0	0	0	$0	#DIV/0!	1,033	$1,713	$1.6587	106	0	$0	$0	$0	$0.00	$1,713
Totals	**6,259**	**534**	**1,857**	**496,800**	**$81,820**	**$0.1647**	**35,078**	**$34,243**	**$0.9762**	**3,595**	**30,700**	**$1,205**	**$860**	**$2,066**	**$0.07**	**$118,128**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	193	73,200	$11,459	$0.1565	0	0.161085059	$0.4850	0	0	$0	$0	$0	$0.00	$11,459
Aug	21	200	285	71,400	$12,567	$0.1760	105	$51	$0.4850	11	9,950	$354	$247	$601	$0.06	$13,219
Sep	119	63	274	62,700	$11,295	$0.1801	588	$285	$0.4850	60	0	$0	$0	$0	$0.00	$11,580
Oct	409	0	107	3,000	$4,011	$1.3369	2,011	$975	$0.4850	206	0	$0	$0	$0	$0.00	$4,986
Nov	644	0	105	10,800	$6,728	$0.6229	3,169	$1,537	$0.4850	325	11,850	$398	$285	$683	$0.06	$8,948
Dec	1,114	0	102	11,400	$6,992	$0.6133	5,483	$2,660	$0.4850	562	0	$0	$0	$0	$0.00	$9,651
Jan	1,145	0	99	10,200	$6,682	$0.6551	5,635	$2,733	$0.4850	578	0	$0	$0	$0	$0.00	$9,415
Feb	1,007	0	93	11,400	$6,987	$0.6129	4,953	$2,403	$0.4850	508	6,800	$281	$184	$466	$0.07	$9,855
Mar	778	0	95	9,300	$6,393	$0.6874	3,826	$1,856	$0.4850	392	0	$0	$0	$0	$0.00	$8,249
Apr	450	1	91	9,000	$6,257	$0.6953	2,214	$1,074	$0.4850	227	0	$0	$0	$0	$0.00	$7,331
May	167	27	163	11,100	$7,315	$0.6590	823	$399	$0.4850	84	4,450	$227	$138	$364	$0.08	$8,078
Jun	65	133	231	19,800	$10,122	$0.5112	318	$154	$0.4850	33	0	$0	$0	$0	$0.00	$10,276
Totals	**5,920**	**706**	**1,838**	**303,300**	**$96,806**	**$0.3192**	**29,126**	**$14,127**	**$0.4850**	**2,985**	**33,050**	**$1,259**	**$855**	**$2,114**	**$0.06**	**$113,047**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	240	59,100	$10,386	$0.1757	0	0.369288089	$0.9762	0	0	$0	$0	$0	$0.00	$10,386
Aug	21	200	253	58,500	$10,329	$0.1766	119	$116	$0.9762	12	7,600	$300	$214	$513	$0.07	$10,958
Sep	119	63	205	45,300	$3,678	$0.0812	670	$654	$0.9762	69	0	$0	$0	$0	$0.00	$4,332
Oct	409	0	197	42,300	$3,549	$0.0839	2,291	$2,236	$0.9762	235	0	$0	$0	$0	$0.00	$5,785
Nov	644	0	113	37,800	$3,211	$0.0849	3,610	$3,524	$0.9762	370	8,250	$315	$227	$542	$0.07	$7,277
Dec	1,114	0	101	39,000	$7,342	$0.1883	6,246	$6,097	$0.9762	640	0	$0	$0	$0	$0.00	$13,439
Jan	1,145	0	107	36,900	$7,692	$0.2085	6,418	$6,266	$0.9762	658	0	$0	$0	$0	$0.00	$13,957
Feb	1,007	0	109	42,000	$8,401	$0.2000	5,642	$5,508	$0.9762	578	6,850	$282	$198	$480	$0.07	$14,389
Mar	778	0	105	41,700	$8,320	$0.1995	4,358	$4,255	$0.9762	447	0	$0	$0	$0	$0.00	$12,575
Apr	450	1	212	41,400	$8,598	$0.2077	2,522	$2,462	$0.9762	259	0	$0	$0	$0	$0.00	$11,060
May	167	27	215	52,800	$10,314	$0.1953	938	$915	$0.9762	96	8,000	$309	$222	$531	$0.07	$11,760
Jun	65	133	0	0	$0	#DIV/0!	362	$354	$0.9762	37	0	$0	$0	$0	$0.00	$354
Totals	**5,920**	**706**	**1,857**	**496,800**	**$81,820**	**$0.1647**	**33,177**	**$32,387**	**$0.9762**	**3,401**	**30,700**	**$1,205**	**$860**	**$2,066**	**$0.07**	**$116,272**

City of Bristol, CT

Utility Data Summary

Main Library

1.000	CCF

Delivery: Eversource
Account #: 51237924022
Meter #: 891799122
Tariff Rate: Rate 037
Supplier: Liberty Power Holdings

Supplier
Delivery: Eversource
Account #: **Account #:** 57680570041
Meter #: 0424508
Tariff Rate: R20
Supplier: Eversource

Water Service: Bristol Water Department
Account #: 01-09940000
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	2	446	192	60,672	$10,227	$0.1686	0	$583	$0.0000	0	0	$0	$0	$0	$0.00	$10,810
Aug	0	178	209	62,208	$9,570	$0.1538	0	$583	$0.0000	0	0	$0	$0	$0	$0.00	$10,152
Sep	99	143	176	61,824	$10,359	$0.1676	0	$583	$0.0000	0	15,900	$469	$359	$828	$0.05	$11,769
Oct	310	6	167	50,304	$9,378	$0.1864	398	$637	$1.6002	41	0	$0	$0	$0	$0.00	$10,015
Nov	663	0	156	39,936	$7,561	$0.1893	1,695	$771	$0.4551	174	0	$0	$0	$0	$0.00	$8,332
Dec	1,001	0	124	45,312	$7,790	$0.1719	2,545	$833	$0.3273	261	9,250	$316	$226	$541	$0.06	$9,165
Jan	1,206	0	119	46,464	$7,705	$0.1658	3,024	$928	$0.3068	310	0	$0	$0	$0	$0.00	$8,633
Feb	1,056	0	126	49,152	$7,934	$0.1614	2,399	$864	$0.3603	246	0	$0	$0	$0	$0.00	$8,798
Mar	1,007	0	154	50,304	$7,253	$0.1442	1,996	$823	$0.4125	205	3,500	$183	$111	$294	$0.08	$8,370
Apr	508	0	154	44,160	$7,056	$0.1598	456	$631	$1.3831	47	0	$0	$0	$0	$0.00	$7,687
May	191	11	154	39,291	$7,609	$0.1936	0	$554	$0.0000	0	0	$0	$0	$0	$0.00	$8,163
Jun	11	72	171	56,448	$9,639	$0.1708	0	$554	$0.0000	0	3,600	$185	$113	$298	$0.08	$10,491
Totals	**6,054**	**856**	**1,904**	**606,075**	**$102,079**	**$0.1684**	**12,513**	**$8,343**	**$0.6667**	**1,283**	**32,250**	**$1,153**	**$808**	**$1,961**	**$0.06**	**$112,384**

Fiscal Year 2015

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	266	182	62,976	$10,553	$0.1676	0	$554	$0.0000	0	0	$0	$0	$0	$0.00	$11,108
Aug	2	187	181	57,216	$9,471	$0.1655	0	$554	$0.0000	0	0	$0	$0	$0	$0.00	$10,025
Sep	79	152	178	64,128	$10,302	$0.1606	0	$554	$0.0000	0	11,480	$367	$288	$655	$0.06	$11,511
Oct	282	20	172	51,456	$3,359	$0.0653	31	$577	$18.6274	3	0	$0	$0	$0	$0.00	$3,936
Nov	720	1	177	46,080	$3,211	$0.0697	1,251	$1,393	$1.1131	128	0	$0	$0	$0	$0.00	$4,604
Dec	896	0	128	44,160	$3,035	$0.0687	1,809	$1,840	$1.0169	185	10,400	$342	$265	$607	$0.06	$5,482
Jan	1,243	0	126	49,152	$8,635	$0.1757	3,327	$2,944	$0.8850	341	0	$0	$0	$0	$0.00	$11,579
Feb	1,354	0	131	46,848	$6,598	$0.1408	3,223	$2,673	$0.8293	330	0	$0	$0	$0	$0.00	$9,270
Mar	1,019	0	137	47,232	$6,660	$0.1410	2,109	$1,816	$0.8609	216	3,200	$176	$112	$288	$0.09	$8,764
Apr	511	0	131	45,696	$6,487	$0.1420	510	$871	$1.7070	52	0	$0	$0	$0	$0.00	$7,358
May	99	46	219	51,072	$7,547	$0.1478	0	$568	$0.0000	0	0	$0	$0	$0	$0.00	$8,115
Jun	54	103	196	61,824	$8,526	$0.1379	0	$568	$0.0000	0	4,100	$197	$121	$318	$0.08	$9,412
Totals	**6,259**	**775**	**1,958**	**627,840**	**$84,385**	**$0.1344**	**12,260**	**$14,911**	**$1.2163**	**1,257**	**29,180**	**$1,082**	**$786**	**$1,868**	**$0.06**	**$101,164**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	192	60,672	$10,227	$0.1686	0	0.093021779	$0.6667	0	0	$0	$0	$0	$0.00	$10,227
Aug	21	200	209	62,208	$9,570	$0.1538	44	$29	$0.6667	5	0	$0	$0	$0	$0.00	$9,599
Sep	119	63	176	61,824	$10,359	$0.1676	247	$165	$0.6667	25	15,900	$469	$359	$828	$0.05	$11,351
Oct	409	0	167	50,304	$9,378	$0.1864	845	$563	$0.6667	87	0	$0	$0	$0	$0.00	$9,941
Nov	644	0	156	39,936	$7,561	$0.1893	1,331	$888	$0.6667	136	0	$0	$0	$0	$0.00	$8,448
Dec	1,114	0	124	45,312	$7,790	$0.1719	2,303	$1,536	$0.6667	236	9,250	$316	$226	$541	$0.06	$9,867
Jan	1,145	0	119	46,464	$7,705	$0.1658	2,367	$1,578	$0.6667	243	0	$0	$0	$0	$0.00	$9,283
Feb	1,007	0	126	49,152	$7,934	$0.1614	2,081	$1,387	$0.6667	213	0	$0	$0	$0	$0.00	$9,321
Mar	778	0	154	50,304	$7,253	$0.1442	1,607	$1,072	$0.6667	165	3,500	$183	$111	$294	$0.08	$8,619
Apr	450	1	154	44,160	$7,056	$0.1598	930	$620	$0.6667	95	0	$0	$0	$0	$0.00	$7,676
May	167	27	154	39,291	$7,609	$0.1936	346	$231	$0.6667	35	0	$0	$0	$0	$0.00	$7,839
Jun	65	133	171	56,448	$9,639	$0.1708	134	$89	$0.6667	14	3,600	$185	$113	$298	$0.08	$10,026
Totals	**5,920**	**706**	**1,904**	**606,075**	**$102,079**	**$0.1684**	**12,236**	**$8,158**	**$0.6667**	**1,254**	**32,250**	**$1,153**	**$808**	**$1,961**	**$0.06**	**$112,199**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	182	62,976	$10,553	$0.1676	0	0.160811983	$1.2163	0	0	$0	$0	$0	$0.00	$10,554
Aug	21	200	181	57,216	$9,471	$0.1655	42	$51	$1.2163	4	0	$0	$0	$0	$0.00	$9,522
Sep	119	63	178	64,128	$10,302	$0.1606	234	$285	$1.2163	24	11,480	$367	$288	$655	$0.06	$11,241
Oct	409	0	172	51,456	$3,359	$0.0653	801	$974	$1.2163	82	0	$0	$0	$0	$0.00	$4,333
Nov	644	0	177	46,080	$3,211	$0.0697	1,262	$1,535	$1.2163	129	0	$0	$0	$0	$0.00	$4,746
Dec	1,114	0	128	44,160	$3,035	$0.0687	2,183	$2,655	$1.2163	224	10,400	$342	$265	$607	$0.06	$6,297
Jan	1,145	0	126	49,152	$8,635	$0.1757	2,243	$2,728	$1.2163	230	0	$0	$0	$0	$0.00	$11,363
Feb	1,007	0	131	46,848	$6,598	$0.1408	1,972	$2,399	$1.2163	202	0	$0	$0	$0	$0.00	$8,996
Mar	778	0	137	47,232	$6,660	$0.1410	1,523	$1,853	$1.2163	156	3,200	$176	$112	$288	$0.09	$8,801
Apr	450	1	131	45,696	$6,487	$0.1420	881	$1,072	$1.2163	90	0	$0	$0	$0	$0.00	$7,559
May	167	27	219	51,072	$7,547	$0.1478	328	$399	$1.2163	34	0	$0	$0	$0	$0.00	$7,946
Jun	65	133	196	61,824	$8,526	$0.1379	127	$154	$1.2163	13	4,100	$197	$121	$318	$0.08	$8,998
Totals	**5,920**	**706**	**1,958**	**627,840**	**$84,385**	**$0.1344**	**11,596**	**$14,103**	**$1.2163**	**1,189**	**29,180**	**$1,082**	**$786**	**$1,868**	**$0.06**	**$100,356**

City of Bristol, CT

Utility Data Summary

Manross Library

1.000	CCF

Delivery: Eversource
Account #: 51509953055
Meter #: 890390732
Tariff Rate: Rate 030
Supplier: Liberty Power Holdings

Supplier
Delivery: Eversource
Account #: 57354460057
Meter #: 0465862
Tariff Rate: R20
Supplier: Eversource

Water Service: Bristol Water Department
Account #: 02-13222000
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	2	329	62	21,840	$3,745	$0.1715	0	$319	$0.0000	0	1,400	$52	$43	$96	$0.07	$4,159
Aug	0	288	62	18,600	$3,370	$0.1812	0	$319	$0.0000	0	0	$0	$0	$0	$0.00	$3,690
Sep	99	188	59	17,400	$3,116	$0.1791	0	$319	$0.0000	0	0	$0	$0	$0	$0.00	$3,435
Oct	310	10	54	11,760	$2,338	$0.1988	320	$363	$1.1337	33	1,190	$47	$39	$87	$0.07	$2,787
Nov	663	0	35	9,600	$1,806	$0.1881	1,006	$458	$0.4553	103	0	$0	$0	$0	$0.00	$2,264
Dec	1,001	0	27	10,560	$1,799	$0.1704	1,527	$496	$0.3247	157	0	$0	$0	$0	$0.00	$2,295
Jan	1,206	0	29	12,360	$2,059	$0.1666	1,765	$568	$0.3215	181	1,080	$45	$39	$84	$0.08	$2,711
Feb	1,056	0	28	11,280	$1,950	$0.1728	1,509	$547	$0.3626	155	0	$0	$0	$0	$0.00	$2,497
Mar	1,007	0	28	11,040	$1,911	$0.1731	1,391	$535	$0.3847	143	0	$0	$0	$0	$0.00	$2,447
Apr	508	0	26	9,600	$1,698	$0.1768	510	$413	$0.8101	52	1,170	$47	$39	$86	$0.07	$2,197
May	191	9	25	9,600	$1,705	$0.1777	60	$338	$5.6277	6	0	$0	$0	$0	$0.00	$2,043
Jun	11	32	48	10,680	$2,165	$0.2027	0	$328	$0.0000	0	0	$0	$0	$0	$0.00	$2,492
Totals	**6,054**	**856**	**483**	**154,320**	**$27,662**	**$0.1792**	**8,088**	**$5,002**	**$0.6185**	**829**	**4,840**	**$192**	**$161**	**$353**	**$0.07**	**$33,016**

Fiscal Year 2015

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	246	68	16,440	$3,200	$0.1946	0	$328	$0.0000	0	1,235	$49	$43	$92	$0.07	$3,619
Aug	2	200	58	12,720	$2,505	$0.1969	0	$328	$0.0000	0	0	$0	$0	$0	$0.00	$2,832
Sep	79	166	60	13,320	$2,609	$0.1959	0	$328	$0.0000	0	0	$0	$0	$0	$0.00	$2,937
Oct	282	12	42	9,000	$802	$0.0891	72	$382	$5.3001	7	1,170	$47	$42	$89	$0.08	$1,273
Nov	720	9	31	9,840	$697	$0.0708	1,133	$1,093	$0.9648	116	0	$0	$0	$0	$0.00	$1,790
Dec	896	0	25	8,640	$594	$0.0688	1,425	$1,354	$0.9503	146	0	$0	$0	$0	$0.00	$1,949
Jan	1,243	0	26	9,600	$1,654	$0.1722	1,724	$1,619	$0.9389	177	1,110	$46	$41	$86	$0.08	$3,358
Feb	1,354	0	28	10,320	$1,404	$0.1360	1,701	$1,461	$0.8590	174	0	$0	$0	$0	$0.00	$2,865
Mar	1,019	0	28	10,440	$1,410	$0.1351	1,266	$1,095	$0.8648	130	0	$0	$0	$0	$0.00	$2,505
Apr	511	0	26	9,600	$1,309	$0.1363	663	$712	$1.0741	68	1,045	$44	$39	$83	$0.08	$2,104
May	99	38	22	7,080	$1,023	$0.1444	0	$319	$0.0000	0	0	$0	$0	$0	$0.00	$1,341
Jun	54	77	45	10,080	$1,684	$0.1671	0	$319	$0.0000	0	0	$0	$0	$0	$0.00	$2,003
Totals	**6,259**	**748**	**457**	**127,080**	**$18,890**	**$0.1486**	**7,984**	**$9,336**	**$1.1693**	**818**	**4,560**	**$185**	**$165**	**$351**	**$0.08**	**$28,576**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	62	21,840	$3,745	$0.1715	0	0.055771568	$0.6185	0	1,400	$52	$43	$96	$0.07	$3,840
Aug	21	200	62	18,600	$3,370	$0.1812	28	$18	$0.6185	3	0	$0	$0	$0	$0.00	$3,388
Sep	119	63	59	17,400	$3,116	$0.1791	160	$99	$0.6185	16	0	$0	$0	$0	$0.00	$3,215
Oct	409	0	54	11,760	$2,338	$0.1988	546	$338	$0.6185	56	1,190	$47	$39	$87	$0.07	$2,762
Nov	644	0	35	9,600	$1,806	$0.1881	861	$532	$0.6185	88	0	$0	$0	$0	$0.00	$2,338
Dec	1,114	0	27	10,560	$1,799	$0.1704	1,489	$921	$0.6185	153	0	$0	$0	$0	$0.00	$2,720
Jan	1,145	0	29	12,360	$2,059	$0.1666	1,530	$946	$0.6185	157	1,080	$45	$39	$84	$0.08	$3,089
Feb	1,007	0	28	11,280	$1,950	$0.1728	1,345	$832	$0.6185	138	0	$0	$0	$0	$0.00	$2,781
Mar	778	0	28	11,040	$1,911	$0.1731	1,039	$643	$0.6185	106	0	$0	$0	$0	$0.00	$2,554
Apr	450	1	26	9,600	$1,698	$0.1768	601	$372	$0.6185	62	1,170	$47	$39	$86	$0.07	$2,156
May	167	27	25	9,600	$1,705	$0.1777	224	$138	$0.6185	23	0	$0	$0	$0	$0.00	$1,844
Jun	65	133	48	10,680	$2,165	$0.2027	86	$53	$0.6185	9	0	$0	$0	$0	$0.00	$2,218
Totals	**5,920**	**706**	**483**	**154,320**	**$27,662**	**$0.1792**	**7,909**	**$4,891**	**$0.6185**	**811**	**4,840**	**$192**	**$161**	**$353**	**$0.07**	**$32,905**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	68	16,440	$3,200	$0.1946	0	0.100680903	$1.1693	0	1,235	$49	$43	$92	$0.07	$3,292
Aug	21	200	58	12,720	$2,505	$0.1969	27	$32	$1.1693	3	0	$0	$0	$0	$0.00	$2,537
Sep	119	63	60	13,320	$2,609	$0.1959	152	$178	$1.1693	16	0	$0	$0	$0	$0.00	$2,787
Oct	409	0	42	9,000	$802	$0.0891	521	$610	$1.1693	53	1,170	$47	$42	$89	$0.08	$1,501
Nov	644	0	31	9,840	$697	$0.0708	822	$961	$1.1693	84	0	$0	$0	$0	$0.00	$1,657
Dec	1,114	0	25	8,640	$594	$0.0688	1,422	$1,662	$1.1693	146	0	$0	$0	$0	$0.00	$2,257
Jan	1,145	0	26	9,600	$1,654	$0.1722	1,461	$1,708	$1.1693	150	1,110	$46	$41	$86	$0.08	$3,448
Feb	1,007	0	28	10,320	$1,404	$0.1360	1,284	$1,502	$1.1693	132	0	$0	$0	$0	$0.00	$2,905
Mar	778	0	28	10,440	$1,410	$0.1351	992	$1,160	$1.1693	102	0	$0	$0	$0	$0.00	$2,570
Apr	450	1	26	9,600	$1,309	$0.1363	574	$671	$1.1693	59	1,045	$44	$39	$83	$0.08	$2,063
May	167	27	22	7,080	$1,023	$0.1444	213	$250	$1.1693	22	0	$0	$0	$0	$0.00	$1,272
Jun	65	133	45	10,080	$1,684	$0.1671	82	$96	$1.1693	8	0	$0	$0	$0	$0.00	$1,781
Totals	**5,920**	**706**	**457**	**127,080**	**$18,890**	**$0.1486**	**7,551**	**$8,830**	**$1.1693**	**774**	**4,560**	**$185**	**$165**	**$351**	**$0.08**	**$28,070**

City of Bristol, CT
Utility Data Summary
Youth Services Building

Delivery: Eversource
Account #: 51736653049
Meter #: 890802462
Tariff Rate: Rate 030
Supplier: Eversource

Supplier East River Energy
Account #: N/A

Water Service: Bristol Water Department
Account #: 03-00122000
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	2	373	18	4,350	$717	$0.1649	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$717
Aug	0	252	18	3,997	$682	$0.1707	0	$0	$0.0000	0	610	$34	$39	$73	$0.12	$755
Sep	99	175	19	3,626	$649	$0.1790	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$649
Oct	310	6	16	2,642	$501	$0.1896	388	$1,185	$3.0569	54	0	$0	$0	$0	$0.00	$1,686
Nov	663	0	12	2,561	$449	$0.1751	16	$47	$3.0569	2	640	$35	$39	$74	$0.12	$570
Dec	1,001	0	13	3,198	$524	$0.1637	575	$1,758	$3.0569	80	0	$0	$0	$0	$0.00	$2,281
Jan	1,206	0	13	3,309	$574	$0.1733	518	$1,584	$3.0569	72	0	$0	$0	$0	$0.00	$2,158
Feb	1,056	0	12	3,347	$583	$0.1743	588	$1,991	$3.3865	82	590	$34	$39	$73	$0.12	$2,647
Mar	1,007	0	11	2,960	$525	$0.1772	490	$1,656	$3.3800	68	0	$0	$0	$0	$0.00	$2,181
Apr	508	0	12	2,533	$483	$0.1908	495	$1,581	$3.1911	69	0	$0	$0	$0	$0.00	$2,064
May	191	11	15	2,763	$551	$0.1994	0	$0	$0.0000	0	815	$39	$39	$78	$0.10	$629
Jun	11	37	16	3,194	$617	$0.1930	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$617
Totals	**6,054**	**854**	**175**	**38,480**	**$6,854**	**$0.1781**	**3,070**	**$9,802**	**$3.1933**	**426**	**2,655**	**$141**	**$157**	**$298**	**$0.11**	**$16,954**

Fiscal Year 2015

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	266	18	4,754	$848	$0.1783	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$848
Aug	2	187	18	3,844	$733	$0.1906	0	$0	$0.0000	0	590	$34	$38	$72	$0.12	$805
Sep	79	152	18	3,659	$715	$0.1955	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$715
Oct	282	20	15	2,860	$566	$0.1980	499	$1,513	$3.0323	69	0	$0	$0	$0	$0.00	$2,079
Nov	720	1	10	3,339	$574	$0.1719	256	$775	$3.0323	35	540	$32	$38	$71	$0.13	$1,420
Dec	896	0	10	3,380	$577	$0.1707	322	$975	$3.0323	45	0	$0	$0	$0	$0.00	$1,552
Jan	1,243	0	11	3,740	$671	$0.1795	454	$1,377	$3.0323	63	0	$0	$0	$0	$0.00	$2,048
Feb	1,354	0	14	3,500	$716	$0.2046	416	$1,261	$3.0323	58	575	$33	$38	$72	$0.12	$2,048
Mar	1,019	0	11	3,234	$631	$0.1950	874	$2,649	$3.0323	121	0	$0	$0	$0	$0.00	$3,280
Apr	511	0	11	3,005	$606	$0.2016	167	$507	$3.0323	23	0	$0	$0	$0	$0.00	$1,113
May	99	46	12	2,835	$597	$0.2107	0	$0	$0.0000	0	800	$38	$38	$77	$0.10	$674
Jun	54	103	17	3,352	$762	$0.2275	185	$561	$3.0323	26	0	$0	$0	$0	$0.00	$1,323
Totals	**6,259**	**775**	**164**	**41,502**	**$7,997**	**$0.1927**	**3,172**	**$9,618**	**$3.0323**	**440**	**2,505**	**$138**	**$153**	**$291**	**$0.12**	**$17,906**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	18	4,350	$717	$0.1649	0	$0	$3.1933	0	0	$0	$0	$0	$0.00	$718
Aug	21	200	18	3,997	$682	$0.1707	11	$34	$3.1933	1	610	$34	$39	$73	$0.12	$790
Sep	119	63	19	3,626	$649	$0.1790	61	$193	$3.1933	8	0	$0	$0	$0	$0.00	$842
Oct	409	0	16	2,642	$501	$0.1896	207	$662	$3.1933	29	0	$0	$0	$0	$0.00	$1,163
Nov	644	0	12	2,561	$449	$0.1751	327	$1,043	$3.1933	45	640	$35	$39	$74	$0.12	$1,565
Dec	1,114	0	13	3,198	$524	$0.1637	565	$1,804	$3.1933	78	0	$0	$0	$0	$0.00	$2,328
Jan	1,145	0	13	3,309	$574	$0.1733	581	$1,854	$3.1933	81	0	$0	$0	$0	$0.00	$2,428
Feb	1,007	0	12	3,347	$583	$0.1743	510	$1,630	$3.1933	71	590	$34	$39	$73	$0.12	$2,286
Mar	778	0	11	2,960	$525	$0.1772	394	$1,259	$3.1933	55	0	$0	$0	$0	$0.00	$1,784
Apr	450	1	12	2,533	$483	$0.1908	228	$729	$3.1933	32	0	$0	$0	$0	$0.00	$1,212
May	167	27	15	2,763	$551	$0.1994	85	$271	$3.1933	12	815	$39	$39	$78	$0.10	$900
Jun	65	133	16	3,194	$617	$0.1930	33	$105	$3.1933	5	0	$0	$0	$0	$0.00	$721
Totals	**5,920**	**706**	**175**	**38,480**	**$6,854**	**$0.1781**	**3,001**	**$9,584**	**$3.1933**	**416**	**2,655**	**$141**	**$157**	**$298**	**$0.11**	**$16,736**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	18	4,754	$848	$0.1783	0	$0	$3.0323	0	0	$0	$0	$0	$0.00	$848
Aug	21	200	18	3,844	$733	$0.1906	11	$33	$3.0323	1	590	$34	$38	$72	$0.12	$837
Sep	119	63	18	3,659	$715	$0.1955	61	$184	$3.0323	8	0	$0	$0	$0	$0.00	$899
Oct	409	0	15	2,860	$566	$0.1980	207	$628	$3.0323	29	0	$0	$0	$0	$0.00	$1,194
Nov	644	0	10	3,339	$574	$0.1719	326	$990	$3.0323	45	540	$32	$38	$71	$0.13	$1,635
Dec	1,114	0	10	3,380	$577	$0.1707	565	$1,713	$3.0323	78	0	$0	$0	$0	$0.00	$2,290
Jan	1,145	0	11	3,740	$671	$0.1795	580	$1,760	$3.0323	80	0	$0	$0	$0	$0.00	$2,431
Feb	1,007	0	14	3,500	$716	$0.2046	510	$1,547	$3.0323	71	575	$33	$38	$72	$0.12	$2,335
Mar	778	0	11	3,234	$631	$0.1950	394	$1,195	$3.0323	55	0	$0	$0	$0	$0.00	$1,826
Apr	450	1	11	3,005	$606	$0.2016	228	$692	$3.0323	32	0	$0	$0	$0	$0.00	$1,297
May	167	27	12	2,835	$597	$0.2107	85	$257	$3.0323	12	800	$38	$38	$77	$0.10	$931
Jun	65	133	17	3,352	$762	$0.2275	33	$99	$3.0323	5	0	$0	$0	$0	$0.00	$862
Totals	**5,920**	**706**	**164**	**41,502**	**$7,997**	**$0.1927**	**3,000**	**$9,097**	**$3.0323**	**416**	**2,505**	**$138**	**$153**	**$291**	**$0.12**	**$17,385**

City of Bristol, CT

Utility Data Summary

Animal Control

1.000	CCF

Delivery: Eversource
Account #: 51507063048
Meter #: 891536862
Tariff Rate: Rate 030
Supplier: Eversource

Supplier
Delivery: Eversource
Account #: 57899170096
Meter #: 555863
Tariff Rate: R-10
Supplier: Eversource

Water Service: Bristol Water Department
Account #: 02-13540000
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	13	329	4	1,198	$188	$0.1567	37	$108	$2.9222	4	1,880	$63	$53	$116	$0.06	$412
Aug	2	288	3	1,386	$206	$0.1487	30	$105	$3.5123	3	0	$0	$0	$0	$0.00	$311
Sep	24	188	3	823	$143	$0.1735	32	$106	$3.3169	3	0	$0	$0	$0	$0.00	$249
Oct	124	10	2	484	$91	$0.1871	34	$107	$3.1453	3	2,655	$121	$68	$190	$0.07	$387
Nov	470	0	2	690	$114	$0.1653	178	$169	$0.9504	18	0	$0	$0	$0	$0.00	$283
Dec	816	0	2	603	$105	$0.1736	389	$219	$0.5638	40	0	$0	$0	$0	$0.00	$324
Jan	1,188	0	3	814	$140	$0.1719	583	$293	$0.5030	60	2,340	$74	$62	$136	$0.06	$569
Feb	1,121	0	2	737	$136	$0.1852	550	$284	$0.5166	56	0	$0	$0	$0	$0.00	$421
Mar	1,054	0	3	715	$135	$0.1888	509	$273	$0.5359	52	0	$0	$0	$0	$0.00	$408
Apr	743	0	3	741	$140	$0.1883	404	$244	$0.6032	41	1,710	$60	$49	$109	$0.06	$492
May	416	9	2	826	$146	$0.1773	288	$212	$0.7348	30	0	$0	$0	$0	$0.00	$358
Jun	96	32	3	675	$139	$0.2055	54	$125	$2.3211	6	0	$0	$0	$0	$0.00	$264
Totals	**6,067**	**856**	**32**	**9,692**	**$1,682**	**$0.1735**	**3,088**	**$2,246**	**$0.7273**	**317**	**8,585**	**$318**	**$232**	**$551**	**$0.06**	**$4,478**

Fiscal Year 2015

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	246	4	1,584	$263	$0.1659	60	$157	$2.6123	6	2,245	$72	$65	$137	$0.06	$556
Aug	0	200	4	1,357	$241	$0.1774	7	$109	$15.6129	1	0	$0	$0	$0	$0.00	$350
Sep	4	166	3	823	$161	$0.1956	9	$112	$12.4022	1	0	$0	$0	$0	$0.00	$273
Oct	137	12	2	484	$102	$0.2110	13	$116	$8.9269	1	5,710	$152	$138	$290	$0.05	$508
Nov	452	9	2	712	$133	$0.1871	208	$305	$1.4676	21	0	$0	$0	$0	$0.00	$439
Dec	847	0	2	603	$119	$0.1972	462	$543	$1.1754	47	0	$0	$0	$0	$0.00	$662
Jan	1,099	0	3	814	$156	$0.1912	526	$615	$1.1684	54	3,175	$93	$84	$178	$0.06	$948
Feb	1,278	0	3	667	$149	$0.2232	557	$601	$1.0786	57	0	$0	$0	$0	$0.00	$750
Mar	1,222	0	2	528	$122	$0.2301	405	$443	$1.0931	42	0	$0	$0	$0	$0.00	$564
Apr	856	0	3	594	$132	$0.2223	307	$357	$1.1630	31	4,848	$132	$120	$252	$0.05	$741
May	256	38	3	669	$153	$0.2283	92	$174	$1.8910	9	0	$0	$0	$0	$0.00	$327
Jun	101	77	4	931	$195	$0.2091	52	$138	$2.6571	5	0	$0	$0	$0	$0.00	$333
Totals	**6,252**	**748**	**34**	**9,766**	**$1,924**	**$0.1970**	**2,698**	**$3,669**	**$1.3600**	**277**	**15,978**	**$449**	**$407**	**$856**	**$0.05**	**$6,449**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	4	1,198	$188	$0.1567	0	0.024986571	$0.7273	0	1,880	$63	$53	$116	$0.06	$304
Aug	21	200	3	1,386	$206	$0.1487	11	$8	$0.7273	1	0	$0	$0	$0	$0.00	$214
Sep	119	63	3	823	$143	$0.1735	61	$44	$0.7273	6	0	$0	$0	$0	$0.00	$187
Oct	409	0	2	484	$91	$0.1871	208	$151	$0.7273	21	2,655	$121	$68	$190	$0.07	$431
Nov	644	0	2	690	$114	$0.1653	328	$238	$0.7273	34	0	$0	$0	$0	$0.00	$352
Dec	1,114	0	2	603	$105	$0.1736	567	$413	$0.7273	58	0	$0	$0	$0	$0.00	$517
Jan	1,145	0	3	814	$140	$0.1719	583	$424	$0.7273	60	2,340	$74	$62	$136	$0.06	$700
Feb	1,007	0	2	737	$136	$0.1852	512	$373	$0.7273	53	0	$0	$0	$0	$0.00	$509
Mar	778	0	3	715	$135	$0.1888	396	$288	$0.7273	41	0	$0	$0	$0	$0.00	$423
Apr	450	1	3	741	$140	$0.1883	229	$167	$0.7273	23	1,710	$60	$49	$109	$0.06	$415
May	167	27	2	826	$146	$0.1773	85	$62	$0.7273	9	0	$0	$0	$0	$0.00	$208
Jun	65	133	3	675	$139	$0.2055	33	$24	$0.7273	3	0	$0	$0	$0	$0.00	$163
Totals	**5,920**	**706**	**32**	**9,692**	**$1,682**	**$0.1735**	**3,013**	**$2,191**	**$0.7273**	**309**	**8,585**	**$318**	**$232**	**$551**	**$0.06**	**$4,424**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	4	1,584	$263	$0.1659	0	0.039615547	$1.3600	0	2,245	$72	$65	$137	$0.06	$399
Aug	21	200	4	1,357	$241	$0.1774	9	$12	$1.3600	1	0	$0	$0	$0	$0.00	$253
Sep	119	63	3	823	$161	$0.1956	52	$70	$1.3600	5	0	$0	$0	$0	$0.00	$231
Oct	409	0	2	484	$102	$0.2110	176	$240	$1.3600	18	5,710	$152	$138	$290	$0.05	$632
Nov	644	0	2	712	$133	$0.1871	278	$378	$1.3600	28	0	$0	$0	$0	$0.00	$511
Dec	1,114	0	2	603	$119	$0.1972	481	$654	$1.3600	49	0	$0	$0	$0	$0.00	$773
Jan	1,145	0	3	814	$156	$0.1912	494	$672	$1.3600	51	3,175	$93	$84	$178	$0.06	$1,005
Feb	1,007	0	3	667	$149	$0.2232	434	$591	$1.3600	45	0	$0	$0	$0	$0.00	$740
Mar	778	0	2	528	$122	$0.2301	336	$456	$1.3600	34	0	$0	$0	$0	$0.00	$578
Apr	450	1	3	594	$132	$0.2223	194	$264	$1.3600	20	4,848	$132	$120	$252	$0.05	$648
May	167	27	3	669	$153	$0.2283	72	$98	$1.3600	7	0	$0	$0	$0	$0.00	$251
Jun	65	133	4	931	$195	$0.2091	28	$38	$1.3600	3	0	$0	$0	$0	$0.00	$233
Totals	**5,920**	**706**	**34**	**9,766**	**$1,924**	**$0.1970**	**2,555**	**$3,474**	**$1.3600**	**262**	**15,978**	**$449**	**$407**	**$856**	**$0.05**	**$6,254**

City of Bristol, CT

Utility Data Summary

Hill Street

Delivery: Eversource
Account #: 51466874062
Meter #: 890811832
Tariff Rate: Rate 030
Supplier: Liberty Power Holdings

Supplier Account #:

Fiscal Year 2014

	Weather		*Electric*				*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	$
Jul	2	373	0	33	$53	$1.6103	$53
Aug	0	252	0	36	$54	$1.4942	$54
Sep	99	175	0	32	$53	$1.6553	$53
Oct	310	6	0	31	$53	$1.7071	$53
Nov	663	0	0	31	$53	$1.7065	$53
Dec	1,001	0	0	34	$53	$1.5671	$53
Jan	1,206	0	0	34	$53	$1.5712	$53
Feb	1,056	0	0	34	$53	$1.5718	$53
Mar	1,007	0	0	30	$53	$1.7577	$53
Apr	508	0	0	31	$53	$1.7090	$53
May	191	11	0	33	$53	$1.6167	$53
Jun	11	37	0	34	$54	$1.5747	$54
Totals	**6,054**	**854**	**1**	**393**	**$638**	**$1.6246**	**$638**

Fiscal Year 2015

	Weather		*Electric*				*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	$
Jul	0	266	0	33	$53	$1.6139	$53
Aug	2	187	0	33	$53	$1.6118	$53
Sep	79	152	0	32	$53	$1.6572	$53
Oct	282	20	0	31	$50	$1.6019	$50
Nov	720	1	0	34	$50	$1.4665	$50
Dec	896	0	0	32	$50	$1.5538	$50
Jan	1,243	0	0	35	$58	$1.6537	$58
Feb	1,354	0	0	32	$59	$1.8497	$59
Mar	1,019	0	0	30	$59	$1.9633	$59
Apr	511	0	0	32	$59	$1.8497	$59
May	99	46	0	34	$59	$1.7497	$59
Jun	54	103	0	32	$59	$1.8497	$59
Totals	**6,259**	**775**	**0**	**390**	**$663**	**$1.6989**	**$663**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	$
Jul	0	281	0	33	$53	$1.6103	$53
Aug	21	200	0	36	$54	$1.4942	$54
Sep	119	63	0	32	$53	$1.6553	$53
Oct	409	0	0	31	$53	$1.7071	$53
Nov	644	0	0	31	$53	$1.7065	$53
Dec	1,114	0	0	34	$53	$1.5671	$53
Jan	1,145	0	0	34	$53	$1.5712	$53
Feb	1,007	0	0	34	$53	$1.5718	$53
Mar	778	0	0	30	$53	$1.7577	$53
Apr	450	1	0	31	$53	$1.7090	$53
May	167	27	0	33	$53	$1.6167	$53
Jun	65	133	0	34	$54	$1.5747	$54
Totals	**5,920**	**706**	**1**	**393**	**$638**	**$1.6246**	**$638**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	$
Jul	0	281	0	33	$53	$1.6139	$53
Aug	21	200	0	33	$53	$1.6118	$53
Sep	119	63	0	32	$53	$1.6572	$53
Oct	409	0	0	31	$50	$1.6019	$50
Nov	644	0	0	34	$50	$1.4665	$50
Dec	1,114	0	0	32	$50	$1.5538	$50
Jan	1,145	0	0	35	$58	$1.6537	$58
Feb	1,007	0	0	32	$59	$1.8497	$59
Mar	778	0	0	30	$59	$1.9633	$59
Apr	450	1	0	32	$59	$1.8497	$59
May	167	27	0	34	$59	$1.7497	$59
Jun	65	133	0	32	$59	$1.8497	$59
Totals	**5,920**	**706**	**0**	**390**	**$663**	**$1.6989**	**$663**

City of Bristol, CT

Utility Data Summary

City Yard

1.000	CCF

Delivery: Eversource
Account #: 51952163004
Meter #: 891540112
Tariff Rate: Rate 030
Supplier: Liberty Power Holdings

Supplier East River Energy
Account #: N/A

Delivery: Eversource
Account #: 57572080042
Meter #: 0341593
Tariff Rate: R20
Supplier: Eversource

Water Service: Bristol Water Department
Account #: 02-07493000
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*#2 Fuel Oil*			*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	2	329	36	9,171	$759	$0.0827	0	$0	$0.0000	34	$579	$17.0194	3	6,160	$222	$158	$380	$0.06	$1,718
Aug	0	288	37	10,585	$832	$0.0786	0	$0	$0.0000	46	$580	$12.6152	5	0	$0	$0	$0	$0.00	$1,412
Sep	99	188	25	6,651	$554	$0.0833	0	$0	$0.0000	34	$579	$17.0194	3	0	$0	$0	$0	$0.00	$1,133
Oct	310	10	35	7,137	$696	$0.0974	0	$0	$0.0000	317	$617	$1.9473	32	5,690	$211	$149	$360	$0.06	$1,673
Nov	663	0	41	9,568	$851	$0.0890	0	$0	$0.0000	1,432	$744	$0.5194	147	0	$0	$0	$0	$0.00	$1,595
Dec	1,001	0	40	9,324	$826	$0.0885	376	$1,148	$3.0569	2,944	$853	$0.2898	354	0	$0	$0	$0	$0.00	$2,827
Jan	1,206	0	47	13,746	$1,088	$0.0792	559	$1,708	$3.0569	3,368	$1,011	$0.3002	423	5,790	$214	$151	$364	$0.06	$4,171
Feb	1,056	0	49	16,771	$1,247	$0.0744	0	$0	$0.0000	2,835	$957	$0.3375	291	0	$0	$0	$0	$0.00	$2,204
Mar	1,007	0	49	17,611	$1,278	$0.0726	0	$0	$0.0000	3,026	$976	$0.3226	310	0	$0	$0	$0	$0.00	$2,254
Apr	508	0	43	8,881	$801	$0.0902	0	$0	$0.0000	1,054	$776	$0.7359	108	8,140	$168	$198	$366	$0.04	$1,942
May	191	9	38	8,193	$801	$0.0978	0	$0	$0.0000	62	$613	$9.8829	6	0	$0	$0	$0	$0.00	$1,414
Jun	11	32	34	7,978	$741	$0.0928	0	$0	$0.0000	25	$607	$24.2612	3	0	$0	$0	$0	$0.00	$1,347
Totals	**6,054**	**856**	**474**	**125,616**	**$10,473**	**$0.0834**	**934**	**$2,856**	**$3.0569**	**15,177**	**$8,891**	**$0.5858**	**1,685**	**25,780**	**$816**	**$655**	**$1,470**	**$0.06**	**$23,690**

Fiscal Year 2015

	Weather		*Electric*				*#2 Fuel Oil*			*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	246	38	11,476	$891	$0.0776	0	$0	$0.0000	26	$621	$23.8973	3	5,085	$197	$146	$343	$0.07	$1,856
Aug	2	200	35	10,177	$779	$0.0766	0	$0	$0.0000	26	$620	$23.8335	3	0	$0	$0	$0	$0.00	$1,399
Sep	79	166	44	10,819	$899	$0.0831	0	$0	$0.0000	25	$620	$24.8176	3	0	$0	$0	$0	$0.00	$1,520
Oct	282	12	33	4,317	$567	$0.1312	0	$0	$0.0000	166	$727	$4.3788	17	4,930	$194	$142	$336	$0.07	$1,630
Nov	720	9	33	10,021	$750	$0.0749	0	$0	$0.0000	1,617	$1,667	$1.0307	166	0	$0	$0	$0	$0.00	$2,417
Dec	896	0	41	10,179	$842	$0.0827	0	$0	$0.0000	2,933	$2,645	$0.9019	301	0	$0	$0	$0	$0.00	$3,487
Jan	1,243	0	45	15,120	$2,672	$0.1767	0	$0	$0.0000	4,411	$3,862	$0.8755	452	7,305	$249	$193	$441	$0.06	$6,975
Feb	1,354	0	52	18,209	$2,527	$0.1388	0	$0	$0.0000	4,085	$3,421	$0.8374	419	0	$0	$0	$0	$0.00	$5,948
Mar	1,019	0	48	16,965	$2,360	$0.1391	0	$0	$0.0000	2,835	$2,425	$0.8555	291	0	$0	$0	$0	$0.00	$4,785
Apr	511	0	49	13,260	$2,040	$0.1538	0	$0	$0.0000	1,063	$1,398	$1.3151	109	8,295	$272	$214	$485	$0.06	$3,923
May	99	38	36	9,103	$1,454	$0.1597	0	$0	$0.0000	84	$814	$9.6957	9	0	$0	$0	$0	$0.00	$2,268
Jun	54	77	36	8,600	$1,405	$0.1633	0	$0	$0.0000	72	$804	$11.1614	7	0	$0	$0	$0	$0.00	$2,208
Totals	**6,259**	**748**	**490**	**138,246**	**$17,185**	**$0.1243**	**0**	**$0**	**$0.0000**	**17,343**	**$19,624**	**$1.1315**	**1,778**	**25,615**	**$912**	**$695**	**$1,606**	**$0.06**	**$38,416**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	36	9,171	$759	$0.0827	0	$0	$3.0569	0	0.099128556	$0.5858	0	6,160	$222	$158	$380	$0.06	$1,139
Aug	21	200	37	10,585	$832	$0.0786	3	$10	$3.0569	53	$31	$0.5858	6	0	$0	$0	$0	$0.00	$873
Sep	119	63	25	6,651	$554	$0.0833	18	$56	$3.0569	300	$175	$0.5858	33	0	$0	$0	$0	$0.00	$786
Oct	409	0	35	7,137	$696	$0.0974	63	$193	$3.0569	1,025	$600	$0.5858	114	5,690	$211	$149	$360	$0.06	$1,849
Nov	644	0	41	9,568	$851	$0.0890	99	$304	$3.0569	1,615	$946	$0.5858	179	0	$0	$0	$0	$0.00	$2,101
Dec	1,114	0	40	9,324	$826	$0.0885	172	$526	$3.0569	2,794	$1,637	$0.5858	310	0	$0	$0	$0	$0.00	$2,988
Jan	1,145	0	47	13,746	$1,088	$0.0792	177	$540	$3.0569	2,871	$1,682	$0.5858	319	5,790	$214	$151	$364	$0.06	$3,675
Feb	1,007	0	49	16,771	$1,247	$0.0744	155	$475	$3.0569	2,524	$1,479	$0.5858	280	0	$0	$0	$0	$0.00	$3,201
Mar	778	0	49	17,611	$1,278	$0.0726	120	$367	$3.0569	1,950	$1,142	$0.5858	216	0	$0	$0	$0	$0.00	$2,787
Apr	450	1	43	8,881	$801	$0.0902	69	$212	$3.0569	1,128	$661	$0.5858	125	8,140	$168	$198	$366	$0.04	$2,040
May	167	27	38	8,193	$801	$0.0978	26	$79	$3.0569	419	$246	$0.5858	47	0	$0	$0	$0	$0.00	$1,126
Jun	65	133	34	7,978	$741	$0.0928	10	$30	$3.0569	162	$95	$0.5858	18	0	$0	$0	$0	$0.00	$866
Totals	**5,920**	**706**	**474**	**125,616**	**$10,473**	**$0.0834**	**914**	**$2,793**	**$3.0569**	**14,841**	**$8,694**	**$0.5858**	**1,648**	**25,780**	**$816**	**$655**	**$1,470**	**$0.06**	**$23,430**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	38	11,476	$891	$0.0776	0	$0	$0.0000	0	0.211635633	$1.1315	0	5,085	$197	$146	$343	$0.07	$1,234
Aug	21	200	35	10,177	$779	$0.0766	0	$0	$0.0000	59	$67	$1.1315	6	0	$0	$0	$0	$0.00	$846
Sep	119	63	44	10,819	$899	$0.0831	0	$0	$0.0000	331	$375	$1.1315	34	0	$0	$0	$0	$0.00	$1,274
Oct	409	0	33	4,317	$567	$0.1312	0	$0	$0.0000	1,133	$1,281	$1.1315	116	4,930	$194	$142	$336	$0.07	$2,184
Nov	644	0	33	10,021	$750	$0.0749	0	$0	$0.0000	1,785	$2,020	$1.1315	183	0	$0	$0	$0	$0.00	$2,770
Dec	1,114	0	41	10,179	$842	$0.0827	0	$0	$0.0000	3,088	$3,494	$1.1315	317	0	$0	$0	$0	$0.00	$4,336
Jan	1,145	0	45	15,120	$2,672	$0.1767	0	$0	$0.0000	3,173	$3,591	$1.1315	325	7,305	$249	$193	$441	$0.06	$6,704
Feb	1,007	0	52	18,209	$2,527	$0.1388	0	$0	$0.0000	2,790	$3,157	$1.1315	286	0	$0	$0	$0	$0.00	$5,684
Mar	778	0	48	16,965	$2,360	$0.1391	0	$0	$0.0000	2,155	$2,438	$1.1315	221	0	$0	$0	$0	$0.00	$4,798
Apr	450	1	49	13,260	$2,040	$0.1538	0	$0	$0.0000	1,247	$1,411	$1.1315	128	8,295	$272	$214	$485	$0.06	$3,936
May	167	27	36	9,103	$1,454	$0.1597	0	$0	$0.0000	464	$525	$1.1315	48	0	$0	$0	$0	$0.00	$1,979
Jun	65	133	36	8,600	$1,405	$0.1633	0	$0	$0.0000	179	$203	$1.1315	18	0	$0	$0	$0	$0.00	$1,607
Totals	**5,920**	**706**	**490**	**138,246**	**$17,185**	**$0.1243**	**0**	**$0**	**$0.0000**	**16,403**	**$18,561**	**$1.1315**	**1,681**	**25,615**	**$912**	**$695**	**$1,606**	**$0.06**	**$37,352**

City of Bristol, CT

Utility Data Summary

Transfer Stations - Lake Ave

Delivery: Eversource
Account #: 51897883054
Meter #: 892304672
Tariff Rate: Rate 030
Supplier: Liberty Power Holdings

Supplier/ater Service: Bristol Water Department
Account #: **Account #:** 02-15674000
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	2	329	4	1,414	$260	$0.1838	2,665	$82	$0	$82	$0.03	$341
Aug	0	288	5	1,173	$234	$0.1992	0	$0	$0	$0	$0.00	$234
Sep	99	188	4	1,059	$211	$0.1996	0	$0	$0	$0	$0.00	$211
Oct	310	10	5	537	$151	$0.2805	2,255	$72	$0	$72	$0.03	$223
Nov	663	0	7	944	$239	$0.2535	0	$0	$0	$0	$0.00	$239
Dec	1,001	0	13	2,941	$570	$0.1937	0	$0	$0	$0	$0.00	$570
Jan	1,206	0	12	4,390	$746	$0.1700	1,075	$45	$0	$45	$0.04	$791
Feb	1,056	0	12	3,953	$703	$0.1779	0	$0	$0	$0	$0.00	$703
Mar	1,007	0	10	3,262	$590	$0.1807	0	$0	$0	$0	$0.00	$590
Apr	508	0	10	2,026	$418	$0.2063	1,315	$50	$0	$50	$0.04	$468
May	191	9	6	882	$220	$0.2498	0	$0	$0	$0	$0.00	$220
Jun	11	32	4	658	$156	$0.2376	0	$0	$0	$0	$0.00	$156
Totals	**6,054**	**856**	**91**	**23,239**	**$4,498**	**$0.1936**	**7,310**	**$249**	**$0**	**$249**	**$0.03**	**$4,747**

Fiscal Year 2015

	Weather		*Electric*				*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	246	4	894	$192	$0.2143	1,980	$66	$0	$66	$0.03	$257
Aug	2	200	4	768	$170	$0.2215	0	$0	$0	$0	$0.00	$170
Sep	79	166	4	729	$164	$0.2246	0	$0	$0	$0	$0.00	$164
Oct	282	12	6	480	$98	$0.2046	1,800	$62	$0	$62	$0.03	$160
Nov	720	9	7	848	$120	$0.1411	0	$0	$0	$0	$0.00	$120
Dec	896	0	11	2,402	$218	$0.0906	0	$0	$0	$0	$0.00	$218
Jan	1,243	0	12	3,650	$663	$0.1816	1,210	$48	$0	$48	$0.04	$711
Feb	1,354	0	14	4,233	$626	$0.1479	0	$0	$0	$0	$0.00	$626
Mar	1,019	0	12	4,066	$576	$0.1416	0	$0	$0	$0	$0.00	$576
Apr	511	0	8	2,108	$330	$0.1565	975	$43	$0	$43	$0.04	$372
May	99	38	6	672	$169	$0.2514	0	$0	$0	$0	$0.00	$169
Jun	54	77	5	606	$152	$0.2516	0	$0	$0	$0	$0.00	$152
Totals	**6,259**	**748**	**90**	**21,456**	**$3,477**	**$0.1620**	**5,965**	**$218**	**$0**	**$218**	**$0.04**	**$3,695**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	4	1,414	$260	$0.1838	2,665	$82	$0	$82	$0.03	$341
Aug	21	200	5	1,173	$234	$0.1992	0	$0	$0	$0	$0.00	$234
Sep	119	63	4	1,059	$211	$0.1996	0	$0	$0	$0	$0.00	$211
Oct	409	0	5	537	$151	$0.2805	2,255	$72	$0	$72	$0.03	$223
Nov	644	0	7	944	$239	$0.2535	0	$0	$0	$0	$0.00	$239
Dec	1,114	0	13	2,941	$570	$0.1937	0	$0	$0	$0	$0.00	$570
Jan	1,145	0	12	4,390	$746	$0.1700	1,075	$45	$0	$45	$0.04	$791
Feb	1,007	0	12	3,953	$703	$0.1779	0	$0	$0	$0	$0.00	$703
Mar	778	0	10	3,262	$590	$0.1807	0	$0	$0	$0	$0.00	$590
Apr	450	1	10	2,026	$418	$0.2063	1,315	$50	$0	$50	$0.04	$468
May	167	27	6	882	$220	$0.2498	0	$0	$0	$0	$0.00	$220
Jun	65	133	4	658	$156	$0.2376	0	$0	$0	$0	$0.00	$156
Totals	**5,920**	**706**	**91**	**23,239**	**$4,498**	**$0.1936**	**7,310**	**$249**	**$0**	**$249**	**$0.03**	**$4,747**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	4	894	$192	$0.2143	1,980	$66	$0	$66	$0.03	$257
Aug	21	200	4	768	$170	$0.2215	0	$0	$0	$0	$0.00	$170
Sep	119	63	4	729	$164	$0.2246	0	$0	$0	$0	$0.00	$164
Oct	409	0	6	480	$98	$0.2046	1,800	$62	$0	$62	$0.03	$160
Nov	644	0	7	848	$120	$0.1411	0	$0	$0	$0	$0.00	$120
Dec	1,114	0	11	2,402	$218	$0.0906	0	$0	$0	$0	$0.00	$218
Jan	1,145	0	12	3,650	$663	$0.1816	1,210	$48	$0	$48	$0.04	$711
Feb	1,007	0	14	4,233	$626	$0.1479	0	$0	$0	$0	$0.00	$626
Mar	778	0	12	4,066	$576	$0.1416	0	$0	$0	$0	$0.00	$576
Apr	450	1	8	2,108	$330	$0.1565	975	$43	$0	$43	$0.04	$372
May	167	27	6	672	$169	$0.2514	0	$0	$0	$0	$0.00	$169
Jun	65	133	5	606	$152	$0.2516	0	$0	$0	$0	$0.00	$152
Totals	**5,920**	**706**	**90**	**21,456**	**$3,477**	**$0.1620**	**5,965**	**$218**	**$0**	**$218**	**$0.04**	**$3,695**

City of Bristol, CT

Utility Data Summary

Water Pollution Control Park

1.000	CCF

Delivery: Eversource
Account #: 51864193024
Meter #: 891015812
Tariff Rate: Rate 056
Supplier: Liberty Power Holdings

Supplier
Delivery: Eversource
Account #: **Account #:** 57141960070
Meter #: 0289734
Tariff Rate: R30
Supplier: Eversource

Water Service: Bristol Water Department
Account #: 02-06160000
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	2	388	677	339,840	$48,739	$0.1434	80	$868	$10.8440	8	200	$248	$0	$248	$1.24	$49,854
Aug	0	237	618	322,560	$48,498	$0.1504	160	$875	$5.4689	16	0	$0	$0	$0	$0.00	$49,373
Sep	99	169	552	292,320	$43,123	$0.1475	330	$891	$2.7000	34	0	$0	$0	$0	$0.00	$44,014
Oct	310	6	580	282,960	$41,860	$0.1479	1,000	$954	$0.9539	103	200	$248	$0	$248	$1.24	$43,062
Nov	663	0	549	272,160	$40,418	$0.1485	4,640	$1,373	$0.2960	476	0	$0	$0	$0	$0.00	$41,792
Dec	1,001	0	490	270,000	$39,596	$0.1467	6,480	$1,467	$0.2264	664	0	$0	$0	$0	$0.00	$41,063
Jan	1,206	0	469	279,360	$45,040	$0.1612	7,800	$1,900	$0.2436	800	250	$249	$0	$249	$1.00	$47,189
Feb	1,056	0	513	291,600	$43,685	$0.1498	6,460	$1,792	$0.2775	662	0	$0	$0	$0	$0.00	$45,478
Mar	1,007	0	533	268,560	$40,722	$0.1516	6,170	$1,769	$0.2867	632	0	$0	$0	$0	$0.00	$42,491
Apr	508	0	721	321,840	$45,074	$0.1401	3,030	$1,517	$0.5007	311	250	$249	$0	$249	$1.00	$46,840
May	191	11	727	347,040	$54,857	$0.1581	650	$1,243	$1.9124	67	0	$0	$0	$0	$0.00	$56,100
Jun	11	46	660	351,360	$48,518	$0.1381	100	$1,174	$11.7426	10	0	$0	$0	$0	$0.00	$49,692
Totals	**6,054**	**857**	**7,088**	**3,639,600**	**$540,131**	**$0.1484**	**36,900**	**$15,824**	**$0.4288**	**3,782**	**900**	**$993**	**$0**	**$993**	**$1.10**	**$556,947**

Fiscal Year 2015

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	268	564	318,960	$46,477	$0.1457	60	$1,201	$20.0162	6	200	$248	$0	$248	$1.24	$47,925
Aug	2	179	553	277,200	$41,504	$0.1497	70	$1,203	$17.1866	7	0	$0	$0	$0	$0.00	$42,707
Sep	79	149	580	291,600	$43,138	$0.1479	100	$1,225	$12.2510	10	0	$0	$0	$0	$0.00	$44,363
Oct	282	21	565	254,880	$12,318	$0.0483	110	$1,234	$11.2211	11	150	$246	$0	$246	$1.64	$13,798
Nov	720	0	484	281,520	$12,451	$0.0442	3,540	$3,214	$0.9078	363	0	$0	$0	$0	$0.00	$15,665
Dec	896	0	544	262,800	$12,764	$0.0486	5,180	$4,406	$0.8506	531	0	$0	$0	$0	$0.00	$17,171
Jan	1,243	0	560	303,840	$70,229	$0.2311	6,170	$5,065	$0.8210	632	250	$249	$0	$249	$1.00	$75,543
Feb	1,354	0	517	287,280	$33,916	$0.1181	5,300	$4,131	$0.7794	543	0	$0	$0	$0	$0.00	$38,047
Mar	1,019	0	588	276,480	$33,937	$0.1227	5,540	$3,871	$0.6987	568	0	$0	$0	$0	$0.00	$37,808
Apr	511	0	564	351,360	$40,026	$0.1139	2,390	$2,232	$0.9341	245	100	$245	$0	$245	$2.45	$42,504
May	99	49	570	311,040	$36,200	$0.1164	300	$1,158	$3.8588	31	0	$0	$0	$0	$0.00	$37,357
Jun	54	103	585	289,440	$33,803	$0.1168	80	$1,059	$13.2421	8	0	$0	$0	$0	$0.00	$34,862
Totals	**6,259**	**769**	**6,674**	**3,506,400**	**$416,762**	**$0.1189**	**28,840**	**$29,999**	**$1.0402**	**2,956**	**700**	**$988**	**$0**	**$988**	**$1.41**	**$447,749**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	677	339,840	$48,739	$0.1434	0	0.176431108	$0.4288	0	200	$248	$0	$248	$1.24	$48,986
Aug	21	200	618	322,560	$48,498	$0.1504	130	$56	$0.4288	13	0	$0	$0	$0	$0.00	$48,554
Sep	119	63	552	292,320	$43,123	$0.1475	728	$312	$0.4288	75	0	$0	$0	$0	$0.00	$43,435
Oct	409	0	580	282,960	$41,860	$0.1479	2,491	$1,068	$0.4288	255	200	$248	$0	$248	$1.24	$43,176
Nov	644	0	549	272,160	$40,418	$0.1485	3,926	$1,684	$0.4288	402	0	$0	$0	$0	$0.00	$42,102
Dec	1,114	0	490	270,000	$39,596	$0.1467	6,793	$2,913	$0.4288	696	0	$0	$0	$0	$0.00	$42,509
Jan	1,145	0	469	279,360	$45,040	$0.1612	6,980	$2,993	$0.4288	715	250	$249	$0	$249	$1.00	$48,282
Feb	1,007	0	513	291,600	$43,685	$0.1498	6,136	$2,631	$0.4288	629	0	$0	$0	$0	$0.00	$46,317
Mar	778	0	533	268,560	$40,722	$0.1516	4,740	$2,033	$0.4288	486	0	$0	$0	$0	$0.00	$42,754
Apr	450	1	721	321,840	$45,074	$0.1401	2,743	$1,176	$0.4288	281	250	$249	$0	$249	$1.00	$46,499
May	167	27	727	347,040	$54,857	$0.1581	1,020	$437	$0.4288	105	0	$0	$0	$0	$0.00	$55,295
Jun	65	133	660	351,360	$48,518	$0.1381	394	$169	$0.4288	40	0	$0	$0	$0	$0.00	$48,687
Totals	**5,920**	**706**	**7,088**	**3,639,600**	**$540,131**	**$0.1484**	**36,082**	**$15,473**	**$0.4288**	**3,698**	**900**	**$993**	**$0**	**$993**	**$1.10**	**$556,597**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Natural Gas*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	CCF	$	$/CCF	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	564	318,960	$46,477	$0.1457	0	0.323524513	$1.0402	0	200	$248	$0	$248	$1.24	$46,725
Aug	21	200	553	277,200	$41,504	$0.1497	98	$102	$1.0402	10	0	$0	$0	$0	$0.00	$41,606
Sep	119	63	580	291,600	$43,138	$0.1479	551	$573	$1.0402	56	0	$0	$0	$0	$0.00	$43,711
Oct	409	0	565	254,880	$12,318	$0.0483	1,883	$1,959	$1.0402	193	150	$246	$0	$246	$1.64	$14,523
Nov	644	0	484	281,520	$12,451	$0.0442	2,968	$3,087	$1.0402	304	0	$0	$0	$0	$0.00	$15,538
Dec	1,114	0	544	262,800	$12,764	$0.0486	5,135	$5,342	$1.0402	526	0	$0	$0	$0	$0.00	$18,106
Jan	1,145	0	560	303,840	$70,229	$0.2311	5,277	$5,489	$1.0402	541	250	$249	$0	$249	$1.00	$75,967
Feb	1,007	0	517	287,280	$33,916	$0.1181	4,639	$4,825	$1.0402	475	0	$0	$0	$0	$0.00	$38,741
Mar	778	0	588	276,480	$33,937	$0.1227	3,583	$3,727	$1.0402	367	0	$0	$0	$0	$0.00	$37,665
Apr	450	1	564	351,360	$40,026	$0.1139	2,074	$2,157	$1.0402	213	100	$245	$0	$245	$2.45	$42,428
May	167	27	570	311,040	$36,200	$0.1164	771	$802	$1.0402	79	0	$0	$0	$0	$0.00	$37,001
Jun	65	133	585	289,440	$33,803	$0.1168	298	$310	$1.0402	31	0	$0	$0	$0	$0.00	$34,112
Totals	**5,920**	**706**	**6,674**	**3,506,400**	**$416,762**	**$0.1189**	**27,277**	**$28,373**	**$1.0402**	**2,796**	**700**	**$988**	**$0**	**$988**	**$1.41**	**$446,123**

City of Bristol, CT
Utility Data Summary
Remote Pumping Stations

Delivery: Eversource
51318953049, 51272853045,
51326593027, 51861063071,
51447063074, 51580063055,
Account #: 51968163071, 51660293051,
Meter #: N/A
Tariff Rate: Rate 056, Rate 030
Supplier: Eversource

Supplier
Account #:

Fiscal Year 2014

	Weather		*Electric*				*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	$
Jul	2	388	419	127,520	$8,624	$0.0676	$8,624
Aug	0	237	394	95,680	$8,083	$0.0845	$8,083
Sep	99	169	357	80,452	$6,854	$0.0852	$6,854
Oct	310	6	245	73,972	$6,294	$0.0851	$6,294
Nov	663	0	266	77,378	$6,126	$0.0792	$6,126
Dec	1,001	0	276	83,151	$6,445	$0.0775	$6,445
Jan	1,206	0	280	124,584	$8,336	$0.0669	$8,336
Feb	1,056	0	332	103,462	$7,764	$0.0750	$7,764
Mar	1,007	0	316	105,554	$8,311	$0.0787	$8,311
Apr	508	0	346	125,361	$8,389	$0.0669	$8,389
May	191	11	514	164,822	$11,406	$0.0692	$11,406
Jun	11	46	305	116,895	$8,687	$0.0743	$8,687
Totals	**6,054**	**857**	**4,049**	**1,278,831**	**$95,319**	**$0.0745**	**$95,319**

Fiscal Year 2015

	Weather		*Electric*				*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	$
Jul	0	268	333	97,539	$7,730	$0.0793	$7,730
Aug	2	179	229	79,058	$7,022	$0.0888	$7,022
Sep	79	149	215	74,615	$6,726	$0.0901	$6,726
Oct	282	21	206	70,221	$6,454	$0.0919	$6,454
Nov	720	0	220	83,978	$6,771	$0.0806	$6,771
Dec	896	0	355	111,926	$8,485	$0.0758	$8,485
Jan	1,243	0	301	130,047	$22,190	$0.1706	$22,190
Feb	1,354	0	263	103,247	$15,046	$0.1457	$15,046
Mar	1,019	0	304	101,118	$15,466	$0.1529	$15,466
Apr	511	0	322	144,444	$19,333	$0.1338	$19,333
May	99	49	322	110,379	$15,559	$0.1410	$15,559
Jun	54	103	289	95,645	$13,972	$0.1461	$13,972
Totals	**6,259**	**769**	**3,359**	**1,202,217**	**$144,755**	**$0.1204**	**$144,755**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	$
Jul	0	281	419	127,520	$8,624	$0.0676	$8,624
Aug	21	200	394	95,680	$8,083	$0.0845	$8,083
Sep	119	63	357	80,452	$6,854	$0.0852	$6,854
Oct	409	0	245	73,972	$6,294	$0.0851	$6,294
Nov	644	0	266	77,378	$6,126	$0.0792	$6,126
Dec	1,114	0	276	83,151	$6,445	$0.0775	$6,445
Jan	1,145	0	280	124,584	$8,336	$0.0669	$8,336
Feb	1,007	0	332	103,462	$7,764	$0.0750	$7,764
Mar	778	0	316	105,554	$8,311	$0.0787	$8,311
Apr	450	1	346	125,361	$8,389	$0.0669	$8,389
May	167	27	514	164,822	$11,406	$0.0692	$11,406
Jun	65	133	305	116,895	$8,687	$0.0743	$8,687
Totals	**5,920**	**706**	**4,049**	**1,278,831**	**$95,319**	**$0.0745**	**$95,319**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	$
Jul	0	281	333	97,539	$7,730	$0.0793	$7,730
Aug	21	200	229	79,058	$7,022	$0.0888	$7,022
Sep	119	63	215	74,615	$6,726	$0.0901	$6,726
Oct	409	0	206	70,221	$6,454	$0.0919	$6,454
Nov	644	0	220	83,978	$6,771	$0.0806	$6,771
Dec	1,114	0	355	111,926	$8,485	$0.0758	$8,485
Jan	1,145	0	301	130,047	$22,190	$0.1706	$22,190
Feb	1,007	0	263	103,247	$15,046	$0.1457	$15,046
Mar	778	0	304	101,118	$15,466	$0.1529	$15,466
Apr	450	1	322	144,444	$19,333	$0.1338	$19,333
May	167	27	322	110,379	$15,559	$0.1410	$15,559
Jun	65	133	289	95,645	$13,972	$0.1461	$13,972
Totals	**5,920**	**706**	**3,359**	**1,202,217**	**$144,755**	**$0.1204**	**$144,755**

City of Bristol, CT

Utility Data Summary

Street Lighting

Delivery: Eversource
Account #: N/A
Meter #: N/A
Tariff Rate: Rate 116,117
Supplier: Eversource

Supplier Account #:

Fiscal Year 2014

	Weather						*Total*
Date	HDD	CDD	Total kWh	Total $	$/kWh Blended	$/CF Total	$
Jul	0	446	211,465	$29,948	$0.1416	$0.00	$29,948
Aug	1	178	211,465	$29,948	$0.1416	$0.00	$29,948
Sep	70	143	211,465	$29,948	$0.1416	$0.00	$29,948
Oct	265	6	211,465	$29,948	$0.1416	$0.00	$29,948
Nov	713	0	211,465	$29,948	$0.1416	$0.00	$29,948
Dec	869	0	211,465	$29,948	$0.1416	$0.00	$29,948
Jan	1,087	0	211,465	$29,948	$0.1416	$0.00	$29,948
Feb	957	0	211,465	$29,948	$0.1416	$0.00	$29,948
Mar	837	0	211,465	$29,948	$0.1416	$0.00	$29,948
Apr	477	0	211,465	$29,948	$0.1416	$0.00	$29,948
May	184	11	211,465	$29,948	$0.1416	$0.00	$29,948
Jun	27	72	211,465	$29,948	$0.1416	$0.00	$29,948
Totals	**5,487**	**856**	**2,537,578**	**$359,373**	**$0.1416**	**$0.00**	**$359,373**

Fiscal Year 2015

	Weather						*Total*
Date	HDD	CDD	Total kWh	Total $	$/kWh Blended	$/CF Total	$
Jul	2	275	211,465	$29,948	$0.1416	$0.00	$29,948
Aug	0	160	211,465	$29,948	$0.1416	$0.00	$29,948
Sep	99	139	211,465	$29,948	$0.1416	$0.00	$29,948
Oct	310	17	211,465	$29,948	$0.1416	$0.00	$29,948
Nov	663	0	211,465	$29,948	$0.1416	$0.00	$29,948
Dec	1,001	0	211,465	$29,948	$0.1416	$0.00	$29,948
Jan	1,206	0	211,465	$29,948	$0.1416	$0.00	$29,948
Feb	1,056	0	211,465	$29,948	$0.1416	$0.00	$29,948
Mar	1,007	0	211,465	$29,948	$0.1416	$0.00	$29,948
Apr	508	0	211,465	$29,948	$0.1416	$0.00	$29,948
May	191	49	211,465	$29,948	$0.1416	$0.00	$29,948
Jun	11	133	211,465	$29,948	$0.1416	$0.00	$29,948
Totals	**6,054**	**773**	**2,537,578**	**$359,373**	**$0.1416**	**$0.00**	**$359,373**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather						*Total*
Date	HDD	CDD	Total kWh	Total $	$/kWh Blended	$/CF Total	$
Jul	0	281	211,465	$29,948	$0.1416	$0.00	$29,948
Aug	21	200	211,465	$29,948	$0.1416	$0.00	$29,948
Sep	119	63	211,465	$29,948	$0.1416	$0.00	$29,948
Oct	409	0	211,465	$29,948	$0.1416	$0.00	$29,948
Nov	644	0	211,465	$29,948	$0.1416	$0.00	$29,948
Dec	1,114	0	211,465	$29,948	$0.1416	$0.00	$29,948
Jan	1,145	0	211,465	$29,948	$0.1416	$0.00	$29,948
Feb	1,007	0	211,465	$29,948	$0.1416	$0.00	$29,948
Mar	778	0	211,465	$29,948	$0.1416	$0.00	$29,948
Apr	450	1	211,465	$29,948	$0.1416	$0.00	$29,948
May	167	27	211,465	$29,948	$0.1416	$0.00	$29,948
Jun	65	133	211,465	$29,948	$0.1416	$0.00	$29,948
Totals	**5,920**	**706**	**2,537,578**	**$359,373**	**$0.1416**	**$0.00**	**$359,373**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather						*Total*
Date	HDD	CDD	Total kWh	Total $	$/kWh Blended	$/CF Total	$
Jul	0	281	211,465	$29,948	$0.1416	$0.00	$29,948
Aug	21	200	211,465	$29,948	$0.1416	$0.00	$29,948
Sep	119	63	211,465	$29,948	$0.1416	$0.00	$29,948
Oct	409	0	211,465	$29,948	$0.1416	$0.00	$29,948
Nov	644	0	211,465	$29,948	$0.1416	$0.00	$29,948
Dec	1,114	0	211,465	$29,948	$0.1416	$0.00	$29,948
Jan	1,145	0	211,465	$29,948	$0.1416	$0.00	$29,948
Feb	1,007	0	211,465	$29,948	$0.1416	$0.00	$29,948
Mar	778	0	211,465	$29,948	$0.1416	$0.00	$29,948
Apr	450	1	211,465	$29,948	$0.1416	$0.00	$29,948
May	167	27	211,465	$29,948	$0.1416	$0.00	$29,948
Jun	65	133	211,465	$29,948	$0.1416	$0.00	$29,948
Totals	**5,920**	**706**	**2,537,578**	**$359,373**	**$0.1416**	**$0.00**	**$359,373**

City of Bristol, CT

Utility Data Summary

Pool

Delivery: N/A
Account #: N/A
Meter #: N/A
Tariff Rate: N/A
Supplier: N/A

Supplier East River Energy
Account #: N/A

Water Service: Bristol Water Department
Account #: 03-06394000
Meter # N/A
Sewer Service: N/A
Account #: N/A

Fiscal Year 2014

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	373	31	19,140	$2,685	$0.1403	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$2,685
Aug	1	252	29	17,726	$2,507	$0.1414	0	$0	$0.0000	0	89,100	$2,182	$0	$2,182	$0.02	$4,689
Sep	70	175	28	2,300	$640	$0.2785	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$640
Oct	265	6	2	194	$100	$0.5172	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$100
Nov	713	0	0	197	$101	$0.5112	0	$0	$0.0000	0	48,700	$1,249	$0	$1,249	$0.03	$1,350
Dec	869	0	0	209	$102	$0.4888	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$102
Jan	1,087	0	0	194	$99	$0.5113	617	$1,649	$2.6722	86	0	$0	$0	$0	$0.00	$1,748
Feb	957	0	0	175	$96	$0.5496	0	$0	$0.0000	0	0	$124	$0	$124	$0.00	$220
Mar	837	0	3	234	$111	$0.4757	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$111
Apr	477	0	1	311	$111	$0.3572	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$111
May	184	11	2	286	$112	$0.3918	0	$0	$0.0000	0	200	$129	$0	$129	$0.64	$241
Jun	27	37	4	477	$158	$0.3308	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$158
Totals	**5,487**	**854**	**101**	**41,443**	**$6,824**	**$0.1647**	**617**	**$1,649**	**$2.6722**	**86**	**138,000**	**$3,684**	**$0**	**$3,684**	**$0.03**	**$12,157**

Fiscal Year 2015

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	2	266	29	16,288	$2,144	$0.1316	624	$1,908	$3.0569	87	0	$0	$0	$0	$0.00	$4,052
Aug	0	187	30	19,457	$2,515	$0.1293	0	$0	$0.0000	0	70,650	$1,756	$0	$1,756	$0.02	$4,271
Sep	99	0	28	4,552	$883	$0.1941	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$883
Oct	310	0	3	210	$109	$0.5182	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$109
Nov	663	0	1	252	$104	$0.4131	425	$1,299	$3.0569	59	48,700	$1,249	$0	$1,249	$0.03	$2,652
Dec	1,001	0	1	269	$106	$0.3938	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$106
Jan	1,206	0	5	378	$155	$0.4106	896	$2,740	$3.0569	124	0	$0	$0	$0	$0.00	$2,895
Feb	1,056	0	2	371	$124	$0.3337	0	$0	$0.0000	0	100	$126	$0	$126	$1.26	$250
Mar	1,007	0	3	482	$152	$0.3145	380	$1,203	$3.1663	53	0	$0	$0	$0	$0.00	$1,355
Apr	508	0	2	247	$111	$0.4481	200	$641	$3.2068	28	0	$0	$0	$0	$0.00	$752
May	191	0	1	214	$104	$0.4859	0	$0	$0.0000	0	850	$144	$0	$144	$0.17	$248
Jun	11	0	1	242	$108	$0.4443	0	$0	$0.0000	0	0	$0	$0	$0	$0.00	$108
Totals	**6,054**	**453**	**104**	**42,962**	**$6,614**	**$0.1540**	**2,526**	**$7,792**	**$3.0852**	**350**	**120,300**	**$3,275**	**$0**	**$3,275**	**$0.03**	**$17,681**

Fiscal Year 2014 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	31	19,140	$2,685	$0.1403	0	$0	$2.6722	0	0	$0	$0	$0	$0.00	$2,685
Aug	21	200	29	17,726	$2,507	$0.1414	2	$6	$2.6722	0	89,100	$2,182	$0	$2,182	$0.02	$4,696
Sep	119	63	28	2,300	$640	$0.2785	13	$36	$2.6722	2	0	$0	$0	$0	$0.00	$676
Oct	409	0	2	194	$100	$0.5172	46	$123	$2.6722	6	0	$0	$0	$0	$0.00	$223
Nov	644	0	0	197	$101	$0.5112	72	$194	$2.6722	10	48,700	$1,249	$0	$1,249	$0.03	$1,543
Dec	1,114	0	0	209	$102	$0.4888	125	$335	$2.6722	17	0	$0	$0	$0	$0.00	$437
Jan	1,145	0	0	194	$99	$0.5113	129	$344	$2.6722	18	0	$0	$0	$0	$0.00	$443
Feb	1,007	0	0	175	$96	$0.5496	113	$303	$2.6722	16	0	$124	$0	$124	$0.00	$523
Mar	778	0	3	234	$111	$0.4757	87	$234	$2.6722	12	0	$0	$0	$0	$0.00	$345
Apr	450	1	1	311	$111	$0.3572	51	$135	$2.6722	7	0	$0	$0	$0	$0.00	$246
May	167	27	2	286	$112	$0.3918	19	$50	$2.6722	3	200	$129	$0	$129	$0.64	$291
Jun	65	133	4	477	$158	$0.3308	7	$19	$2.6722	1	0	$0	$0	$0	$0.00	$177
Totals	**5,920**	**706**	**101**	**41,443**	**$6,824**	**$0.1647**	**666**	**$1,779**	**$2.6722**	**92**	**138,000**	**$3,684**	**$0**	**$3,684**	**$0.03**	**$12,287**

Fiscal Year 2015 - Weather Adjusted w/ 30-year average HARTFORD BRADLEY INTL AP HDD

	Weather		*Electric*				*#2 Fuel Oil*			*Total*	*Water & Sewer*					*Total*
Date	HDD	CDD	kW	Total kWh	Total $	$/kWh Blended	Gallons	$	$/Gal	MMBtu	CF	Water $	Sewer $	Total $	$/CF Total	$
Jul	0	281	29	16,288	$2,144	$0.1316	0	$0	$3.0852	0	0	$0	$0	$0	$0.00	$2,144
Aug	21	200	30	19,457	$2,515	$0.1293	9	$27	$3.0852	1	70,650	$1,756	$0	$1,756	$0.02	$4,299
Sep	119	63	28	4,552	$883	$0.1941	50	$154	$3.0852	7	0	$0	$0	$0	$0.00	$1,037
Oct	409	0	3	210	$109	$0.5182	171	$526	$3.0852	24	0	$0	$0	$0	$0.00	$635
Nov	644	0	1	252	$104	$0.4131	269	$829	$3.0852	37	48,700	$1,249	$0	$1,249	$0.03	$2,182
Dec	1,114	0	1	269	$106	$0.3938	465	$1,434	$3.0852	64	0	$0	$0	$0	$0.00	$1,540
Jan	1,145	0	5	378	$155	$0.4106	478	$1,474	$3.0852	66	0	$0	$0	$0	$0.00	$1,629
Feb	1,007	0	2	371	$124	$0.3337	420	$1,296	$3.0852	58	100	$126	$0	$126	$1.26	$1,546
Mar	778	0	3	482	$152	$0.3145	324	$1,001	$3.0852	45	0	$0	$0	$0	$0.00	$1,153
Apr	450	1	2	247	$111	$0.4481	188	$579	$3.0852	26	0	$0	$0	$0	$0.00	$690
May	167	27	1	214	$104	$0.4859	70	$215	$3.0852	10	850	$144	$0	$144	$0.17	$463
Jun	65	133	1	242	$108	$0.4443	27	$83	$3.0852	4	0	$0	$0	$0	$0.00	$191
Totals	**5,920**	**706**	**104**	**42,962**	**$6,614**	**$0.1540**	**2,470**	**$7,619**	**$3.0852**	**343**	**120,300**	**$3,275**	**$0**	**$3,275**	**$0.03**	**$17,509**

Section 2:
Existing Conditions

Bristol Central High School

Building

The Bristol Central High School building is a three-story brick building located at 480 Wolcott Street. The 217,027 sq. ft. building consists of classrooms, gymnasium, auditorium, library, cafeteria, and offices. Building envelope features include aluminum frame windows and doors with single pane glazing and a rubber roof with loose gravel top coat.



Building Occupancy

The Central High School building is primarily occupied Monday through Friday from 7:35 a.m. to 2:00 p.m. with occasional use on weekends.

Lighting

Interior lighting consists primarily of 2-lamp, 4-foot, indirect/direct pendant fixtures with standard, 32-Watt T8 lamps and electronic ballasts. Additional lighting includes 26- and 32-Watt compact fluorescents, 500-Watt dimmable incandescent cans in the auditorium, T5 high-bays in the gym, T5 "biax" indirects, and a small number of strip fixtures in display cases with T12 lamps and magnetic ballasts. Exterior lighting consists of a variety of building-mounted or pole fixtures with high-pressure sodium or compact fluorescent lamps. The interior lights are typically in use weekdays 6:00 a.m. to 10:00 p.m. to allow for maintenance services and extracurricular activities.

HVAC

The classrooms are provided with heating, cooling and ventilation by five (5) GovernAir Model RSA-HWL-T make-up air units, MAU-1 through MAU-5, located on the rooftop. Each unit is equipped with steam coils, DX cooling coil, heat recovery wheel and supply and return fan motors ranging from 15 to 30 HP on VFDs. The MAUs operate in occupied mode from Mon. - Fri., 5:15 a.m. to 4:00 p.m. and in unoccupied mode at all other times.

MQuay AHU's serve the Auditorium (AC-1) with 15HP fan, Lecture Hall (AC-2) with 7.5HP fan, Cafeteria (AC-3) with 10HP fan, Media Center (AHU-1) with 10HP fan and VFD, and Offices (AHU-2) with 20HP fan and VFD. Heating & Ventilation units (HVs) serve various areas such as the Chorus Rm, Band Rm,

"Page content is subject to Confidentiality Restrictions"

Shops, Garage, Lobby, Varsity Locker, Boiler Rm, Cafeteria, Locker Rms, and the Gym (HV-12 thru HV-15). These units have fan motors ranging from 1.5HP to 7.5HP.

The majority of AHUs operate in occupied mode from Mon. - Fri., 6:00 a.m. to 3:00 p.m. and in unoccupied mode at all other times.

The Gym operates in occupied mode from Mon. - Fri., 6:00 a.m. to 7:00 p.m., Sunday 7:30 a.m. – 7:00 p.m. and in unoccupied mode at all other times.

Boiler

Three space heating boilers provide around 7 lbs of low pressure steam to the building. The two primary boilers used are HB Smith Series 28A-18, rated at 4,629 MBH output each, with dual fuel burners currently only using Oil. One Cleaver Brooks CR655-200 steam boiler with 8,375 MBH input installed in 1966 is used as back-up. Domestic Hot Water is provided by two (2) Duramax gas-fired atmospheric boilers each with 840 MBH input, serving a 350 gallon A.O. Smith indirect storage tank.

Cooling

Cooling is provided to the MAU's serving the classrooms by five (5) Trane RAUCC DX condensing units (CU1A-CU5A) totaling 220 tons. Cooling for AHU-1,2 and AC-1,2 is provided by four (4) McQuay ALP condensing untis (CU1-CU-4) which serve the Media Center, Admin, Auditorium, and Lecture Hall totaling 136 tons. Additional small condensing units on the roof serve the server rooms and media rooms.

Bristol Eastern High School

Building



The Bristol Eastern High School building is a two-story brick and block building located in Bristol, Connecticut. The building contains 210,403 sq. ft. of usable space and consists of classrooms, gymnasium, auditorium, library, cafeteria, and offices.

Building Occupancy

The Eastern High School building is occupied Monday through Friday from 7:35 a.m. to 2:00 p.m. with occasional use on weekends.

Lighting

Interior lighting consists primarily of 2-lamp, 4-foot, indirect/direct pendant fixtures with standard, 32-Watt T8 lamps and electronic ballasts. Additional lighting includes 18- and 26-Watt compact fluorescents, dimmable incandescent cans in the auditorium, T5 high-bays in the gym, and T5 "biax" indirect/direct fixtures. Exterior lighting consists of a variety of building-mounted or pole fixtures with high-pressure sodium, compact fluorescent or incandescent lamps. The interior lights are typically in use weekdays 6:00 a.m. to 10:00 p.m. to allow for maintenance services and extracurricular.

"Page content is subject to Confidentiality Restrictions"

HVAC

The classrooms are provided with heating, cooling and ventilation by six (6) GovernAir Model RSA-HWL-T make-up air units, MAU-1 through MAU-6, located on the rooftop. Each unit is equipped with steam coils, DX cooling coil, heat recovery wheel and supply and return fan motors ranging from 15 to 25 HP on VFDs. The MAUs are scheduled to operate in occupied mode at different times Mon. - Fri., ranging from 5:30 a.m. start, 9:00 am start to 2:00 p.m. or 3:00 p.m. and in unoccupied mode at all other times.

MQuay RTU's serve the Admin/Media Center (RTU-1) with 10HP fan, Blue House Area (RTU-2) with 5HP fan,Grey House Area (RTU-3) with 3HP fan, Section G (RTU-4) with 1.5HP fan. Ten (10) AHU's serve areas such as the Small gym, locker rooms, and offices. Heating & Ventilation units (HVs) serve various areas such as the old gym, locker rooms, wrestling room, music room, cafeteria, band room, halls, and rifle range (HV-1 thru HV-9). These units have fan motors ranging from 0.75 HP to 3HP.

The majority of AHUs operate in occupied mode from Mon. - Fri., 9:00 a.m. to 2:30 p.m. and in unoccupied mode at all other times.

The Gym operates in occupied mode from Mon. - Fri., 7:30 a.m. to 6:00 p.m., and on weekends 9:00 a.m. – 2:00 p.m. and in unoccupied mode at all other times.

Boiler

Two space heating boilers provide low pressure steam to the building. The two primary boilers used are Smith Mills 400A cast iron sectional, rated at 5,093 MBH output each, with dual fuel burners currently using gas. Domestic Hot Water is produced by an indirect system consisting of the space heating boilers and a A.O. Smith custom model HWG350 indirect storage tank.

Cooling

Cooling is provided to the MAU's serving the classrooms by six (6) Trane RAUCC DX condensing units (CU1A-CU6A) totaling 220 tons. Cooling for RTU-1,2 3, and 4 is provided by four (4) McQuay ALP condensing untis (CU1-CU-4) which serve the Media, Admin, Blue House, Grey House, and Section G, totaling 36 tons. Additional small condensing units on the roof serve the special Ed Wing, server rooms and media rooms.

"Page content is subject to Confidentiality Restrictions"

Chippens Hill Middle School

Building

The Chippens Hill Middle School is a three-story masonry block and brick building constructed in 1993. The 166,855 sq. ft. building contains a library, gymnasium, auditorium, cafeteria, offices and classrooms. The flat rubber roof has a top layer of loose gravel and supports a number of HVAC equipment. There are fixed and awning style windows throughout with double glazing in aluminum frames.



Building Occupancy

The Chippens Hill Middle School building in Bristol is occupied on Monday from 8:15 a.m. to 5:20 p.m., Tuesday through Thursday 8:15 a.m. to 4:50 p.m. and Friday from 8:15 a.m. to 5:05 p.m. with occasional use on weekends.

Lighting

Interior lighting consists primarily of 2-lamp, 4-foot, indirect/direct pendant fixtures with standard, 32-Watt T8 lamps and electronic ballasts. Additional lighting includes 18- and 26-Watt compact fluorescents, dimmable incandescent cans in the auditorium, and T5 high-bays in the gym. Exterior lighting consists of a variety of building-mounted or pole fixtures with metal halide, compact fluorescent or standard linear T8 lamps. The interior lights are typically in use weekdays 7:30 a.m. to 10:00 p.m. to allow for maintenance services and extracurricular activities.

HVAC

The majority of the building is provided with heating, cooling and ventilation by rooftop units RTU-1 through RTU-10 serving the Library, Computer Rm A-215, Computer Rm A-216, Faculty Lounge, Cafeteria, Gym A, Gym B, Gym C, Administration, and Auditorium Stage, respectively. These units are equipped with gas heaters, single-stage DX cooling coils and economizers, with supply fans in the range of 5 HP to 10 HP. AHU-1, 2 and 3 serve the Auditorium area and are equipped with hot water coils, two-stage DX cooling coils, economizers and 5 HP supply fans. MAU-1 through 5 provide heating and ventilation to Tech Ed 105, Tech Ed 108, Tech Ed 111, Rm C233 and Rm C239, respectively. These units have gas heaters and 1 HP supply fans. There are approximately 34 fractional HP rooftop exhaust fans that provide exhaust to most of the building. Much of the rooftop equipment is 20 years old or greater and showing signs of deterioration. None of the equipment appears to be controlled with VFDs. Most MAUs, RTUs and AHUs are interlocked with their respective exhaust fans and all cycle between occupied/unoccupied modes according to BMS schedules.

Perimeter classrooms and offices are provided with supplementary heat by hot water convectors. Common areas and some interior spaces are heated and ventilated by ceiling mounted hot water fan coil units.

"Page content is subject to Confidentiality Restrictions"

Boiler

Heating hot water is generated by two H.B. Smith Series 28A-16 dual-fuel boilers, each with an input capacity of 5,189 MBH. Two 20 HP pumps distribute heating hot water throughout the building to the radiation loop and terminal units. The motors have efficiencies of 92.4% and are constant speed, constant volume.

Cooling

The majority of the building is cooled by rooftop units RTU-1 through RTU-10 serving the Library, Computer Rm A-215, Computer Rm A-216, Faculty Lounge, Cafeteria, Gym A, Gym B, Gym C, Administration, and Auditorium Stage, respectively. These packaged rooftop units are equipped with single-stage DX cooling coils and air-cooled condensers and have a combined cooling capacity of approximately 50 tons.

Northeast Middle School

Building

The Northeast Middle School building is a two-story brick building constructed in 1961. The building contains 72,731 sq. ft. of usable space consisting of a gym, café, library, classrooms and offices. The roof is flat with a rubber membrane and top layer of loose gravel. The hopper and awning style windows throughout are single pane in metal frames and are in worn condition.



Building Occupancy

The Northeast Middle School building in Bristol is occupied Monday through Friday from 8:15 a.m. to 2:50 p.m. with occasional use on weekends.

Lighting

Interior lighting consists primarily of 2-lamp, 4-foot wrap fixtures with standard, 32-Watt T8 lamps and electronic ballasts. Additional lighting includes 13- and 26-Watt compact fluorescents and T5 high-bays in the gym. Exterior lighting consists of a variety of building-mounted or pole fixtures with high-pressure sodium, metal halide or compact fluorescent lamps. The interior lights are typically in use weekdays 6:30 a.m. to 10:00 p.m. to allow for maintenance services and extracurricular activities.

HVAC

The building is provided with very little outdoor air ventilation. Two ceiling-hung HV units provide heating and ventilation to the gym. The units have 1 HP constant speed supply fans, hot water coils and outdoor air dampers. A similar indoor unit, AHU-2, serves the cafeteria. Perimeter spaces are heated by hot water

"Page content is subject to Confidentiality Restrictions"

convectors located along outside walls. A few interior rooms are heated with hot water unit heaters. There are approximately 34 exhaust fans that provide general exhaust throughout the building.

Boiler

Heating hot water is generated by two H.B. Smith 28A-13 oil-fired boilers, each with an input capacity of 1,036 MBH. Main pumps P-1 and P-2, each 15 HP, distribute the heating hot water to the radiation loop. They have constant speed motors with efficiencies of 93%. A small 2 HP pump, P-3, distributed heating hot water to the gym units. The boilers and pumps operate based on Tork time clocks that cycle the equipment between occupied and unoccupied modes. Terminal unit valves and dampers are all pneumatically controlled and communicate with pneumatic thermostats.

Cooling

The administration offices are cooled by a 3-ton AC unit consisting of a roof mounted condensing unit and ceiling-hung fan coil unit. The IT sever room is cooled by a Sanyo split-system. 5 window air conditioners provide cooling to the library and a few classrooms.

West Bristol K8 School

Building



The West Bristol K8 School is one of two newly constructed K8 School buildings that opened in 2012. The brick and masonry block building is made up of two-story north and west wings and a three story south wing. The building contains 124,678 sq. ft. of usable space which includes a library, gymnasium, cafeteria, classrooms, offices, and large atrium lobby. Building architectural features include a multi-color plate panel system, exterior sun shades on south facing windows, a white membrane roof and over 200 rooftop solar modules.

Building Occupancy

The building is occupied Monday through Friday from 7:30 a.m. to 5:30 p.m. with occasional use on weekends.

Lighting

Interior lighting consists primarily of 2-lamp, 4-foot, indirect/direct pendant fixtures with standard, 32-Watt T8 lamps and electronic ballasts. Additional lighting includes 26- and 8x42-Watt compact fluorescents (gym), T5 biax fixtures for the cafeteria and metal halide up lights in the library and main lobby. Exterior lighting consists of a variety of building-mounted or pole fixtures with LED lamps. The interior lights are typically in use weekdays 6:00 a.m. to 9:00 p.m. to allow for maintenance services and extracurricular activities.

"Page content is subject to Confidentiality Restrictions"

HVAC

The majority of the classroom and office areas of the building are provided with heating and cooling by Mitsubishi Electric City Multi variable refrigerant volume heat pumps. Ventilation is provided to these areas by 4 rooftop DOAS units that feed an overhead VAV system. These units are equipped with energy recovery wheels that transfer energy from the exhaust air stream to the outdoor air supply stream. Additional heat is provided to classrooms by an underfloor radiant heating system. The remaining large areas including the café, auditorium, and gym are provided with heating, cooling and ventilation by AHU-1 and rooftop units RTU-1 through 4, all equipped with energy recovery wheels and DX heating/cooling coils. MAU-1 serving the mechanical room is the only gas-fired unit in the building.

Boiler

The building is provided with heated water by 4 ClimateMaster geothermal heat pumps that operate in place of a traditional boiler. Each unit has a heating capacity of 238 MBH. Hot water is distributed by two 5 HP pumps equipped with VFDs to the underfloor radiation loops.

Cooling

100% of the building is cooled, either by water-source DX cooling coils in the rooftop equipment or Mitsubishi heat pumps. Condenser water is distributed through the building loop to the terminal unit condensers by two 20 HP pumps equipped with VFDs and then returned to the ground water loop.

Green-Hills K8 School

Building

The Green-Hills K8 School is one of two newly constructed K8 School buildings that opened in 2012. The 134,056 sq. ft. school has 2 story sections that house the K-5 grade classrooms, offices, gym, cafeteria, and media center and a three story section consisting of 6-8 grade classrooms. The building has architectural wall panels and aluminum sun shades on south facing windows. The flat roof is covered in a white membrane and supports over 230 rooftop solar modules.



Building Occupancy

The Green-Hills K8 School building in Bristol is occupied from 8:15 a.m. to 4:20 p.m. on Mondays and Wednesdays and from 8:15 a.m. to 2:50 p.m. on Tuesdays, Thursdays and Fridays, with occasional use on weekends.

Lighting

Interior lighting consists primarily of 2-lamp, 4-foot, indirect/direct pendant fixtures with standard, 32-Watt T8 lamps and electronic ballasts and T5 fixtures. Additional lighting includes 2x26-Watt (cafeteria) and 8x42-Watt compact fluorescents (gym). Exterior lighting consists of a variety of building-mounted or pole fixtures with LED lamps. The interior lights are typically in use weekdays 6:00 a.m. to 9:00 p.m. to allow for maintenance services and extracurricular activities.

"Page content is subject to Confidentiality Restrictions"

HVAC

The majority of the classroom and office areas of the building are provided with heating and cooling by LG Multi V variable refrigerant volume heat pumps. Ventilation is provided to these areas by 4 ERV units that feed an overhead VAV system. These units are equipped with energy recovery wheels that transfer energy from the exhaust air stream to the outdoor air supply stream. Additional heat is provided to classrooms by an underfloor radiant heating system. The cafeteria and gym are provided with heating, cooling and ventilation by AHU-1 and 2 respectively, each equipped with energy recovery wheels and DX heating/cooling coils. MAU-1 serving the mechanical room is the only gas-fired unit in the building.

Boiler

The building is provided with heated water by 4 ClimateMaster geothermal heat pumps that operate in place of a traditional boiler. Each unit has a heating capacity of 253 MBH. Hot water is distributed by two 5 HP pumps equipped with VFDs to the underfloor radiation loops.

Cooling

100% of the building is cooled, either by water-source DX cooling coils in the AHUs or LG heat pumps. Condenser water is distributed through the building loop to the terminal unit condensers by two 7.5 HP pumps equipped with VFDs and then returned to the ground water loop.

Ellen P. Hubbell Elementary School

Building

The Ellen P. Hubbell Elementary School building is a one-story brick and block building constructed in 1950. The building contains 60,070 sq. ft. of usable space consisting of a gym, café, library, classrooms and offices. Windows throughout the building are double glazing in aluminum frames and appear to be in good condition. The roof is flat with a rubber membrane covered in loose gravel.

Building Occupancy

The Ellen P. Hubbell Elementary School building in Bristol is occupied Monday through Friday from 9:05 a.m. to 3:25 p.m. with occasional use on weekends.



Lighting

Ellen P. Hubbell Elementary School: Interior lighting consists primarily of 2-lamp, 4-foot, wraps and troffers with standard, 32-Watt T8 lamps and electronic ballasts and T5 biax troffers. Additional lighting includes 13-Watt compact fluorescents, T5 high-bays in the gym. Exterior lighting consists of a variety of building-mounted or pole fixtures with high-pressure sodium or metal halide lamps. The interior lights are typically in use weekdays 6:00 a.m. to 9:00 p.m. to allow for maintenance services and extracurricular activities.

"Page content is subject to Confidentiality Restrictions"

HVAC

Indoor units AHU-1, 2 and 3 provide heating and ventilation to the media center, library and cafeteria and are equipped with hot water coils. Perimeter spaces are heated by hot water convectors located along exterior walls. Hot water cabinet unit heaters provide heat to common areas like corridors. 19 rooftop exhaust fans provide general exhaust to the building.

Boiler

Heating hot water is generated by two H.B. Smith 440 Mills boilers with input capacities of 2,499 MBH each. Each is equipped with an oil-fired Carlin burner. Heating hot water is distributed by two pairs of pumps. P-1 and P-2 are 3 HP each and serve the original building radiation loop. P-3 and P-4 are 7.5 HP and serve the east wing radiation loop. All pumps are constant volume. The hot water supply temperature is controlled by a pneumatic three-way mixing valve located in the boiler room. Terminal unit hot water valves are pneumatically controlled and communicate with a variety of Johnson Controls pneumatic thermostats.

Cooling

Indoor fan coil units AC-1 and AC-2 provide cooling and ventilation to the main office and faculty room. These units are equipped with DX cooling coils and electric reheat coils and are tied to rooftop air-cooled condensing units.

Stafford Elementary School

Building

The Stafford Elementary School building was constructed in 1950 of masonry blocks and a brick. The building contains 56,076 sq. ft. of usable space. The first floor consists of the library, gym, offices and classrooms while the basement level houses the cafeteria and additional classes. The hopper and fixed windows throughout are about 30 years old and have double pane glazing in aluminum frames. Doors are metal panels with various percentages of double pane glazing. Weather stripping on both the doors and operable windows are in poor condition.



Building Occupancy

The Stafford Elementary School building in Bristol is occupied Monday through Friday from 9:05 a.m. to 3:25 p.m. with occasional use on weekends.

Lighting

Interior lighting consists primarily of 2-lamp, 4-foot, valances, troffers, and wraps with standard, 32-Watt T8 lamps and electronic ballasts. Additional lighting includes 9- and 13-Watt compact fluorescents and T5 high-bays in the gym. Exterior lighting consists of a variety of building-mounted fixtures with metal halide, high-pressure sodium, or incandescent quartz lamps or LED's. The interior lights are typically in use weekdays 6:00 a.m. to 9:00 p.m. to allow for maintenance services and extracurricular activities.

"Page content is subject to Confidentiality Restrictions"

HVAC

There is no outdoor air ventilation provided to the building. A number of rooftop exhaust fans provide general and restroom exhaust.

Boiler

The building is provided with low pressure steam by 2 H.B. Smith 3500 Mills cast iron boilers, each with an output capacity of 3,140 MBH. Both are equipped with Carlin 1150FFD oil-fired burners. Steam is distributed throughout the building in a two-pipe system to terminal units including cabinet unit heaters and convectors. Cabinet unit heaters have local TRV controls while convectors are equipped with pneumatic 2-way valves controlled by pneumatic thermostats. The steam system operates based on day and night pressure settings controlled by an Intermatic time clock.

Cooling

Only a small percentage of the building is cooled. The office area is cooled by a 5 ton Trane split-system that provides conditioned air through an overhead diffusers. There are 10 window air conditioners that provide cooling to a number of classrooms throughout the building.

Ivy Drive Elementary School

Building

The Ivy Drive Elementary School building is a one-story brick and block building constructed in 1966. The 60,914 sq. ft. building contains classrooms, offices, a multi-purpose room, cafeteria, and media center. The building was renovated about 5 years ago with new double pane aluminum framed windows and insulated panel doors. A north and a south courtyard provide daylight to interior classrooms.

Building Occupancy

The Ivy Drive Elementary building in Bristol is occupied Monday through Friday from 9:05 a.m. to 3:25 p.m. with occasional use on weekends.

Lighting

Interior lighting consists primarily of 2-lamp, 4-foot wraps with standard, 32-Watt T8 lamps and electronic ballasts. Additional lighting includes T5 troffers and indirect pendant fixtures. Exterior lighting consists of a variety of building-mounted or pole fixtures with metal halide or compact fluorescent lamps. The interior lights are typically in use weekdays 6:00 a.m. to 9:00 p.m. to allow for maintenance services and extracurricular activities.



HVAC

The building is provided with heating, cooling and ventilation by 3 RTUs and 5 MAUs located on the roof and by 2 AHUs located in a mechanical mezzanine. RTU-1 and 2 serve the media center and administration area, respectively. These units are gas-fired for heating, are equipped with DX coils for cooling and have VFDs on the fans. RTU-3 provides combustion air to the boiler room. MAU-1 through 4 provide heating, cooling and ventilation to the classrooms and are equipped with VFDs, heat recovery wheels, gas-fired burners for heating, and DX coils for cooling. MAU-5 provides make-up air to the kitchen area and is also gas-fired. AHU-1 and AHU-2 provide heating, cooling and ventilation to the multi-purpose room and cafeteria and are equipped with DX cooling coils, hot water heating coils and VFDs. 18 rooftop exhaust fans provide exhaust to restrooms, cafeteria, kitchen, and custodian closets.



Boiler

The building is provided with heating hot water by 2 gas-fired H.B. Smith 28A-10 cast iron boilers, each with an input capacity of 3,172 MBH. The hot water is distributed throughout the two-pipe system by 4 pumps equipped with VFDs that operate based on differential pressure. 2 HP pump P-1 and 7.5 HP pump P-3 operate for a week, then 2 HP pump P-2 and 7.5 HP pump P-4 will cycle on the following week. The majority of classrooms, offices, and common areas are heated by hot water convectors equipped with electronic two-way valves. The boilers are enabled when the outside air temperature is below 65 deg. F and are equipped with modulating burners to adjust the hot water supply temperature.

Cooling

The building is cooled by RTU-1, RTU-2, MAU-1, MAU-2, MAU-3, MAU-4, AHU-1, and AHU-2. All of these units are packaged rooftop units with DX cooling coils and air-cooled condensing units, except for AHU-1 and AHU-2 which are indoor units with the air-cooled condensing sections located on the rooftop. There are 5 Mitsubishi Mr. Slim split-systems that serve small offices and IT rooms. The combined cooling capacity of this equipment is 173 tons.

Edgewood Elementary School

Building

The Edgewood Elementary School building is a one-story brick building constructed in 1957. The building contains 41,888 sq. ft. of usable space consisting of an all-purpose room, library, offices, and classrooms. The curtain wall systems throughout the building were installed about 15 years ago and consist of a lower 1/3 insulated panel and upper 2/3 aluminum framed double pane windows. Exterior classroom doors are metal slab doors while main entrance doors have various percentages of glazing. Doors appear to have gaps and worn weather stripping.

"Page content is subject to Confidentiality Restrictions"

Building Occupancy

The Edgewood Elementary School building in Bristol is occupied Monday through Friday from 9:05 a.m. to 3:25 p.m. with occasional use on weekends.

Lighting

Interior lighting consists primarily of 2-lamp, 4-foot wraps with standard, 32-Watt T8 lamps and electronic ballasts. Additional lighting includes 60- and 90-Watt incandescent cans and squares, 9- and 13-Watt compact fluorescents, single-lamp cove fixtures with T12 lamps and magnetic ballasts, and T5 high-bays in the cafeteria. Exterior lighting consists of a variety of building-mounted fixtures with metal halide or high-pressure sodium lamps. The interior lights are typically in use weekdays 6:00 a.m. to 9:00 p.m. to allow for maintenance services and extracurricular activities.

HVAC

The 2 unit ventilators serving the all-purpose room are equipped with hot water coils that provide heating and ventilation to the space. The unit ventilators serving the classrooms are equipped with hot water coils for providing heat but the outdoor air louvers have been permanently sealed because they were too drafty. About a dozen rooftop exhaust fans provide general and restroom exhaust.

Boiler

The building is provided with heating hot water by 2 H.B. Smith 28A-9 cast iron boilers, each with an input capacity of 2,744 MBH. Both are equipped with Powerflame C2-OB oil-fired burners. The hot water is distributed to 3 building zones by 5 pumps. The 10 HP pumps P-1 and P-2 operate in lead/lag and serve the northern classrooms. The 1 HP pump P-3 serves the administration area. The 1 HP pumps P-4 and P-5 operate in lead/lag and serve the southern classrooms. The majority of the classrooms and offices have hot water convectors that are equipped with pneumatic 2-way valves controlled by pneumatic thermostats. 2 ceiling-hung Trane unit ventilators equipped with hot water coils heat the all-purpose room. Floor-mounted unit ventilators heat a handful of classrooms. Unit ventilators have pneumatically controlled dampers and 2-way hot water valves. The boilers operate based on day and night pressure settings controlled by an Intermatic time clock.

Cooling

Only a small percentage of the building is cooled. The main office area is cooled by a DX split-system that distributes the conditioned air through overhead ductwork. There are three window air conditioners that cool Classroom 16, the health office and the faculty room. Additional cooling is provided to the IT room by a Sanyo split-system.

"Page content is subject to Confidentiality Restrictions"

Mountain View Elementary School

Building

The Mountain View Elementary School building is a two-story brick and concrete block building constructed in 1966. The 56,522 sq. ft. building contains a media center, multi-purpose room, cafeteria, classrooms and offices. The building was renovated in 2007 with double glazed aluminum frame hopper and fixed style windows. The building has a flat rubber roof with a gravel top coat. A central courtyard provides day light to the main corridor and a few interior spaces.

Building Occupancy

The Mountain View Elementary School building in Bristol is occupied Monday through Friday from 9:05 a.m. to 3:25 p.m. with occasional use on weekends.

Lighting

Interior lighting consists primarily of 2-lamp, 4-foot wraps with standard, 32-Watt T8 lamps and electronic ballasts. Additional lighting includes 18-Watt compact fluorescents, and T5 biax high-bays in the gym. Exterior lighting consists of a variety of building-mounted fixtures with metal halide, compact fluorescent or standard T8 lamps. The interior lights are typically in use weekdays 6:00 a.m. to 9:00 p.m. to allow for maintenance services and extracurricular activities.



HVAC

The HVAC system was renovated in 2007 with all new equipment and distribution systems. The classrooms are provided with heating, cooling and ventilation by MAU-1 through 4 located on the roof. These units are equipped with air-to-air heat exchangers, supply and return fan VFDs, gas heaters, and DX cooling coils. MAU-5 serves the kitchen make-up air requirements. AHU-1 located in a mechanical mezzanine serves the multi-purpose room and provides heating, cooling and ventilation. The unit is equipped with a hot water heating coil, DX cooling coil, and supply fan VFD. Rooftop units RTU-1 through 4 serve the media center, administration, cafeteria and boiler room, respectively. These units are equipped with gas heaters but only RTU-1 and RTU-2 have DX cooling coils and only RTU-3 has a supply fan VFD. All of the classrooms and offices with exterior walls are provided with additional heat by hot water convectors equipped with electronic two-way valves. 12 rooftop exhaust fans provide exhaust to restrooms, kitchen, elevator room, and kiln. All HVAC equipment is controlled by a BMS and operate based on setpoint temperatures and schedules.

Boiler

The building is provided with heating hot water by 2 gas-fired Burnham V1110 cast iron boilers, each with an input capacity of 2,396 MBH. Heating hot water is distributed to the baseboard radiation loop by 5 HP pumps HWP-3 and HWP-4 equipped with VFDs and operating in lead/lag sequence. Heating hot water is

"Page content is subject to Confidentiality Restrictions"

distributed to AHU-1 by 1 HP pumps HWP-5 and HWP-6, also equipped with VFDs and operating in lead/lag sequence. The boilers are controlled by a BMS that operates them in lead/lag sequence when the outdoor air temperature is below 55 deg. F. The hot water supply temperature is on a reset schedule based on outdoor air temperature as well.

Cooling

A majority of the occupied building space is cooled by one of the rooftop MAUs, AHU or RTUs. The rooftop equipment is packaged with the air-cooled condensing unit while indoor AHU-1 is paired with an outdoor air-cooled condensing unit. The units have a total cooling capacity of 101 tons.

South Side Elementary School

Building

The South Side Elementary School building is a two-story brick and block building constructed in 1970. The building contains 64,590 sq. ft. of usable space consisting of classrooms, offices, cafeteria, gym, auditorium, and library. Windows throughout the building are single glazed in metal frames but are in fair condition. The flat roof has a rubber membrane top coat and is also in fair condition.



Building Occupancy

The South Side Elementary School building in Bristol is occupied Monday through Friday from 9:05 a.m. to 3:25 p.m. with occasional use on weekends.

Lighting

Interior lighting consists primarily of 2- and 4-lamp, 4-foot boxes with standard, 32-Watt T8 lamps and electronic ballasts. Additional lighting includes 13-Watt compact fluorescents, 32-Watt circline, 4-lamp T5 high-bays in the gym, and a small number of incandescent lamps. Exterior lighting consists of a variety of building-mounted or pole fixtures with high-pressure sodium, incandescent floods or LED's. The interior lights are typically in use weekdays 6:00 a.m. to 9:00 p.m. to allow for maintenance services and extracurricular activities.

HVAC

A building is provided with heating, cooling, and ventilation by a combination of RTUs, indoor HVs, and unit ventilators. A packaged Aaon RTU provides heating, cooling, and ventilation to the library with dual temperature water coil and economizer. The unit has a 5 HP supply fan and 2 HP return fan, both with premium efficiency motors. HV-1, 2, and 3 serve the left side of gym, right side of gym and café and provide steam heating and ventilation only. 33 AAF unit ventilators provide heating, cooling and ventilation to the classrooms. These units have dual temperature water coils and outdoor air dampers for modulating ventilation rates. 7 rooftop exhaust fans provide general exhaust for the building.

"Page content is subject to Confidentiality Restrictions"

Boiler

Low pressure steam is generated by two H.B. Smith 4500 Mills cast iron boilers, each with a gas input capacity of 3,207 MBH. LPS is sent to a heat exchanger that transfers the energy to the heating hot water supply. 5 HP pumps P-1 and P-2 distribute the heating hot water through the dual temperature loop.

Cooling

Chilled water for the AHU and UVs is produced by a Carrier chiller with a cooling capacity of 140 tons. Chilled water is delivered to the terminal coils by a 5 HP pump P-3. The boilers are enabled during the heating season and then the dual temperature system is manually switched to cooling and the chiller is enabled during the cooling season.

Administration Building & Warehouse

Building

The Board of Education Administration building was constructed in 1930 and initially served as the Bristol South Side School. The three-story brick and concrete building currently contains 30,256 sq. ft. of office and meeting space.

The Administrative Warehouse building is located in the rear lot of the Administration building and receives water and gas service from the Administration building. The single story building was constructed in 1980 of steel and concrete with exterior metal siding. It contains 7,616 sq. ft. of usable space used primarily for storage.

Building Occupancy

Both the Administrative building and adjacent Warehouse are primarily occupied Monday through Friday from 8:00 a.m. to 4:00 p.m.



Lighting

Interior lighting consists primarily of 2-lamp, 4-foot troffers with standard, 32-Watt T8 lamps and electronic ballasts. Additional lighting includes 13-Watt compact fluorescents, and 60-, 100-, 150- or 300-Watt incandescent lamps, primarily in recessed cans, track lighting or decorative fixtures. Exterior lighting consists of a variety of building-mounted fixtures with high-pressure sodium or compact fluorescent lamps. The interior lights are typically in use weekdays from 8:00 a.m. to 4:00 p.m. with extended hours for maintenance services and occasional use on weekends.

"Page content is subject to Confidentiality Restrictions"

HVAC

The Administration 2nd and 3rd floors are provided with cooling and ventilation only by a packaged Trane RTU that distributes the conditioned air through an overhead VAV system. The RTU has a cooling capacity of 30 tons, a 10 HP supply fan and 2 HP return fan. A small packaged Carrier RTU provides cooling and ventilation to the auditorium and has a cooling capacity of 5 tons. The 1st floor is cooled by a small indoor AHU with a cooling capacity of 1.5 tons. The building is heated primarily by hot water baseboard units controlled by old electronic thermostats. The cooling only units are controlled by separate digital thermostats.

The Warehouse is heated by two gas-fired unit heaters, each with an input capacity of 130 MBH. The office is cooled by a window air conditioner with ½ ton cooling capacity.

Boiler

The heating fuel source was recently converted from oil to natural gas. Heating hot water is provided by two fairly new HB Smith 19HE-06 boilers, each with input capacity of 938 MBH. Two 3 HP pumps distribute the heating hot water throughout the building's radiation loop. The boilers are controlled by a Heat-Timer SQ-Elite-8T controller that operates the boilers based on outdoor air temperature and targeted hot water supply temperature. The pumps operate in lead/lag sequence.

Cooling

Cooling at the Administration Building is provided by two packaged RTUs, one AHU, and a Sanyo split-system. All units have DX cooling coils and air-cooled condensers and have a combined cooling capacity of approximately 40 tons.

City Hall & Annex

Building

The Bristol City Hall is a four story building constructed in 1963. The building contains 58,289 sq. ft. of space consisting of offices and meeting space serving departments such as the Mayor's Office, City Treasurer, Clerk, Building and Parks Department, and Council Chambers. The building's exterior is concrete and brick veneer with window openings located at each column. The windows are metal frame, single pane windows with storms.



The City Hall Annex building located in the west parking lot is a single story structure made of brick and concrete. The building contains 1,764 sq. ft. of space used for storage and maintenance.

Building Occupancy

The City Hall building and Annex are occupied primarily Monday through Friday from 8:30 a.m. to 5:00 p.m.

Lighting

Interior lighting consists primarily of 4-lamp, 4-foot troffers, 2-lamp industrials and 1-lamp valences with standard, 32-Watt T8 lamps and electronic ballasts. Additional lighting includes 15-Watt compact fluorescents. Exterior lighting consists of 25-Watt compact fluorescent building-mounted fixtures and high-pressure sodium parking area floods. The interior lights are typically in use weekdays 8:30 a.m. to 5:00 p.m. with extended hours for maintenance services and occasional use on weekends.

HVAC

The majority of the building is heated, cooled and ventilated by vintage American Standard AHUs located in the mechanical penthouse. AHU-1 through AHU-5, and AHU-8 serve the interior zones, perimeter zones, office areas, council chambers, public works and maintenance office, respectively. AHU-1 serves a constant volume system and is equipped with hot water coil, chilled water coil, economizer, 15 HP supply air fan and 7.5 HP return air fan. AHU-2 has a steam coil, chilled water coil, 15 HP supply air fan, and shares the 7.5 return air fan from AHU-1. AHU-3 has a steam coil, chilled water coil, and 2 HP supply air fan. AHU-4 has a steam coil, chilled water coil, economizer and 3 HP supply air fan. AHU-5 located in a basement mechanical room provides heating, cooling and ventilation to the adjacent public works office area. The unit has a steam coil, chilled water coil, economizer and 10 HP supply air fan. AHU-8 has a steam coil, chilled water coil, economizer and 3 HP supply air fan. The AHUs have outdoor air reset control that adjusts the supply air discharge temperatures based on outdoor air temperature. Heating and cooling is controlled by a BMS with an Invensys GCM front end that communicates with thermostats controlling pneumatic valves and actuators throughout the building by means of I/P transducers. Interior zones are conditioned by AHU-1 using VAV boxes located above the dropped ceilings in each space. Thermostats within the conditioned spaces communicate with the VAV boxes to open or close either the bypass damper or space damper, depending on demand. Perimeter offices are heated by floor mounted induction units equipped with hot water coils and 2-way valves. Primary air for these units is provided by AHU-2. Offices have temperature sensors that communicate with the BMS and terminal units. The basement shooting range is heated and ventilated by an outdoor gas-fired Reznor unit with a local timer control. Seven vintage American Standard exhaust fans provide general exhaust to the building.

Boiler

Two oil-fired Columbia MPH-60 boilers generate low pressure steam that is used directly by AHU coils and also feeds into shell and tube heat exchangers to generate heating hot water. Each boiler is rated at 60 HP and are equipped with dual-fuel burners. A 15 HP pump, DTP-2, distributes HHW during the winter only. A 5 HP pump, DTP-1, can be used as back-up for both CHWS and HHW.

There is a large changeover valve in boiler room to switch between winter HHW and summer CHW.

Cooling

An original Trane Model CGWB dual-compressor, semi-hermetic, water-cooled packaged chiller with a cooling capacity of 180 tons is still in operation and was rebuilt in late 1980's. Two new compressors were installed last year on the chiller. CHWS ties into the dual temperature hydronic system in the boiler room. No

"Page content is subject to Confidentiality Restrictions"

VFDs are installed on these pumps. A 10 HP pump, CHWP-1, distributes chilled water during summer only. A 5 HP pump, DTP-1, can be used as back-up for both CHWS and HHW. Two 15 HP pumps serve the condenser water system and are equipped with VFDs. Condenser water is pumped up to a BAC cooling tower located on roof. The chiller has outdoor air reset control that adjusts chilled water supply temperature based on outdoor air temperature.

Water Main Office & Garage

Building

The Water Main Office building is a single story brick and block building with a flat rubber roof. The building contains 10,753 sq. ft. of office space used by the Bristol Water Department.

The Water Main Office Garage is located in the rear lot of the Office building. The 10,753 sq. ft. concrete block building has a brick veneer, sloped roof with asphalt shingles and is used primarily for vehicle maintenance.

Building Occupancy

The Water Main Office and Garage is occupied Monday through Friday from 7:00 a.m. to 4:00 p.m. with occasional use on weekends.

Lighting

Interior lighting for the Main Office consists primarily of 2-, 3-, or 4-lamp fixtures with standard, 32-Watt T8 lamps and electronic ballasts. Additional lighting includes 13-Watt compact fluorescents, 32-/22-Watt circline, 75- or 100-Watt incandescent lamps, 2-lamp, 8-foot T12 lamps with magnetic ballasts, and LED's. Interior lighting for the garage consists of 2-lamp 4-foot standard, 32-Watt T8 industrials. Exterior lighting for the Main Office consists of a variety of building-mounted or pole fixtures with high-pressure sodium or metal halide lamps. Exterior lighting for the Garage consists of high-pressure sodium wall packs. The interior lights are typically in use weekdays from 7:00 a.m. to 4:00 p.m. with extended hours for maintenance services and occasional use on weekends.



HVAC

The Water Main Office is supplied with electric heating and cooling by a single 10 ton Carrier heat pump unit located on the roof. Perimeter heating is also supplied to the building through baseboard hot water heaters. The building has dedicated cooling for the server closet and the meter shop. These spaces are cooled by DX split systems with outdoor condensers rated at 4 tons each. Hot water unit heaters and electric air conditioning units can be found in the kitchen, lobby and shop areas as well.

"Page content is subject to Confidentiality Restrictions"

The Water Main Office Garage building is heated by four gas fired unit heaters throughout the space rated at an estimated 100 MBH each. These units are controlled by standalone wall mounted thermostats.

Boiler

The Water Main office is heated by an A.O. Smith oil-fired hot water boiler Model 19A-S/W-05 and rated at 560 MBH. The buildings domestic hot water supply is produced by a 40 gallon, 4500w, A.O. Smith electric storage water heater.

Cooling

The building cooling is served by the Carrier heat pump unit serving the interior offices. This building has no chilled water plant. Dedicated cooling for the server closet and the meter shop are served by DX split systems rated at 4 tons each.

Water Filtration Plant & High Service Pump Station

Building

The Water Filtration Plant & High Service Pump Station building is a one-story brick and block building located in Bristol, Connecticut. The building contains 29,776 sq. ft. of usable space.

Building Occupancy

The Water Filtration Plant & High Service Pump Station building in Bristol is occupied Monday through Sunday from 12:00 a.m. to 12:00 a.m.

Lighting

Interior lighting consists primarily of 2-lamp, 4-foot troffers or vapor-tights with standard, 32-Watt T8 lamps and electronic ballasts. Additional lighting includes T5 lamps in high-bays, 15-Watt compact fluorescents, and 60-, 100-, 150- or 300-Watt incandescent lamps, primarily in recessed cans, keyless sockets or floods. Exterior lighting consists of a variety of building-mounted fixtures with incandescent or high-pressure sodium lamps and driveway poles with high-pressure sodium lamps.
The interior lights in key areas are in use on a 24-hour basis.



HVAC

The office building is heated and ventilated by a central air system. The main AHU-1 found in the boiler room is a hot deck/ cold deck unit operating on a Barber Coleman pneumatic system. This multi-zone air handler is equipped with a 10 HP supply fan and has an 84% efficiency rating. The discharge air temperature for each zone is adjusted by pneumatic

"Page content is subject to Confidentiality Restrictions"

mixing dampers and controlled by a local thermostat. Perimeter heating consists of hot water baseboard and unit heaters throughout the space. The High Service Pump Station building is ventilated through a louver and exhausted by a dedicated exhaust fan on the roof. The main piping gallery is dehumidified by a Dry-o-tron desiccant dehumidifier and a secondary reheat coil.

Boiler

The Filtration Plant central boiler is a Crown Freeport model VH-11 hot water boiler with a gross output rating of 2,500 MBH and efficiency of approximately 83%. The High Service Pump Station is served by a Dunkirk oil fired boiler serving the hot water rated at a gross output of 178 MBH.

Cooling

A TRANE model CGW reciprocating central chiller serves this site with plant cooling. This chiller is rated for 30 tons and gets service water from underground recycling.

#1 Well House

Building

The Well House #1 building is a one-story brick and block building located in Bristol, Connecticut. The building contains 257 sq. ft. of usable space.

Building Occupancy

The Well House #1 building in Bristol is occupied Monday through Sunday from 6:00 a.m. to 6:30 a.m.

Lighting

Interior lighting consists of 2-lamp, 4-foot industrials with T12 lamps and magnetic ballasts. Exterior lighting consists of a two-lamp, 75-Watt incandescent flood. The interior lights are typically in use on average 30 minutes per day.

HVAC

The building is served by an exhaust fan controlled by a thermostat.



Boiler

This Well House is served by one hanging Qmark electric unit heater with a full load input capacity of 24 MBH.

Cooling

The building is not cooled.

"Page content is subject to Confidentiality Restrictions"

#2 Well House

Building

The Well House #2 building is a one-story brick and block building located in Bristol, Connecticut. The building contains 257 sq. ft. of usable space.



Building Occupancy

The Well House #2 building in Bristol is occupied Monday through Sunday from 6:00 a.m. to 6:30 a.m.

Lighting

Interior lighting consists primarily of 2-lamp, 4-foot vapor-tights with T12 lamps and magnetic ballasts. Additional lighting includes 2-lamp, 4-foot vapor-tights with standard, 32-Watt T8 lamps and electronic ballasts. Exterior lighting consists of a high-pressure sodium wall pack and compact fluorescent cylinders. The interior lights are typically in use on average 30 minutes per day.



HVAC

The building is served by an exhaust fan controlled by a thermostat.

Boiler

This Well House is heated by one hanging Qmark electric unit heater with a full load input capacity of 24 MBH.

Cooling

The building is not cooled.

Chemical Control, Generator & #3-5 Well Houses

Building

The Chemical Control, Generator & Well Houses #3-5 building is a one-story brick and block building located in Bristol, Connecticut. The building contains 1,673 sq. ft. of usable space.

Building Occupancy

The Chemical Control, Generator & Well Houses #3-5 building in Bristol is occupied Monday through Sunday from 6:00 a.m. to 6:30 a.m.

"Page content is subject to Confidentiality Restrictions"

Lighting



Interior lighting consists primarily of 100- or 150-Watt incandescent lamps in explosion-proof fixtures. Additional lighting includes 2-lamp, 8-foot strips with T12 lamps and magnetic ballasts. Exterior lighting consists of high-pressure sodium wall packs and a 75-Watt incandescent lamp in an explosion-proof fixture. The interior lights are typically in use on average 30 minutes per day.

HVAC

Well Houses #3, #4 and #5 do not receive outdoor air ventilation, they are each served by an exhaust fan and a unit heater on a thermostat.

The Chemical Control Building is also served by an exhaust fan and a unit heater on a thermostat.

Boiler

Well Houses #3, #4 and #5 are each served by one hanging Berko electric unit heater with a full load input capacity of 24 MBH. The Chemical Control Building is served by three hanging Qmark electric unit heaters with a total full load input capacity of 71 MBH.

Cooling

The building is not cooled.

Mechanic Street Chemical Control

Building

The Mechanic Street Chemical Control building is a one-story block building located in Bristol, Connecticut. The building contains 912 sq. ft. of usable space.

Building Occupancy

The Mechanic Street Chemical Control building in Bristol is occupied Monday through Sunday from 6:00 a.m. to 6:30 a.m.

Lighting

Interior lighting consists primarily of 2-lamp, 4-foot vapor-tights with T12 lamps and magnetic ballasts. Additional lighting includes a 28-Watt compact fluorescent rectangle. Exterior lighting consists of compact fluorescent cylinders. The interior lights are typically in use on average 30 minutes per day.

"Page content is subject to Confidentiality Restrictions"

HVAC

The Chemical Control Building on Mechanic Street is served by an exhaust fan on a thermostat.

Boiler

The Chemical Control Building on Mechanic Street is served by two hanging Federal Pacific electric unit heaters with a full load input capacity of 24 MBH each.

Cooling

The building is not cooled.

Peck Lane Pump Control

Building

The Peck Lane Pump Control building is a one-story block building located in Bristol, Connecticut. The building contains 865 sq. ft. of usable space.

Building Occupancy

The Peck Lane Pump Control building in Bristol is occupied Monday through Sunday from 6:00 a.m. to 6:30 a.m.

Lighting

Interior lighting consists of 2-lamp, 4-foot vapor-tights with standard 32-Watt T8 lamps and electronic ballasts. Exterior lighting consists of compact fluorescent wall packs and a 2-lamp, 75-Watt flood. The interior lights are typically in use on average 30 minutes per day.

HVAC

The Pump Control Building on Peck Lane is served by an exhaust fan on a thermostat.



Boiler

The Pump Control Building on Peck Lane is heated by one hanging Taskmaster electric unit heater with a full load input capacity of 24 MBH.

Cooling

The building is not cooled.

"Page content is subject to Confidentiality Restrictions"

Hill Street Pump Control & Generator

Building

The Hill Street Pump Control & Generator building is a one-story block building located in Bristol, Connecticut. The building contains 2,400 sq. ft. of usable space.



Building Occupancy

The Hill Street Pump Control & Generator building in Bristol is occupied Monday through Sunday from 6:00 a.m. to 6:30 a.m.

Lighting

Interior lighting consists of 200-Watt lamps in keyless sockets. Exterior lighting consists of a 13-Watt compact fluorescent jar. The interior lights are typically in use on average 30 minutes per day.

HVAC

The Pump Control & Generator Building on Hill Street is served by an exhaust on a thermostat. Hot water baseboard serves each room controlled by stand-alone thermostats.



Boiler

One space heating oil-fired Dunkirk Empire II hot water boiler with an input capacity of 175 MBH heats this space. This boiler has a rated efficiency of 82.4%. The space is also served by one hanging Singer electric unit heater with a full load input capacity of 24 MBH.

Cooling

The building is not cooled.

Wolcott Street Pump and Control

Building

The Wolcott Street Pump and Control building is a four-story vinyl and concrete building located in Bristol, Connecticut. The building contains 610 sq. ft. of usable space.

Building Occupancy

The Wolcott Street Pump & Control building in Bristol is occupied Monday through Sunday from 6:00 a.m. to 6:30 a.m.

Lighting

Interior lighting consists of 2-lamp, 4-foot vapor-tights with standard 32-Watt T8 lamps and electronic ballasts. Exterior lighting consists of high-pressure sodium wall packs. The interior lights are typically in use on average 30 minutes per day.

HVAC

The Pump Control Building on Wolcott Street is served by an exhaust fan on a thermostat.

Boiler

This Building is heated by one hanging Qmark electric unit heater with a full load input capacity of 24 MBH.

Cooling

The building is not cooled.

Police Court & Parking Garage

Building

The Police Court & Parking Garage building is a four-story brick and concrete building located adjacent to City Hall and connected by an elevated catwalk. The 83,343 sq. ft. building houses court rooms, offices and a garage.



Building Occupancy

The Police Court & Parking Garage building is occupied 24 hours per day, 365 days per year.

Lighting

Interior lighting consists primarily of 4-lamp, 4-foot troffers and 2-lamp wraps with standard, 32-Watt T8 lamps and electronic ballasts. Additional lighting includes 18- and 26-Watt compact fluorescents and LED's. Exterior lighting consists of 2-lamp, 4-foot wraps with standard 32-Watt T8 lamps and electronic ballasts and metal halide shoe fixtures. The interior lights in key areas are in use on a 24-hour basis.

HVAC

The first and second floors of the Police Court building are heated, cooled, and ventilated by five (5) AHU's with supply fans ranging from 7.5HP-15HP. AHU-1 serves the police department admin wing and has VFDs

"Page content is subject to Confidentiality Restrictions"

on its supply and return fan motors. AHU-2 also serves this area but does not have VFD controls. AHU-3 and AHU-4 serve the court areas. These air handlers have 3-way valves on the chilled water coils and 2-way valves on the hot water coils. Variable Air Volume (VAV) boxes regulate air flow from the air handlers to control space temperatures can also be found throughout the building. The basement garage is heated by hot water unit heaters which are typically controlled by unit mounted controllers. Eleven (11) exhaust fans help ventilate spaces in the building such as the basement garage, holding cells, kitchen and other general areas.



Boiler

The Police Court building is served by three oil-fired boilers. Two (2) HB smith 350 Mills cast iron boilers generate low pressure steam and each have an output capacity of 1,036 MBH input. Low pressure steam is sent to a heat exchanger in the boiler room which generates heating hot water to be distributed by eight (8) pumps serving the basement garage, main floor, second floor, and reheat coils. One (1) Weil McClain 478 oil-fired, hot water boiler is used for summer use as well as additional heat for the cell holding area.

Cooling

A new Marley SPX cooling tower located on the roof serves a 150-ton TRANE RTHB150FMC- scroll water-cooled chiller and supplies the first and second floor with cooling. The chilled water produced by this chiller runs through the buildings air handling units. The basement area is served by a Trane RAUA-2504-MC 25 ton air-cooled condensing unit located on the roof. The Data room is 5-ton Data Aire DRCF-0534 split system. Two additional Sanyo split systems serve additional space in the Police Court building.

Rockwell Park & Pavilion

Building

The Rockwell Park & Pavilion building is a one-story brick and block building located in Bristol, Connecticut. The building contains 5,302 sq. ft. of usable space.

Building Occupancy

The Rockwell Park & Pavilion building in Bristol is typically occupied Monday through Friday from 6:00 a.m. to 3:00 p.m.

Lighting

Interior lighting consists primarily of 2-lamp wraps with standard, 32-Watt T8 lamps and electronic ballasts. Additional lighting includes 13-Watt compact fluorescents and 60-Watt incandescent jars, squares and keyless sockets. The interior lights have low operating hours and is used primarily for holiday festivities.

HVAC

The Rockwell Park building is served by baseboard hot water heaters throughout the offices and common area. Two hanging hot water Modine unit heaters serve the garage and main sitting area, which are both on their own thermostats. This space is ventilated by a switch operated exhaust fan.

The Rockwell Park Pavilion building is served by two oil-fired hot air furnaces each on their own thermostat.

Boiler

The Rockwell Park building is served by one Burnham 84 WNH hot water boiler with an input load capacity of 159 MBH. Domestic hot water is produced by a 30 gallon A.O. Smith electric storage heater.

The Pavilion Building is served by two oil fired International forced air furnaces, which both have an input capacity of 127 MBH. Domestic hot water is provided by a 40 gallon GE electric storage heater.

Cooling

Window and wall AC units serve the Rockwell park building.

Bathhouse

Building

The Bathhouse building is a one-story brick and block building located in Bristol, Connecticut. The building contains 0 sq. ft. of usable space.

Building Occupancy

The Bathhouse building is unoccupied.

Lighting

Interior lighting consists of 60-Watt incandescent squares. Exterior lighting consists of high-pressure sodium wall packs. The facility is currently not used.

HVAC

The building does not receive outdoor air ventilation. The Bathhouse is served by an exhaust fan and two electric unit heaters rated at 4kW each on a single thermostat.

Boiler

The domestic hot water for the building is produced by a 30 gallon electric water heater.

Cooling

This building is not cooled.

"Page content is subject to Confidentiality Restrictions"

Muzzy Field

Building

The Muzzy Field building is a one-story brick and block building located in Bristol, Connecticut. The building contains 1,104 sq. ft. of usable space.

Building Occupancy

Muzzy Field has varying times of occupancy depending on when the field is used for games and events throughout the spring, summer and fall.

Lighting

Interior lighting consists primarily of 2- or 4-lamp, 4-foot wraps or troffers or 2-lamp, 8-foot wraps with T12 lamps and magnetic ballasts. Additional lighting includes 60-Watt incandescent lamps in keyless sockets. Exterior lighting consists of 1,500-Watt metal halide high-poles and 175-Watt metal halide shoebox fixtures for the sports field and building-mounted wall packs with metal halide lamps. The facility currently has low use with lighting in use approximately 150 hours per year.

HVAC

Qmark electric unit heaters provide heating to some of the conditioned space at Muzzy field. The locker rooms are heated by two gas fired unit heaters. Two rooftop exhaust fans serve each of the restrooms. The press box is heated and cooled by a through-the-wall air conditioner with an electric resistance heating element.

Boiler

There are two gas fired Hot Water heaters used to serve the showers and sinks. The first is a 40 gallon Rheem and the other is a 50 gallon Vanguard which are found in the bathrooms. There is also a 120 gallon Hubbell electric water heater in the mechanical room which serves additional domestic hot water loads.



Cooling

The building is not cooled.

Ski Lodge

Building

The Ski Lodge building is a one-story wood framed structure with interior and exterior wood paneling. The building contains 655 sq. ft. of open, usable space. The building has single pane, aluminum framed windows and doors in poor condition. The sloped, asphalt shingle roof also looks to be worn.

Building Occupancy

The Ski Lodge building is used sparingly throughout the year for a language course as little as 1 hour per week.



Lighting

Interior lighting consists primarily of 2-lamp, 4-foot wraps with T12 lamps and magnetic ballasts. Additional lighting includes 26-Watt compact fluorescent and 60-Watt incandescent squares. Exterior lighting consists of metal halide wall packs.

HVAC

The building does not receive outdoor air ventilation. 2 Singer 3000W electric unit heaters provide heating to the space and operate based on a local control dial. A rooftop exhaust fan serves the restroom.



Boiler

Domestic hot water for the restrooms is provided by a 6 gallon electric A.O. Smith water heater.

Cooling

The building is not cooled.

Page Park Pavilion

Building

The single story Page Park Pavilion building was constructed in 1963 and has a steel and wood frame structure with a combination of masonry block walls and wood siding. Windows at the entrance vestibule are double pane glazing in aluminum frame but the remaining windows are Plexiglas panels in wooden frames. The building was recently renovated with a new standing seam metal roof system. The building contains a 2,938 sq. ft. open space used for public gymnastic and art classes.

"Page content is subject to Confidentiality Restrictions"

Building Occupancy

The Page Park Pavilion building is occupied sparingly throughout the year for gymnastic and art classes.

Lighting

Interior lighting consists primarily of 2-lamp, 4-foot wraps with standard 32-Watt T8 lamps and electronic ballasts. Additional lighting includes 2-lamp, 4-foot wraps with T12 lamps and magnetic ballasts, 22-/32-Watt circline drums, and 60-Watt incandescent squares.

HVAC

Two ceiling fans circulate conditioned air throughout the space. A sidewall exhaust fan provides exhaust for the restroom.

Boiler

Heating hot water is generated by an oil-fired cast iron boiler with an input capacity of 707 MBH. The boiler is equipped with a Carlin 201CRD burner. Two fractional HP pumps distribute heating hot water to terminal units along the east and west zones of the building including cabinet unit heaters and convectors. A 19 gallon, 6,000W electric water heater provides domestic hot water for the restroom. The boiler is controlled by two vintage Johnson Control thermostats that operate the boiler based on setpoint temperature.

Cooling

The building is not cooled.

Dennis Malone Aquatic Center



Building

The Dennis Malone Aquatic Center building is a one-story vinyl building located in Bristol, Connecticut. The building contains 14,484 sq. ft. of usable space.

Building Occupancy

The Dennis Malone Aquatic Center building in Bristol is occupied Monday through Friday from 7:00 a.m. to 9:00 p.m., on Saturday from 6:30 a.m. to 5:45 p.m. and Sunday from 7:00 a.m. to 5:45 p.m.

Lighting

Interior lighting consists primarily of 2-lamp, 4-foot troffers, vapor-tights and wraps with standard, 32-Watt T8 lamps and electronic ballasts and 250-Watt mercury vapor high-bays in the pool area. Additional lighting includes 13- and 18-Watt compact fluorescents, 60-Watt incandescent lamps, 2-lamp, 4-foot T12 lamps with

"Page content is subject to Confidentiality Restrictions"

magnetic ballasts, and 250-Watt mercury vapor cylinders. Exterior lighting consists of a variety of building-mounted fixtures with mercury vapor, incandescent, or metal halide. The interior lights are typically in use 14 hours per day Monday through Friday and 12 hours per day Saturday and Sunday.

HVAC

This building is served by one Zephyr DP-6000 dehumidifying pool heater located on the mezzanine floor of the building providing 14,375 of supply air through registers located along the perimeter of the pool. A 28 kW Heatrix unit provides supplemental electric heat to the supply air after being dehumidified. Stand-alone Johnson controls control the Zephyr unit, and maintain an air temperature 3 degrees higher than the pool water temp. Rooftop exhaust fans serve each of the restrooms in the facility.

Boiler

A gas fired atmospheric Peerless 211A boiler rated at 1,050 MBH input and 840 MBH output, severs the perimeter hot water radiation for the building and hot water coil in the dehumidifying pool heater. The pool is heated by an A.O. Smith DuraMax DW-720-1810 atmospheric boiler rated at 1,210 MBH input. Domestic hot water is provided by an indirect system consisting of an A.O. Smith Burkay copper coil water heater serving a large A.O. smith storage tank located in the adjacent room.

Cooling

A condensing unit located outside the building serves the dehumidifying pool heater. A Carrier PTAC unit serves the office space.

Fire Head Quarters

Building

The Fire Head Quarters building is a two-story brick and block building located in Bristol, Connecticut. The building contains 12,084 sq. ft. of usable space.



Building Occupancy

The Fire Head Quarters building in Bristol is occupied Monday through Sunday from 12:00 a.m. to 12:00 a.m.

Lighting

Interior lighting consists primarily of 4-lamp, 4-foot troffers, with standard, 32-Watt T8 lamps and electronic ballasts. Additional lighting includes T5 bay fixtures and 60- and 300-Watt incandescent lamps in keyless sockets. Exterior lighting consists of building-mounted, 60-Watt incandescent decorative fixtures and 400-Watt mercury vapor floods. The interior lights in key areas are in use on a 24-hour basis.

"Page content is subject to Confidentiality Restrictions"

HVAC



Fire Head Quarters is primarily heated by perimeter baseboard hot water heaters throughout the building. Two AHU's in the 2nd floor ceiling provide cooling and ventilation air to the 2nd floor living quarters. Hot water unit heaters serve the garage bays and controlled by standard wall mount thermostats.

Boiler

An oil-fired A.O. Smith cast iron hot water boiler serves three zone pumps distributing hot water to the 1st, floor, 2nd floor and garage bays. The boiler has a rated input capacity of 1,137 MBH. Domestic hot water for the building is provided by an 80 gallon, 3500W, A.O. Smith ProMax electric storage water heater located in the boiler room with supplemental hot water storage from a TrangleTube Phase III TR-75 storage tank.

Cooling

The 2nd floor of the Fire HQ is cooled by a split system of two AHU's located in the ceiling served by two DX condensing units each 3.5 tons. Three (3) window AC units serve the first floor offices, and break room.

Engine 2

Building

The Engine 2 building is a one-story brick and block building located in Bristol, Connecticut. The building contains 4,016 sq. ft. of usable space.

Building Occupancy

The Engine 2 building in Bristol is occupied Monday through Sunday from 12:00 a.m. to 12:00 a.m.

Lighting

Interior lighting consists primarily of 1-lamp, 4-foot industrials or 2-lamp wraps with standard, 32-Watt T8 lamps and electronic ballasts. Additional lighting includes 13-Watt compact fluorescent and 60-Watt incandescent lamps. Exterior lighting consists of building-mounted, 13- or 18-Watt compact fluorescent squares or floods and incandescent quartz floods. The interior lights in key areas are in use on a 24-hour basis.

HVAC

Engine 2 is heated by perimeter baseboard hot water heaters throughout the building.

Hot water unit heaters serve the garage bays, controlled by wall-mount thermostats.

"Page content is subject to Confidentiality Restrictions"

Boiler

This building has an oil fired, HB Smith boiler 25 Mills series, which has a capacity of 348 MBH. This boiler makes hot water for the perimeter baseboard heating in the offices and living areas and unit heaters in the bay. A 40 gallon, 4500W A.O. Smith electric storage water heater rated at 15 MBH, provides the building with domestic hot water.



Cooling

The living quarters and break room are served by two separate window air conditioners rated for 1 and 1.5 tons.

Engine 3

Building

The Engine 3 building is a one-story brick and block building located in Bristol, Connecticut. The building contains 3,268 sq. ft. of usable space.

Building Occupancy

The Engine 3 building in Bristol is occupied Monday through Sunday from 12:00 a.m. to 12:00 a.m.

Lighting

Interior lighting consists primarily of 1-lamp, 4-foot industrials or 2-lamp wraps with standard, 32-Watt T8 lamps and electronic ballasts. Additional lighting includes 60-Watt incandescent lamps in keyless sockets. Exterior lighting consists of building-mounted incandescent quartz floods and a 75-Watt incandescent can. The interior lights in key areas are in use on a 24-hour basis.

HVAC

Engine 3 is heated by perimeter baseboard hot water heaters throughout the building. The garage bays are served by two (2) gas-fired PanelBloc Infrared radiant heaters rated at a capacity of 125 MBH each.



Boiler

Engine 3 is served by a fairly new gas-fired, Weil-McLain GV90+6 hot water boiler with a capacity of 175 MBH input with a Taco Zone control board controlling the boiler. Hot water serves perimeter baseboard heating in

"Page content is subject to Confidentiality Restrictions"

the offices and living areas. A 40 gallon, 4500W GE electric storage water heater rated at 15 MBH, provides the building with domestic hot water.

Cooling

The living quarters and break room are served by two separate window air conditioners rated for 1.5 tons each.

Engine 5

Building

The Engine 5 building is a one-story brick and block building located in Bristol, Connecticut. The building contains 3,587 sq. ft. of usable space.

Building Occupancy

The Engine 5 building in Bristol is occupied Monday through Sunday from 12:00 a.m. to 12:00 a.m.

Lighting

Interior lighting consists primarily of 1-lamp, 4-foot industrials or 2-lamp troffers with standard, 32-Watt T8 lamps and electronic ballasts. Additional lighting includes 13-Watt compact fluorescents and 60-Watt incandescent lamps in keyless sockets. Exterior lighting consists of building-mounted incandescent quartz floods and a 2-lamp, compact fluorescent flood. The interior lights in key areas are in use on a 24-hour basis.

HVAC

Engine 5 is heated by perimeter baseboard hot water heaters throughout the building. Hot water unit heaters serve the garage bays.

Boiler

This building has an oil fired, HB Smith boiler 19 series-5, with a rated capacity of 660 MBH input. The boiler makes hot water for the perimeter baseboard heating in the offices and living areas and unit heaters in the bay. A 40 gallon, 4500W A.O. Smith electric storage water heater rated at 15 MBH, provides the building with domestic hot water.

Cooling

The living quarters are served by a window air conditioner unit rated for 1.5 tons.

"Page content is subject to Confidentiality Restrictions"

Beals Senior Center

Building

The Beals Senior Center building is a one-story half brick and block, half vinyl building located in Bristol, Connecticut. The building contains 55,866 sq. ft. of usable space.



Building Occupancy

The Beals Senior Center building in Bristol is occupied Monday through Friday from 8:00 a.m. to 5:00 p.m. with occasional use on weekends.

Lighting

Interior lighting consists primarily of 2-, 3-, and 4-lamp, 4-foot troffers with standard, 32-Watt T8 lamps and electronic ballasts. Additional lighting includes 2-lamp, 2- and 3-foot troffers with T8 lamps and electronic ballasts, 13- and 28-Watt compact fluorescents, T5 high-bays in the gym and 60- and 75-Watt incandescent lamps in track cans and keyless sockets. Exterior lighting consists of a variety of building-mounted or pole fixtures with high-pressure sodium, incandescent, metal halide, and compact fluorescent lamps. Building signage is illuminated with 1-lamp, 4-foot and 8-foot T12 lamps with magnetic ballasts. The interior lights are typically in use Monday through Friday from 8:00 a.m. to 5:00 p.m. with occasional use on weekends.

HVAC

Heating, cooling, and ventilation air are provided to the Senior Center by six (6) York XTO-roof top units (AHU-1 thru AHU-6). The AHU's have Supply and Return fan motors ranging from 1.5 HP to 15 HP and supply a minimum of 720 - 3,720 CFM of outdoor air. AHU-1 serves the main office, AHU-2 serves the game room, AHU-3 serves the cafeteria, AHU-4 serves the pool room, AHU-5 serves the senior center and AHU-6 serves the dental/board of health section of the building. A make-up air unit MAU-1 serves the kitchen. The building is ventilated through the use of 19 different exhaust fans on the roof as well as a separate dedicated exhaust fan for the kitchen. The classroom wing is heated, cooled and ventilated by newly installed unit ventilators. Additional heat in the building is provided by baseboard and reheats in Variable Air Volume boxes. Building control is provided by a newly installed JCI Metasys system, and it was reported this will be the first winter with the new control system.

Boiler

This building's central boiler plant consists of three (3) new Patterson-Kelly MACH C-1500 gas-fired condensing boilers rated at 1,501 MBH input, 1,440 MBH output each. The boilers provide hot water to two 15HP hot water pumps which feed roof top units, air-handling units, perimeter baseboard and reheats throughout the building. Domestic hot water for the building is provided by two A.O. Smith Cyclone BTH

"Page content is subject to Confidentiality Restrictions"

199A-100 gas-fired storage water heaters. These water heaters both have a 100 gallon capacity and are rated at 200 MBH each.

Cooling

Cooling for the Senior Center is provided by two (2) York YLAA0091YE17 air cool scroll chillers located outside, each rated for 82.3 tons of cooling capacity and serve all the rooftop air handling units in order to distribute cooling throughout the building. A Trane TCH210C300EA 17.5 ton packaged unit serves the gym.

Main Library

Building

The Main Library is a two-story brick building with sections of sloped architectural roof and sections of flat rubber roof that houses mechanical equipment. The building had a major renovation performed in 2006. The building contains 55,468 sq. ft. of space used for reading, circulation materials, and audio & visual activities.



Building Occupancy

The Main Library building in Bristol is occupied Monday through Friday from 8:30 a.m. to 8:00 p.m. and on Saturday from 8:30 a.m. to 5:00 p.m.

Lighting

Interior lighting consists primarily of 2-lamp, 4-foot, indirect/direct pendant T5 biax fixtures and 2- and 4-lamp, 4-foot indirects, troffers or wraps with standard, 32-Watt T8 lamps and electronic ballasts. Additional lighting includes 26- or 42-Watt compact fluorescents and 30-Watt incandescent halogen lamps. Exterior lighting consists of a variety of building-mounted or pole fixtures with high-pressure sodium, metal halide or compact fluorescent lamps. The interior lights are typically in use Monday through Friday from 8:30 a.m. to 8:00 p.m. and on Saturday from 8:30 a.m. to 5:00 p.m. with extended hours for maintenance services.

HVAC

The building HVAC system installed in 2006 serves the entire Library. Three (3) energy recovery units (ERUs) on the roof provide heating, cooling and ventilation air. Each unit contains chilled water coils, hot water coils and a heat recovery. A single make-up air unit MAU-1 containing hot water coils provides the mechanical room with heating and outdoor air. The history room is served by a separate RTU for its heating and cooling as well. Ventilation for this building is supplied through the use of six rooftop exhaust fans. An Invensys GCM building management system controls the HVAC system in the building.

"Page content is subject to Confidentiality Restrictions"

Boiler

The central boiler plant is comprised of two H.B. Smith gas-fired boilers rated at 1,770 MBH and 85% efficiency each which provide hot water to space heating terminal units and hot water coils in the three ERUs on the roof. The majority of system pumps are equipped with variable frequency drives (VFDs). Domestic hot water is supplied to the library by a Bradford White electric storage water heater. This water heater has a 30 gallon capacity and is rated at 15 MBH.

Cooling

Cooling for The Main Library is provided by a Cooling Technology Evapco LRC-174 outdoor chiller with a built in evaporative condenser. This chiller is 146 tons and has a 20 HP fan motor. The chilled water output is circulated through the central air handlers and 4 pipe terminal units in order to provide the building with cooling. A Trane Model YSC 4-ton unit serves the History room.

Manross Library

Building

The Manross Library is a one-story masonry block building with sloped asphalt shingle roof. The building contains 17,237 sq. ft. of space used mostly for reading and housing circulation materials. There is a small central atrium with clerestory windows that allows ample daylight to enter the building.



Building Occupancy

The Manross Library building in Bristol is occupied Monday through Thursday from 10:00 a.m. to 8:0 p.m. and on Friday through Saturday from 9:00 a.m. to 5:00 p.m.

Lighting

Interior lighting consists primarily of 2- and 4-lamp, 4-foot troffers with standard, 32-Watt T8 lamps and electronic ballasts. Additional lighting includes 2-lamp, 3-foot T8 lamps with electronic ballasts, and 13-, 18- or 26-Watt compact fluorescents. Exterior lighting consists of a variety of building-mounted or pole fixtures with LED's, metal halide, or compact fluorescent lamps. The interior lights are typically in use Monday through Thursday from 10:00 a.m. to 8:00 p.m. and on Friday through Saturday from 9:00 a.m. to 5:00 p.m. with extended hours for maintenance services.

HVAC

The Manross Public Library is heated by hot water baseboard, Singer Incremental PTAC units and two (2) air handling units. AHU-1 is a Trane BRCA-2006-0A with a 3HP motor that services the main floor. AHU-2 is a Trane SAUA-1506A and services the basement. The building is on a digital control system but has to call a

"Page content is subject to Confidentiality Restrictions"

separate building to make any adjustments. The library is ventilated by the use of three separate exhaust fans which serve the restrooms as well as the common area.

Boiler

Hot water is provided by an H.B. Smith G2500L gas-fired boiler rated at 1,200 MBH and 83.1% efficiency. Three (3) pumps 1/4, and 1/3 HP serve the AHU's and perimeter heat. Domestic hot water is supplied to the library by two A.O. Smith EJC 6200 electric storage water heaters. These water heaters have a 6 gallon capacity each at 1650W.

Cooling

Cooling for this building is provided by a Trane RAUA-2006-MB outdoor air cooled condensing unit which is rated for 20 tons which serves the two air handling units for the first floor and basement cooling. Sixteen (16) PTAC units provide additional cooling to the main floor area.

Youth Services

Building

The Youth Services building is a three-story half brick half vinyl building located in Bristol, Connecticut. The building contains 12,816 sq. ft. of usable space.



Building Occupancy

The Youth Services building in Bristol is occupied Monday through Friday from 8:30 a.m. to 5:00 p.m. with occasional use on weekends.

Lighting

Interior lighting consists primarily of 2 U-bend lamps in troffers with standard, 32-Watt T8 lamps and electronic ballasts. Additional lighting includes 13-Watt compact fluorescent or incandescent squares and 60-Watt, incandescent lamps in keyless sockets. Exterior lighting consists of a variety of building-mounted fixtures with compact fluorescent, incandescent or linear fluorescent T12 lamps with magnetic ballasts. The interior lights are typically in use Monday through Friday from 8:30 a.m. to 5:00 p.m. with occasional use on weekends.

HVAC

Heating, cooling and ventilation air is provided to the Youth Services building by five (5) First Co. --MBXB-HW air handling units (AHU-1 thru 5) ranging from 650-1,980 CFM.

Temperature is controlled by an EMS system, that does not have a local front end.

"Page content is subject to Confidentiality Restrictions"

Boiler



This building receives its heating from a Peerless EC/ECT-06-300 W/S oil-fired boiler. This boiler is rated 347 MBH output. This boiler also works with a TriangleTube Phase III Smart 30 indirect hot water tank with a capacity of 30 gallons.

Cooling

The cooling is supplied by five (5) Allegiance 14 - 2A7A40- condensing units located outside ranging from 1.5 to 5 tons in size. Two condensing units located on the roof serve AHU-1 and AHU-5. The other three units located on the ground outside serve AHU-2, AHU-3 and AHU-4.

Animal Control

Building

The Animal Control building is a one-story half brick half vinyl building located in Bristol, Connecticut. The building contains 2,126 sq. ft. of usable space.

Building Occupancy

The Animal Control building in Bristol operates 24/7.

Lighting

Interior lighting consists of 2-and 4-lamp wraps with standard, 32-Watt T8 lamps and electronic ballasts and a 2x60-Watt incandescent vanity. Exterior lighting consists of building-mounted can and a rectangle with incandescent lamps and an LED flood. The interior lights are typically in use on average 4 hours per day.

HVAC

This building is heated by a Conguest 90 condensing hot air furnace rated for 120 MBH. This furnace services the office, bathroom and kitchen areas. Two (2) Carrier gas-fire unit heaters each rated at 60 MBH output capacity provide heating to the kennel section of the building. All areas are controlled by local thermostats and ventilation is provided to the building by an exhaust fan on the roof.

Boiler

The Animal Control Facility is provided with domestic hot water by an A.O. Smith FCG gas-fired hot water storage heater. This heater has a capacity of 74 gallons and is rated for 75 MBH.

"Page content is subject to Confidentiality Restrictions"

Cooling

No cooling was observed in this building.

Hill Street

Building

The Hill Street building is a two-story half brick half vinyl building located in Bristol, Connecticut. The building contains 4,904 sq. ft. of vacant space.

Building Occupancy

The Hill Street building in Bristol is currently unoccupied at this time.

Lighting

Interior lighting consists primarily of 2-and 4-lamp, 4-foot wraps or troffers with T12 lamps and magnetic ballasts. Additional lighting includes 13-Watt compact fluorescents and 60-Watt incandescent. Exterior lighting consists of a 2-lamp building-mounted flood fixture. The facility is currently unoccupied at this time.

HVAC

This building receives its heating through steam radiator units.



Boiler

This building is heated by an oil-fired H.B. Smith steam boiler rated for an input capacity of 226 MBH.

Cooling

There is no cooling in this building.

City Yard

Building

The City Yard building consists of two garages, one old and one newer garage. The Old garage has offices, lunch room, locker room, tool rooms and garage bay. The newer garage consists of oil room, offices, and tool rooms, and garage bays. The buildings contain 22,629 sq. ft. of usable space.



"Page content is subject to Confidentiality Restrictions"

Building Occupancy

The City Yard building in Bristol is occupied Monday through Friday from 6:00 a.m. to 3:00 p.m.

Lighting

Interior lighting consists primarily of 1-or 2-lamp, 4-foot, troffers or industrials with standard, 32-Watt T8 lamps and electronic ballasts. Additional lighting includes 400-Watt incandescent quartz floods, and 4-lamp T5 high-bays. Exterior lighting consists of a variety of building-mounted or pole fixtures with LED's, high-pressure sodium, metal halide, or incandescent quartz lamps. The interior lights are typically in use Monday through Friday from 6:00 a.m. to 3:00 p.m.

HVAC

The Old Garage building is heated by four (4) heating units including a gas-fired air handling unit serving the lunch room, tool room and offices, two (2) Modine heaters serve one wing of the old garage, and a waste-oil heater serves the other end. The New Garage is heated by roughly eleven Reznor and Modine gas-fired unit heaters mounted on the ceiling throughout the space.



Boiler

Domestic hot water for this building is provided by two A.O. Smith electric storage hot water heaters. The first heater has a storage capacity of 50 gallons and is rated at 12 MBH and 3375W. The second storage heater has a capacity of 15 gallons and is rated at 5 MBH and 1500W.

Cooling

Cooling for these buildings is supplied by eight window air conditioners in the offices, conference room, carpenter shop and lunch room.

Lake Ave Transfer Station

Building

The Lake Ave Transfer Station consists of a one-story trailer with wood paneling, a large shed with metal siding and batt insulation, and a gate house located in Bristol, Connecticut. The office building contains 2,763 sq. ft. of usable space.

Building Occupancy

The Lake Ave Transfer Station building in Bristol is occupied Monday through Friday from 7:00 a.m. to 3:00 p.m. with occasional use on weekends.

"Page content is subject to Confidentiality Restrictions"

Lighting

Interior lighting consists primarily of 4-lamp, 4-foot, troffers with standard, 32-Watt T8 lamps and electronic ballasts. Additional lighting includes low-bay fixtures with high-pressure sodium lamps and 2-lamp, 4-foot wraps with T12 lamps and magnetic ballasts. Exterior lighting consists of a variety of building-mounted fixtures with high-pressure sodium or metal halide lamps. The interior lights are typically in use Monday through Friday 7:15 a.m. to 2:45 p.m. and 7:30 a.m. to 1:00 p.m. on Saturday.

HVAC

Heating, cooling and ventilation air for the office trailer building is served by two PTAC units with built in control, one in each office.

A Reznor waste-oil heater (MN: RA-235) serves the shed building.

Cooling

PTAC units provide cooling to the office, and a roof mount unit serves the gate house.

Water Pollution Control Park

Building

The Water Pollution Control Park consists of an Administration building, Headworks, Primary Pump house, Secondary Pump Gallery, Operations building, Sludge Storage &Thickening Building, Air Blowers building, and Sludge Disposal building. All buildings are one-story brick and block construction located in Bristol, Connecticut. The buildings contain around 13,751 sq. ft. of usable space.



Building Occupancy

The Water Pollution Control Park building operates 24/7, with some buildings occupied Monday through Friday from 7:30 a.m. to 5:30 p.m. with occasional use on weekends.

Lighting

Interior lighting consists primarily of 2- and 4-lamp, 4-foot, troffers, wraps, or vapor-tights with standard, 32-Watt T8 lamps and electronic ballasts. Additional lighting includes 4-lamp T5 high-bays, 18-Watt compact fluorescents, 60- and 75-Watt incandescent cans and keyless sockets and high-pressure sodium keyless fixtures. Exterior lighting consists of a variety of building-mounted and pole fixtures with high-pressure sodium or metal halide lamps. The interior lights in key areas are in use on a 24-hour basis.

"Page content is subject to Confidentiality Restrictions"

HVAC

Heating and cooling is provided to the Administration building by newly installed PTAC units with self contained controls.

Direct gas-fired Reznor make-up air units (125-400 MBH input) serve a number of the spaces found at the WPCP, however failed MAU's have since been replaced with

Modine gas-fired, and electric horizontal unit heaters, all controlled by stand-alone thermostats.

Exhaust fans are found through out the park, including two (2) exhaust units with 25 HP motors serving the Headworks building and Sludge Thickening building which exhaust air under ground to alleviate odor. These two exhaust fans were reported to be turned off during winter when odor is less of an issue.



Boiler

There are no boilers on site, the buildings are heated by gas-fired MAU's and horizontal unit heaters as described above.

Cooling

Cooling is only provided to the Administration building through the use of PTAC units.

Remote Pumping Stations

Building

The Bristol waste water system includes fourteen (14) remote pumping stations throughout the City. Each pump station is typically a one-story brick, block, or vinyl siding type building located in Bristol, Connecticut. The buildings total around 6,750 sq. ft. of unoccupied space.

Building Occupancy

The building in Bristol is occupied Monday through Sunday from 6:00 a.m. to 6:30 a.m.

Lighting

Interior lighting consists primarily of 2-lamp, 4-foot wraps, strips, or vapor-tights with T12 lamps and magnetic ballasts. Additional lighting includes 100-Watt incandescent globes and 2-lamp vapor-tights with T12 lamps and magnetic ballasts or T8 lamps and electronic ballasts. Exterior lighting consists of a variety of building-mounted and pole fixtures with high-pressure sodium, compact fluorescent or incandescent lamps. The interior lights are typically in use on average 30 minutes per day.

"Page content is subject to Confidentiality Restrictions"

HVAC

The majority of the pump station buildings are ventilated by exhaust fans on thermostats. A number of buildings had plug-in dehumidifiers.



Boiler

The pump station buildings are primarily heated by electric resistive unit heaters rated around 5 kW controlled on thermostats.

Cooling

No cooling is present at any of the pumping stations.

Page Park Pool

Building

The Page Park Pool building is a two story concrete building with a steel structure. The 6,200 sq. ft. building contains offices, locker rooms and mechanical rooms. There is an outdoor pool located in the rear of the building that is used in the summer months.

Building Occupancy

The Page Park Pool building in Bristol is occupied daily during summer months from 7:30 a.m. to 5:30 p.m.

Lighting

Interior lighting consists primarily of 13- and 28-Watt compact fluorescent lamps. Additional lighting includes 2-lamp T12 wraps and vapor-tights, 60-Watt incandescent squares and LED's. Exterior lighting consists of building-mounted canopies with high-pressure sodium or incandescent lamps. The interior lights are in use in the summer months from 7:30 a.m. to 5:30 p.m.

HVAC

The first floor offices are heated by a number of cabinet unit heaters and ceiling hung unit heaters. The lower level locker rooms are heated by ceiling hung radiators and unit heaters. All the terminal units are equipped with steam heating coils. These units are controlled locally by T87 round thermostats. Rooftop exhaust fans serve the lower level locker rooms.

Boiler

Low pressure steam is generated by an oil-fired HB Smith 28-4 boiler with an input capacity of 980 MBH. The boiler also serves an adjacent heat exchanger that generates domestic hot water.

"Page content is subject to Confidentiality Restrictions"

Cooling

The building is not cooled.

This page is intentionally left blank.

Section 3:
Energy Savings Measures

ESM No.	Title	Tab
1	Lighting System Improvements - Interior	1
2	Lighting System Improvements - Exterior	2
3	Lighting Controls	3
4	Energy Management System Upgrade/Expansion	4
6	Demand Control Ventilation	6
12	Variable Frequency Drives	12
13	Transformer Replacement	13
14	Steam Trap Replacement	14
15	Pipe & Jacket Insulation	15
18	Window Replacements	18
21	Boiler Replacement	21
23	Steam to Hot Water Conversion	23
26	Condensing Unit Replacement	26
27	AHU Replacement	27
28	Induction Unit Replacement	28
33	WPCP – Aeration Control Improvement	33
34	WPCP – Install High Speed Turbo Blower	34
38	Street Lighting	38

"Page content is subject to Confidentiality Restrictions"

Maintenance Requirements per ESM

For the majority of measures included in this project, O&M is expected to be approximately equal to what the City currently incurs for overall operations and maintenance, therefore O&M can continue to be performed as is. City personnel will receive training on the proper operation and maintenance of the new equipment once equipment commissioning is complete. The City will be expected to perform maintenance on a scheduled basis and repair/replacement of failed components in a timely manner, all in accordance with manufacturer's standards and/or Ameresco O&M manuals for the measures installed under this Performance Contract. If the City is unable to perform these tasks, Ameresco can provide these services for an additional fee and/or the City shall outsource to a qualified service provider. Failure of the City to carry out the aforementioned during the term of the contract, may require Ameresco to adjust the savings guarantee.

The following table describes the general maintenance responsibilities of the parties. Final operational and maintenance tasks will be developed in detail once these Energy Savings Measures (ESMs) are commissioned. Ameresco will provide the City with a set of O&M manuals that will details these tasks.

Energy Conservation Measures	City Responsibility	Ameresco Responsibility
ESM-1: Lighting System Improvements – Interior	✓	
ESM-2: Lighting System Improvements - Exterior	✓	
ESM-3: Lighting Controls	✓	
ESM-4: Integrated and New Energy Management Systems	✓	
ESM-6: Demand Control Ventilation	✓	
ESM-12: Variable Frequency Drives	✓	
ESM-13: Transformer Replacement	✓	
ESM-14: Steam Trap Replacement	✓	
ESM-15: Pipe & Jacket Insulation	✓	
ESM-18: Window Replacement	✓	
ESM-21: Boiler Replacement	✓	
ESM-23: Steam to Hot Water Conversion	✓	
ESM-26: Condensing Unit Replacement	✓	
ESM-27: AHU Replacement	✓	
ESM-28: Induction Unit Replacement	✓	
ESM-33: WPCP – Aeration Control Improvement	✓	
ESM-34: WPCP – Install High Speed Turbo Blower	✓	
ESM-38: Street Lighting	✓[1]	

Warranty and Maintenance Response

Warranty

Ameresco will warrant the labor and material for each ESM for a period of one year from the issuance of substantial completion for each ESM. This warranty is for repair of equipment installed by Ameresco

[1] Ameresco has included a line item for costs associated with maintaining the new street lights, however, the City can either contract with Ameresco to perform these services or another third party.

only and does not include operation and maintenance unless otherwise included in the table above. After the one year period, any remaining manufacturer's warranties will be passed on to the City.

Maintenance Response

To the extent that any Ameresco maintenance services are included in the final project, all operations and services will be coordinated through the Ameresco corporate office located in Middletown, Connecticut and through local area contractors. This will provide the City with a local, single point of contact. Ameresco's Operations Manager will serve as the single point of contact for the City throughout the entire operations phase of the project.

"Page content is subject to Confidentiality Restrictions"

Savings Summary

The following savings summary shows the subset of ESMs as preliminarily selected by Ameresco.

ESM #	ESM Name	Annual kW	Total kWh	Natural Gas (CCF)	#2 Fuel Oil (Gallons)	Max Daily Demand (Natural Gas) (CCF (Demand))	Energy Savings	O&M Savings	Total Project Savings	Total Project Costs	SPB
1A	Lighting System Improvements - Interior - LED	7,665	1,600,577	(16,681)	(11,636)	-	$ 252,871	$ 31,391	$ 284,263	$ 3,415,928	12.02
2	Lighting System Improvements - Exterior	-	521,666	-	-	-	$ 60,386	$ 380	$ 60,765	$ 517,044	8.51
3A	Lighting Controls - LED	-	75,083	(1,471)	(152)	-	$ 8,501	$ -	$ 8,501	$ 92,395	10.87
4	Energy Management System Upgrade/Expansion	-	108,455	8,735	2,252	8	$ 20,844	$ -	$ 20,844	$ 586,097	28.12
6	Demand Control Ventilation	-	100,672	2,922	2,122	-	$ 22,045	$ -	$ 22,045	$ 104,142	4.72
12	Variable Frequency Drives	-	54,906	-	-	-	$ 5,834	$ -	$ 5,834	$ 40,724	6.98
13	Transformer Replacement	457	333,583	-	-	-	$ 44,465	$ -	$ 44,465	$ 594,173	13.36
14	Steam Trap Replacement	-	-	4,520	4,498	-	$ 14,887	$ -	$ 14,887	$ 358,582	24.09
15	Pipe & Jacket Insulation	-	-	5,540	1,301	-	$ 6,664	$ -	$ 6,664	$ 60,231	9.04
18	Window Replacements	-	639	-	2,800	-	$ 7,770	$ -	$ 7,770	$ 1,055,119	135.79
21	Boiler Replacement	-	-	(6,179)	5,347	(56)	$ 10,273	$ (3,386)	$ 6,887	$ 127,061	18.45
23	Steam to Hot Water Conversion	-	8,143	(59,818)	49,115	(568)	$ 99,097	$ (6,772)	$ 92,325	$ 1,308,149	14.17
26	Condensing Unit Replacement	7	6,809	-	-	-	$ 719	$ -	$ 719	$ 87,351	121.54
27	AHU Replacement	-	620	405	-	-	$ 306	$ -	$ 306	$ 109,897	358.99
28	Induction Unit Replacement	-	-	-	1,014	-	$ 2,789	$ -	$ 2,789	$ 1,368,294	490.67
33	WPCP - Aeration Control Improvement	-	92,252	-	-	-	$ 7,734	$ -	$ 7,734	$ 80,955	10.47
34	WPCP - Install High Speed Turbo Blower	225	53,637	-	-	-	$ 8,289	$ -	$ 8,289	$ 223,549	26.97
38	Street Lighting	-	1,640,892	-	-	-	$ 165,331	$ 78,987	$ 244,317	$ 2,324,854	9.52
	Investment Grade Energy Audit Fee									$ 150,000	
		8,354	**4,597,934**	**(62,028)**	**56,661**	**(615)**	**$ 738,805**	**$ 100,599**	**$ 839,404**	**$ 12,604,546**	**15.02**

ESM Matrix

The following ESM Matrix shows the subset of ESMs as preliminarily selected by Ameresco.

City of Bristol Energy Savings Measures (ESMs)	Lighting System Improvements - Interior	Lighting System Improvements - Interior - LED	Lighting System Improvements - Exterior	Lighting Controls	Lighting Controls - LED	Energy Management System Upgrade/Expansion	Demand Control Ventilation	Variable Frequency Drives	Transformer Replacement	Steam Trap Replacement	Pipe & Jacket Insulation	Window Replacements	Boiler Replacement	Steam to Hot Water Conversion	Condensing Unit Replacement	AHU Replacement	Induction Unit Replacement	Induction Unit Refurbishment	WPCP - Aeration Control Improvement	WPCP - Install High Speed Turbo Blower	Street Lighting	
Facility	**1**	**1A**	**2**	**3**	**3A**	**4**	**6**	**12**	**13**	**14**	**15**	**18**	**21**	**23**	**26**	**27**	**28**	**28A**	**33**	**34**	**38**	
Bristol Central High School		X	X		X		X		X	X	X											
Bristol Eastern High School		X	X		X		X		X	X	X											
Chippens Hill Middle School		X	X		X		X	X			X											
Northeast Middle School		X	X																			
West Bristol K8 School		X																				
Green-Hills K8 School		X																				
Ellen P. Hubbell Elementary School		X	X																			
Stafford Elementary School		X	X																			
Ivy Drive Elementary School		X	X																			
Edgewood Elementary School		X	X																			
Mountain View Elementary School		X	X																			
South Side Elementary School		X	X		X		X															
Board of Education Administration Building & Warehouse		X	X																			
City Hall & Annex		X	X			X	X	X	X			X		X			X					
Water Main Office & Garage		X	X																			
Water Filtration Plant & High Service Pump Station		X	X																			
#1 Well House		X	X																			
#2 Well House		X	X																			
Chemical Control, Generator & #3-5 Well Houses		X	X																			
Chemical Control - Mechanic St		X	X																			
Pump Control - Peck Lane		X	X																			
Pump Control & Generator - Hill St.		X																				
Pump and Control - Wolcott St		X	X																			
Police Court & Parking Garage		X	X			X	X		X					X								
Rockwell Park & Pavilion		X																				
Bathhouse			X																			
Muzzy Field		X	X																			
Ski Lodge		X	X																			
Page Park Pavilion		X	X																			
Dennis Malone Aquatic Center		X	X			X																
Fire Head Quarters		X	X										X									
Engine 2		X	X																			
Engine 3		X	X																			
Engine 5		X	X																			
Beals Senior Center		X	X		X	X																
Main Library		X	X		X	X			X													
Manross Library		X	X			X									X	X						
Youth Services Building		X	X			X																
Animal Control		X	X																			
Hill Street			X																			
City Yard		X	X						X													
Transfer Stations - Lake Ave		X	X																			
Water Pollution Control Park		X	X						X										X	X		
Remote Pumping Stations		X	X																			
Street Lighting																					X	
Pool		X	X																			

"Page content is subject to Confidentiality Restrictions"

This page is left intentionally blank.

ESM 1:
Lighting System Improvements - Interior

ESM Overview

Ameresco will install a state-of-the-art lighting system to benefit the building occupants of the City of Bristol. Our project replaces or upgrades **18,477** existing fixtures (Base T8 option), and **18,518** existing fixtures (LED T8 option) and will enhance the quality, consistency, and color rendering of the City's lighting system.

Our in-house lighting experts completed a detailed survey of the City's facilities. Ameresco has eliminated the middle-man, and having implemented projects at hundreds of facilities with similar needs, is fully capable and responsible for meeting the City's lighting needs.



Figure 1.1: New fixtures will improve aesthetics and provide substantial energy savings.

ESM Detail

Existing System

General Information about the Existing System at All Sites

Ameresco identified 375 different lamp/ballast/fixture combinations, the majority of which are linear fluorescent, which provide general lighting in key areas such as classrooms, offices, & halls.

Approximately 86% of linear fluorescent fixtures use standard-grade T8s on electronic ballasts with a mixture of ballast factors.

There are 12% of linear fluorescent fixtures using T5s with electronic ballasts. These are found in gyms, classrooms, libraries, hallways, offices and garages.

The remaining 3% of linear fluorescent fixtures use T12s with magnetic ballasts. Many of these are found in low use storage areas in most buildings. These lamps are not only inefficient, but also noisy due to the age of ballast.

High-intensity discharge (HID) lamps are used in stairwells, libraries, and hallways. Color rendition is fair to poor depending on lamp quality and age, which unfortunately can be a characteristic of HID lamps.

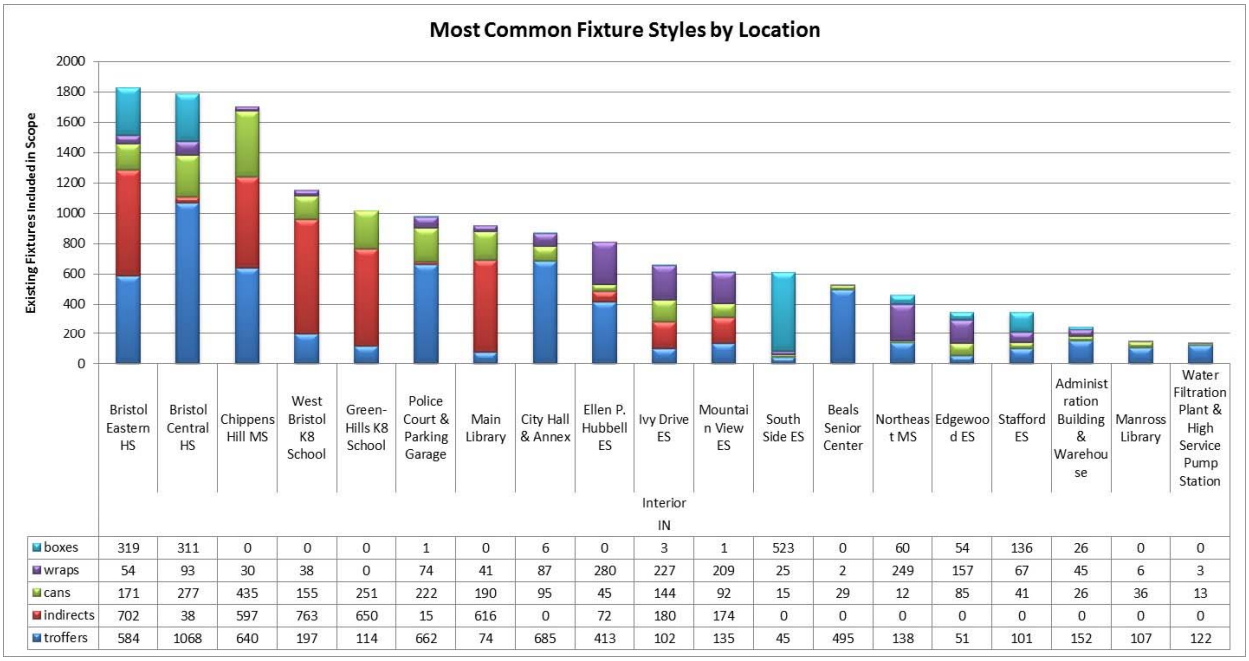
"Page content is subject to Confidentiality Restrictions"

Incandescent lamps are installed in 4% of fixtures. Many are used in specialized applications such as libraries, stages, and auditoriums.

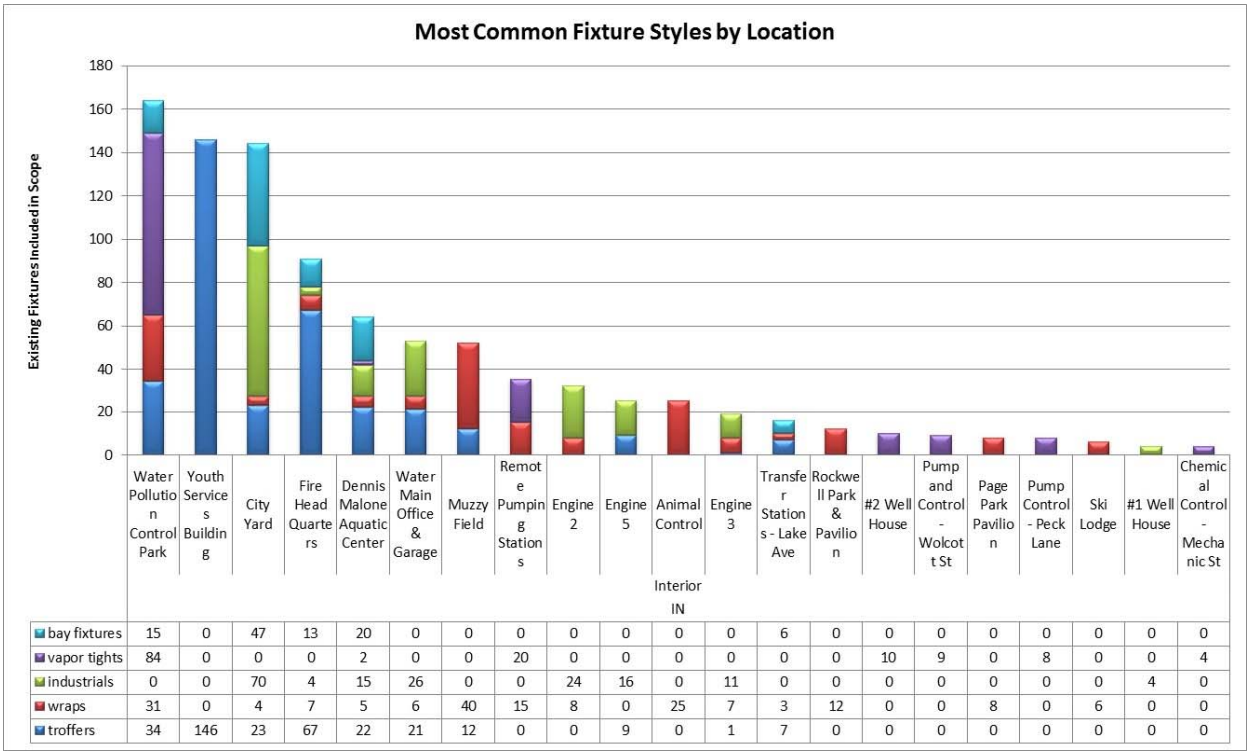
Compact fluorescents comprise 13% of the existing fixture total. Many of these are used in recessed cans.

Although the lighting system is generally performing as designed, improvements are possible. Light levels are appropriate in the majority of areas and most fixtures are in good condition. We installed data loggers in key locations to obtain an accurate representation of operating hours.

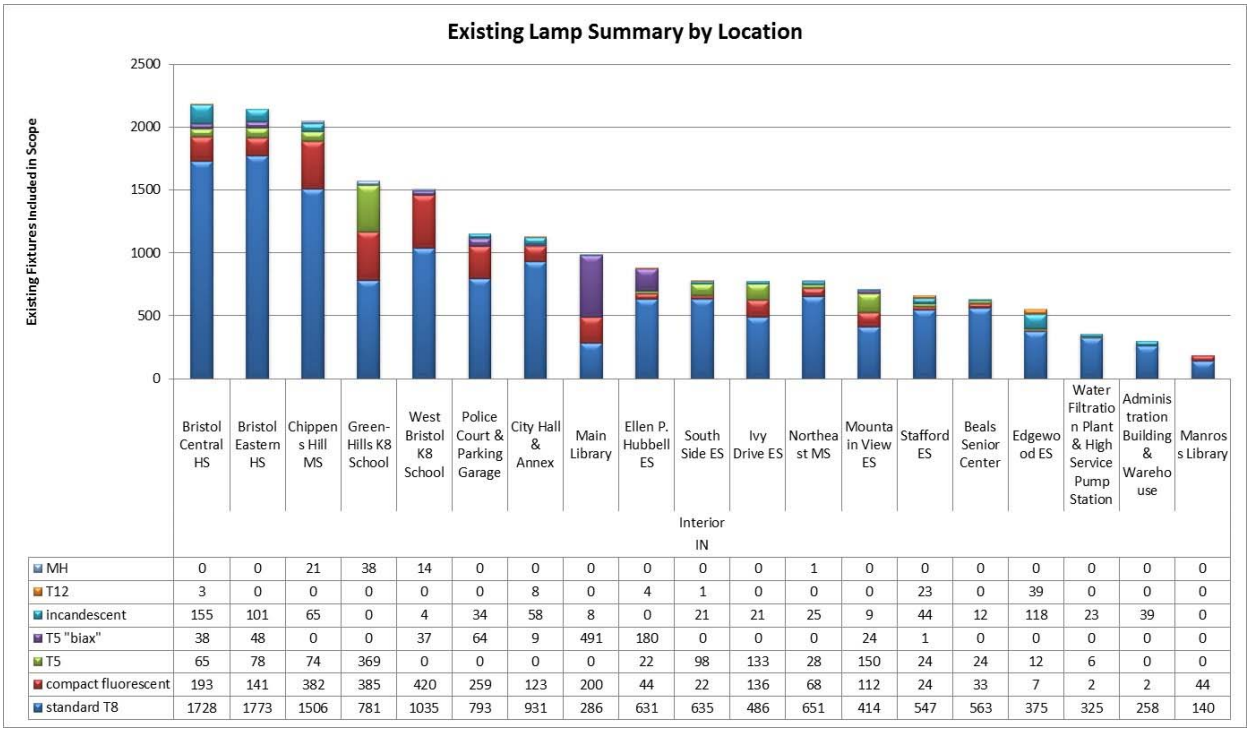
Specific Information about the Existing System



Interior IN	Bristol Eastern HS	Bristol Central HS	Chippens Hill MS	West Bristol K8 School	Green-Hills K8 School	Police Court & Parking Garage	Main Library	City Hall & Annex	Ellen P. Hubbell ES	Ivy Drive ES	Mountain View ES	South Side ES	Beals Senior Center	Northeast MS	Edgewood ES	Stafford ES	Administration Building & Warehouse	Manross Library	Water Filtration Plant & High Service Pump Station
boxes	319	311	0	0	0	1	0	6	0	3	1	523	0	60	54	136	26	0	0
wraps	54	93	30	38	0	74	41	87	280	227	209	25	2	249	157	67	45	6	3
cans	171	277	435	155	251	222	190	95	45	144	92	15	29	12	85	41	26	36	13
indirects	702	38	597	763	650	15	616	0	72	180	174	0	0	0	0	0	0	0	0
troffers	584	1068	640	197	114	662	74	685	413	102	135	45	495	138	51	101	152	107	122

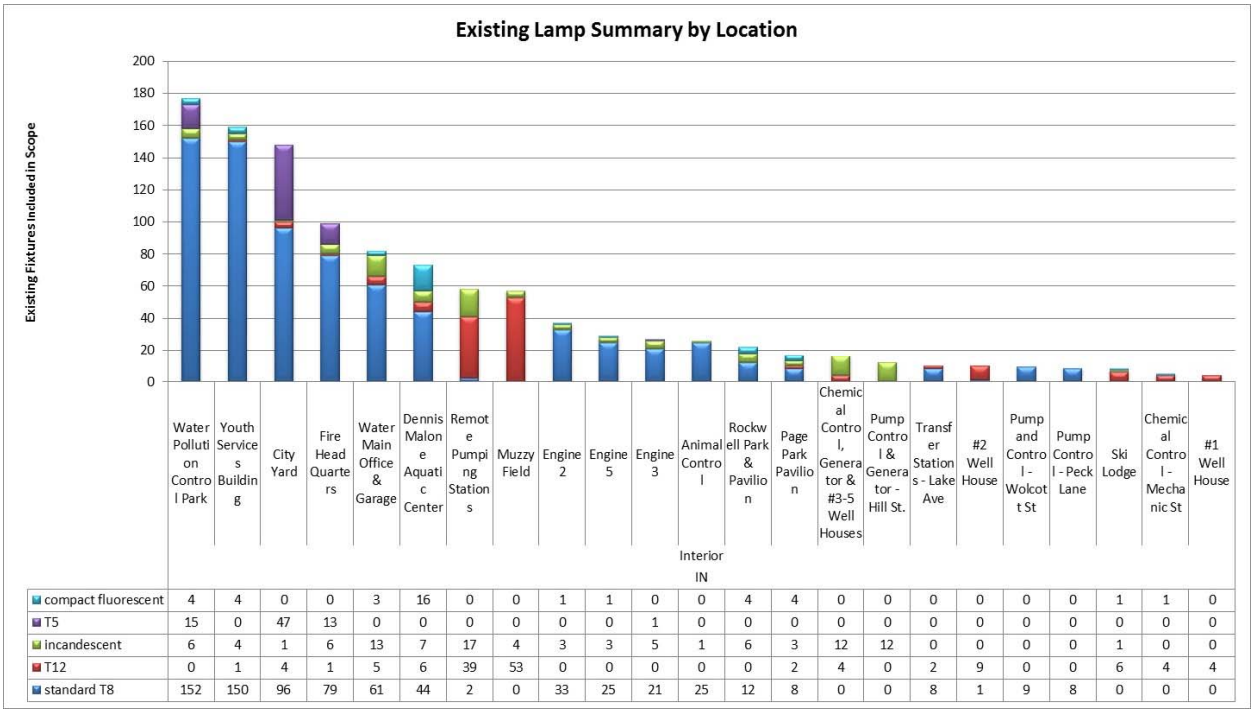


	Water Pollution Control Park	Youth Services Building	City Yard	Fire Head Quarters	Dennis Malone Aquatic Center	Water Main Office & Garage	Muzzy Field	Remote Pumping Stations	Engine 2	Engine 5	Animal Control	Engine 3	Transfer Stations - Lake Ave	Rockwell Park & Pavilion	#2 Well House	Pump and Control - Wolcott St	Page Park Pavilion	Pump Control - Peck Lane	Ski Lodge	#1 Well House	Chemical Control - Mechanic St
bay fixtures	15	0	47	13	20	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0
vapor tights	84	0	0	0	2	0	0	20	0	0	0	0	0	0	10	9	0	8	0	0	4
industrials	0	0	70	4	15	26	0	0	24	16	0	11	0	0	0	0	0	0	0	4	0
wraps	31	0	4	7	5	6	40	15	8	0	25	7	3	12	0	0	8	0	6	0	0
troffers	34	146	23	67	22	21	12	0	0	9	0	1	7	0	0	0	0	0	0	0	0



	Bristol Central HS	Bristol Eastern HS	Chippens Hill MS	Green-Hills K8 School	West Bristol K8 School	Police Court & Parking Garage	City Hall & Annex	Main Library	Ellen P. Hubbell ES	South Side ES	Ivy Drive ES	Northeast MS	Mountain View ES	Stafford ES	Beals Senior Center	Edgewood ES	Water Filtration Plant & High Service Pump Station	Administration Building & Warehouse	Manross Library
MH	0	0	21	38	14	0	0	0	0	0	0	1	0	0	0	0	0	0	0
T12	3	0	0	0	0	0	8	0	4	1	0	0	0	23	0	39	0	0	0
incandescent	155	101	65	0	4	34	58	8	0	21	21	25	9	44	12	118	23	39	0
T5 "biax"	38	48	0	0	37	64	9	491	180	0	0	0	24	1	0	0	0	0	0
T5	65	78	74	369	0	0	0	0	22	98	133	28	150	24	24	12	6	0	0
compact fluorescent	193	141	382	385	420	259	123	200	44	22	136	68	112	24	33	7	2	2	44
standard T8	1728	1773	1506	781	1035	793	931	286	631	635	486	651	414	547	563	375	325	258	140

"Page content is subject to Confidentiality Restrictions"



	Water Pollution Control Park	Youth Services Building	City Yard	Fire Head Quarters	Water Main Office & Garage	Dennis Malone Aquatic Center	Remote Pumping Stations	Muzzy Field	Engine 2	Engine 5	Engine 3	Animal Control	Rockwell Park & Pavilion	Page Park Pavilion	Chemical Control, Generator & #3-5 Well Houses	Pump Control & Generator - Hill St.	Transfer Stations - Lake Ave	#2 Well House	Pump and Control - Wolcott St	Pump Control - Peck Lane	Ski Lodge	Chemical Control - Mechanic St	#1 Well House
compact fluorescent	4	4	0	0	3	16	0	0	1	1	0	0	4	4	0	0	0	0	0	0	1	1	0
T5	15	0	47	13	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
incandescent	6	4	1	6	13	7	17	4	3	3	5	1	6	3	12	12	0	0	0	0	1	0	0
T12	0	1	4	1	5	6	39	53	0	0	0	0	0	2	4	0	2	9	0	0	6	4	4
standard T8	152	150	96	79	61	44	2	0	33	25	21	25	12	8	0	0	8	1	9	8	0	0	0

Proposed System

General Information about the Proposed System

Ameresco will standardize the lighting system where practical, reducing the number of different products the City must purchase, stock and maintain.

There are two options for interior lighting that the City can choose between.



- The "Base" option provides for most fixtures replaced or retrofitted with 4' T8 lamps will receive **Linear Fluorescent 28 watt T8** lamps and instant-start ballasts. This premium combination yields maximum energy savings without sacrificing light output or quality. These **28 watt T8** lamps consume less energy while matching the light output of standard T8's. The **28 watt T8** lamp also maintains light output better than T12 and typical T8 lamps.
    - Fluorescent 28 watt T8 lamps offer 40,000 hour rated life with 5 year warranty.
- The "LED T8" option provides for most fixtures replaced or retrofitted with 4' T8 lamps will receive **LED T8** lamps and instant-start ballasts. This premium combination yields maximum energy savings without sacrificing light output or quality just like the fluorescent T8's. In addition, these **LED T8** lamps offer longer rated lifetimes and an additional year of warranty when paired with new ballasts.

- LED T8 lamps offer 50,000 hour rated life with 6 year warranty.

Ballast outputs were tailored to deliver optimum light levels in each room. The new lighting system is designed to maintain lighting levels, while meeting IESNA standards in affected areas. All recommendations were made with the intent to optimize energy savings without compromising the quality and the level of light output.

Our project replaces or upgrades **18,477** existing fixtures (Base option), and **18,518** existing fixtures (LED T8 option). We consider two adjoining fixtures sharing a ballast to be a single fixture. This method provides a more precise assessment of energy consumption and material inventory, but sometimes results in a lower apparent fixture count.

Following are highlights of the proposed scope, with predominant applications presented first. We then proceed in descending order, with each subsequent item representing a smaller portion of the scope. Please refer to the "Lighting System Analysis" in Appendix I, as this is a complete list of work to be performed. Only locations that appear in that document are included in this project.

Specific Information about the Proposed Base System, by Strategy

11,611 existing fixtures will receive T8 lamps and electronic ballasts.

2,478 existing fixtures will receive T8 lamps, electronic ballasts, and reflectors designed to improve fixture efficiency.

1,574 existing fixtures will receive a customized LED conversion kit for recessed cans which is designed to increase fixture efficiency, save substantial energy, and greatly extend service intervals.

821 existing fixtures will receive a customized LED conversion kit for troffers which is designed to increase fixture efficiency, save substantial energy, and greatly extend service intervals.

806 existing fixtures will receive screw-based LED lamps. They are highly efficient, and with lifetimes up to 50,000 hours, maintenance intervals are greatly extended.

444 existing fixtures shall be replaced with new LED high-bays. These high-performance fixtures will improve light levels & distribution, reduce shadowing and "hot spots", while savings substantial energy. Additional benefits of LED over HID sources are improved color rendition, better lumen maintenance, and reduced color shift over lamp life. Further, HID's need time to re-strike when hot, whereas LED fixtures are instant on, allowing us to specify lighting controls in ESM 3 to reduce total operating hours.

286 existing fixtures shall be replaced with new LED drums.

233 existing fixtures will receive new T8 lamps, which are more efficient than the existing lamps.

55 existing fixtures shall be replaced with a new LED flood.

34 existing fixtures shall be replaced with new wraps.

30 existing fixtures shall be replaced with new LED indirects.

27 existing fixtures shall be replaced with new strips.

"Page content is subject to Confidentiality Restrictions"

16 existing fixtures will receive a customized LED conversion kit designed to increase fixture efficiency, save substantial energy, and greatly extend service intervals.

14 existing fixtures shall be replaced with a new LED canopies.

10 existing fixtures will receive T8 lamps and electronic ballasts that dim the lights when there is sufficient daylight to offset the artificial light.

9 existing fixtures shall be replaced with new LED exit signs. Due to their constant operation, exit signs are one of the best applications of LED technology. Fluorescent exit signs consume about 14 watts per sign and have a rated lamp life of 10,000 hours, so they must be re-lamped every 1 to 1½ years; incandescent exit signs consume about 20 to 40 watts per sign and have a rated life of 2,000 hours and must be re-lamped four to five times per year. LED exit signs consume a few watts per sign and have a rated life of 5+ years.

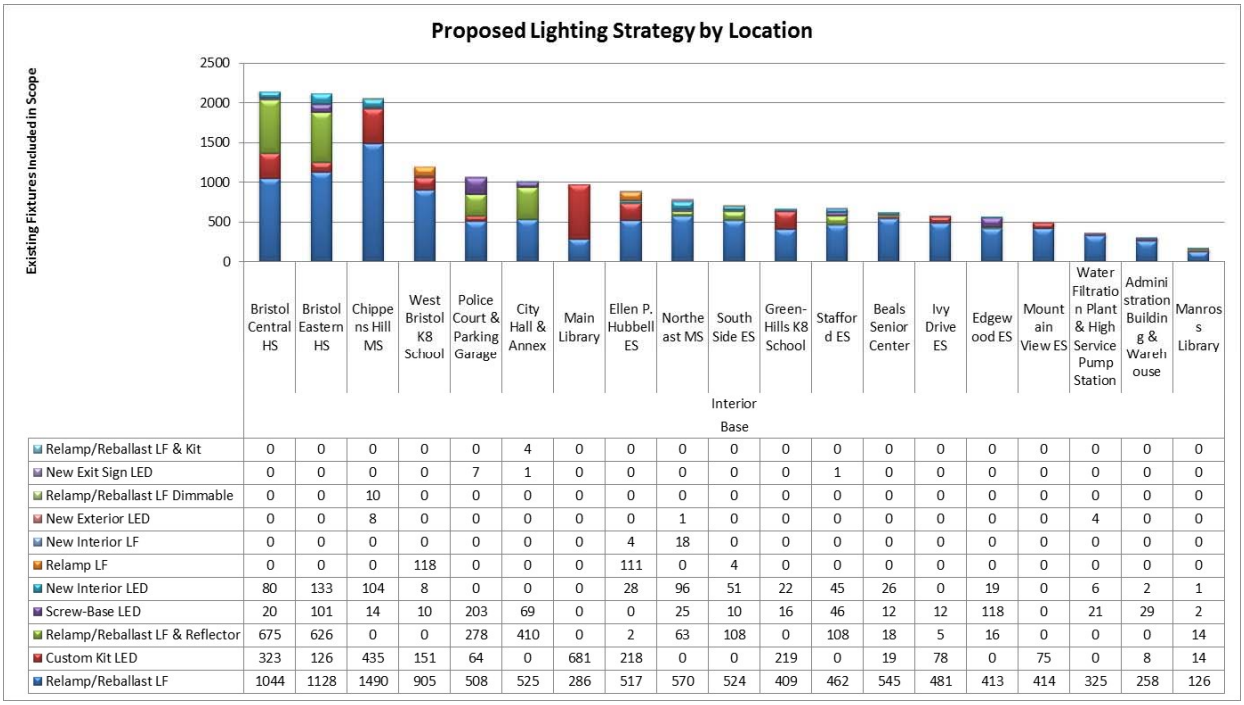
9 existing fixtures shall be replaced with a new LED track head.

8 existing fixtures will receive a customized LED conversion kit for exterior area fixtures which is designed to increase fixture efficiency, save substantial energy, and greatly extend service intervals.

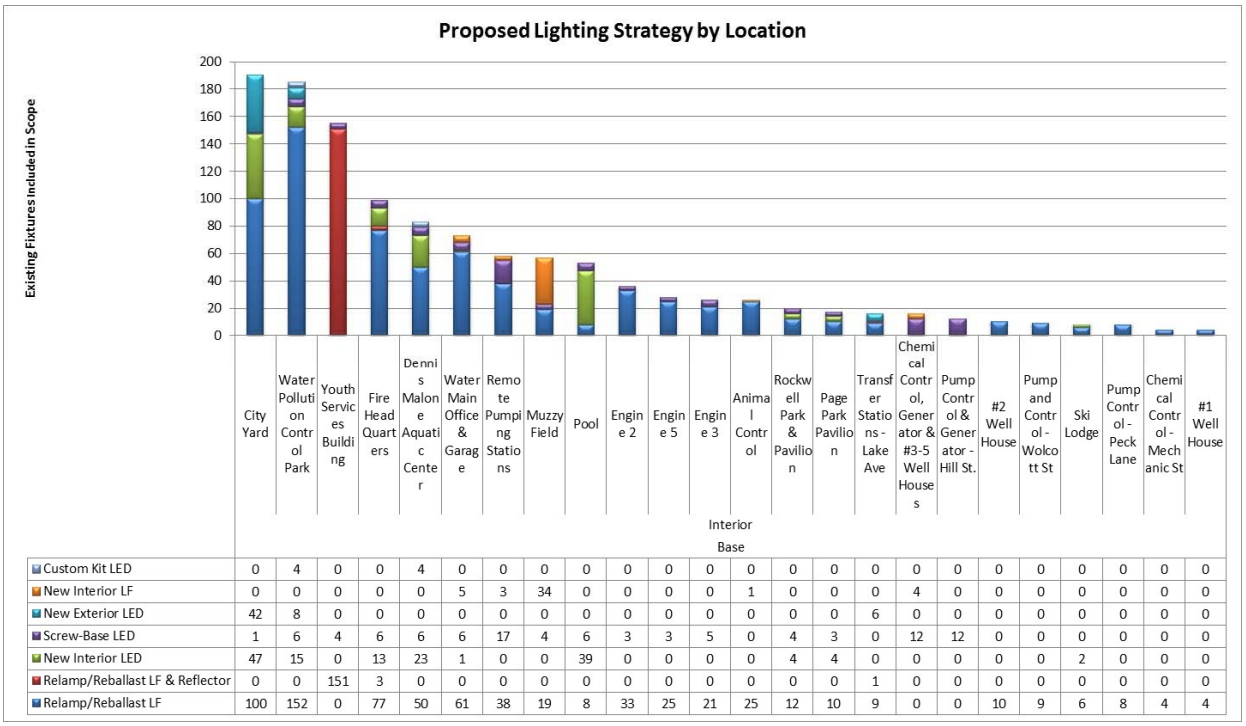
5 existing fixtures shall be replaced with new vanities.

4 existing fixtures will receive T8 lamps, electronic ballasts, and retrofit kits.

3 existing fixtures shall be replaced with new vaportights.



	Bristol Central HS	Bristol Eastern HS	Chippens Hill MS	West Bristol K8 School	Police Court & Parking Garage	City Hall & Annex	Main Library	Ellen P. Hubbell ES	Northeast MS	South Side ES	Green-Hills K8 School	Stafford ES	Beals Senior Center	Ivy Drive ES	Edgewood ES	Mountain View ES	Water Filtration Plant & High Service Pump Station	Administration Building & Warehouse	Manross Library
Relamp/Reballast LF & Kit	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
New Exit Sign LED	0	0	0	0	7	1	0	0	0	0	0	1	0	0	0	0	0	0	0
Relamp/Reballast LF Dimmable	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New Exterior LED	0	0	8	0	0	0	0	0	1	0	0	0	0	0	0	0	4	0	0
New Interior LF	0	0	0	0	0	0	0	4	18	0	0	0	0	0	0	0	0	0	0
Relamp LF	0	0	0	118	0	0	0	111	0	4	0	0	0	0	0	0	0	0	0
New Interior LED	80	133	104	8	0	0	0	28	96	51	22	45	26	0	19	0	6	2	1
Screw-Base LED	20	101	14	10	203	69	0	0	25	10	16	46	12	12	118	0	21	29	2
Relamp/Reballast LF & Reflector	675	626	0	0	278	410	0	2	63	108	0	108	18	5	16	0	0	0	14
Custom Kit LED	323	126	435	151	64	0	681	218	0	0	219	0	19	78	0	75	0	8	14
Relamp/Reballast LF	1044	1128	1490	905	508	525	286	517	570	524	409	462	545	481	413	414	325	258	126



Specific Information about the Proposed LED T8 System, by Strategy

11,113 existing fixtures will receive LED lamps and electronic ballasts.

3,005 existing fixtures will receive LED lamps, electronic ballasts, and reflectors designed to improve fixture efficiency.

1,574 existing fixtures will receive a customized LED conversion kit for recessed cans which is designed to increase fixture efficiency, save substantial energy, and greatly extend service intervals.

831 existing fixtures will receive a customized LED conversion kit for troffers which is designed to increase fixture efficiency, save substantial energy, and greatly extend service intervals.

806 existing fixtures will receive screw-based LED lamps. They are highly efficient, and with lifetimes up to 50,000 hours, maintenance intervals are greatly extended.

444 existing fixtures shall be replaced with new LED high-bays. These high-performance fixtures will improve light levels & distribution, reduce shadowing and "hot spots", while savings substantial energy. Additional benefits of LED over HID sources are improved color rendition, better lumen maintenance, and reduced color shift over lamp life. Further, HID's need time to re-strike when hot, whereas LED fixtures are instant on, allowing us to specify lighting controls in ESM 3 to reduce total operating hours.

286 existing fixtures shall be replaced with new LED drums.

245 existing fixtures will receive new linear LED lamps, which are more efficient than the existing lamps.

55 existing fixtures shall be replaced with a new LED flood.

"Page content is subject to Confidentiality Restrictions"

34 existing fixtures shall be replaced with new wraps.

30 existing fixtures shall be replaced with new LED indirects.

27 existing fixtures shall be replaced with new strips.

16 existing fixtures will receive a customized LED conversion kit designed to increase fixture efficiency, save substantial energy, and greatly extend service intervals.

14 existing fixtures shall be replaced with a new LED canopies.

9 existing fixtures shall be replaced with new LED exit signs. Due to their constant operation, exit signs are one of the best applications of LED technology. Fluorescent exit signs consume about 14 watts per sign and have a rated lamp life of 10,000 hours, so they must be re-lamped every 1 to 1½ years; incandescent exit signs consume about 20 to 40 watts per sign and have a rated life of 2,000 hours and must be re-lamped four to five times per year. LED exit signs consume a few watts per sign and have a rated life of 5+ years.

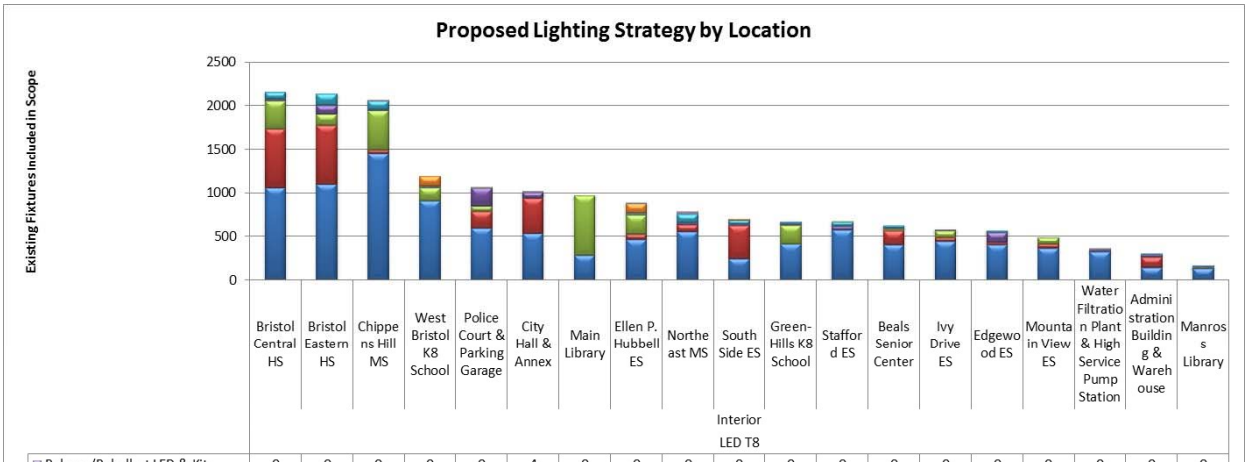
9 existing fixtures shall be replaced with a new LED track head.

8 existing fixtures will receive a customized LED conversion kit for exterior area fixtures which is designed to increase fixture efficiency, save substantial energy, and greatly extend service intervals.

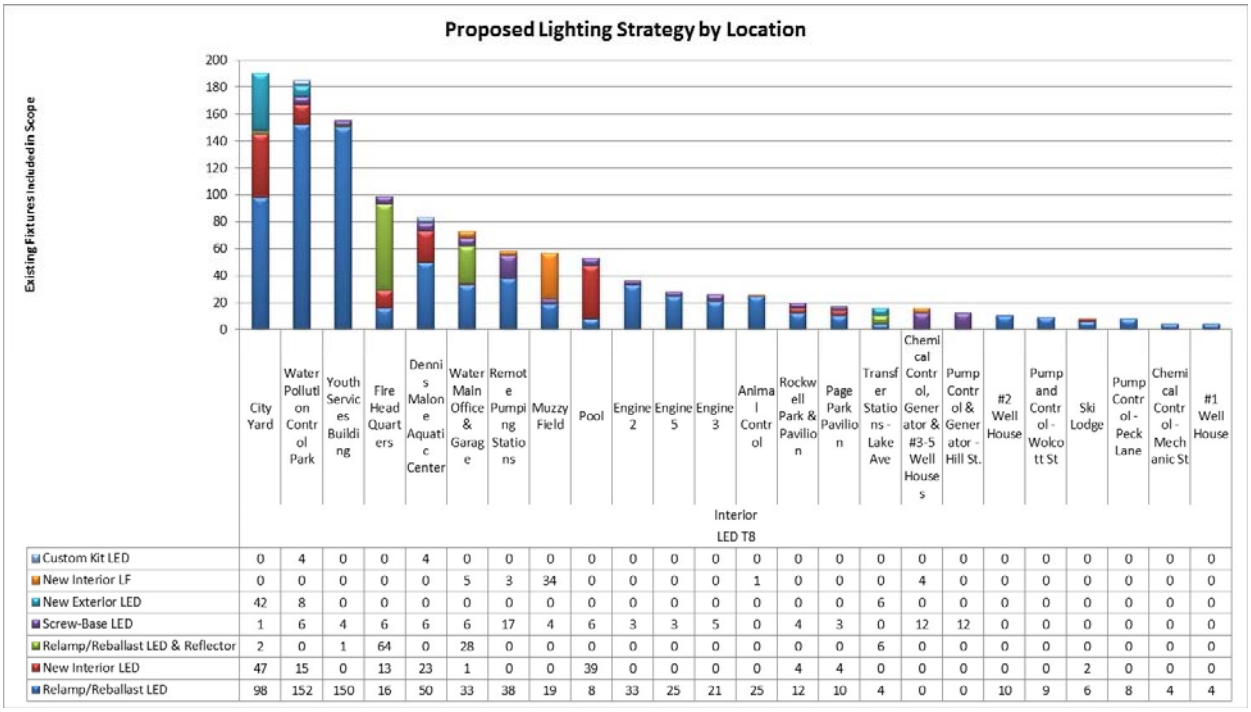
5 existing fixtures shall be replaced with new vanities.

4 existing fixtures will receive LED lamps, electronic ballasts, and retrofit kits.

3 existing fixtures shall be replaced with new vaportights.



Interior LED T8	Bristol Central HS	Bristol Eastern HS	Chippens Hill MS	West Bristol K8 School	Police Court & Parking Garage	City Hall & Annex	Main Library	Ellen P. Hubbell ES	Northeast MS	South Side ES	Green-Hills K8 School	Stafford ES	Beals Senior Center	Ivy Drive ES	Edgewood ES	Mountain View ES	Water Filtration Plant & High Service Pump Station	Administration Building & Warehouse	Manross Library
Relamp/Reballast LED & Kit	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
New Exit Sign LED	0	0	0	0	7	1	0	0	0	0	0	1	0	0	0	0	0	0	0
New Exterior LED	0	0	8	0	0	0	0	0	1	0	0	0	0	0	0	0	4	0	0
New Interior LF	0	0	0	0	0	0	0	4	18	0	0	0	0	0	0	0	0	0	0
Relamp LED	0	0	0	118	0	0	0	111	0	16	0	0	0	0	0	0	0	0	0
New Interior LED	80	133	104	8	0	0	0	28	96	51	22	45	26	0	19	0	6	2	1
Screw-Base LED	20	101	14	10	203	69	0	0	25	10	16	46	12	12	118	0	21	29	2
Custom Kit LED	323	126	445	151	64	0	681	218	0	0	219	0	19	78	0	75	0	8	14
Relamp/Reballast LED & Reflector	675	678	45	0	189	400	0	61	80	376	0	0	156	47	26	47	0	116	8
Relamp/Reballast LED	1056	1095	1451	905	597	535	286	462	553	244	409	570	407	439	403	367	325	142	132



>Equipment, Design and Construction Documentation

Equipment will be identified in submittals provided for approval prior to procurement. The lighting system audit completed for each facility will be submitted as the basis for construction. Despite our best efforts, cataloguing every single fixture in every location is extremely difficult. **Therefore, fixtures or areas not listed are excluded from our scope.** Typical examples are low use areas such as closets and crawlspaces, areas inaccessible during the audit, areas to be renovated, high-security locations, and specialty fixtures such as medical or stage lighting. Additionally, if your staff escorted us full-time through a site, we assume that we were shown every location you desire be included in the project. Therefore, areas not visited may not appear in the scope.

The audit will include the existing descriptions, operating hours, and proposed retrofit description. These documents will be submitted for review and comment. Upon approval, these will constitute the construction documents. Upon completion of the construction phase, the documents will be revised as needed to reflect "As-Built" conditions, and submitted in multiple for record.

>Impact on Facility Operations and Performance

All installations will be conducted during normal business hours or after normal operating hours if interruption of functions is anticipated. Installations will be coordinated with appointed personnel.

>Integration of Proposed Equipment with Existing Systems

The new lighting system, and all components thereof, will be fully integrated into the existing lighting systems. We assume the entire lighting and lighting controls systems comply with, but not limited to, the latest codes, the latest standards, local jurisdictions, and work was done in a quality workmanship manner, per

"Page content is subject to Confidentiality Restrictions"

NECA, and other applicable recommend best practices universally accepted throughout the electrical industry. Further we assume that all existing devices, which are defined in NEC, which includes but not limited to switches, outlets, wiring, etc. are in acceptable condition in order to implement our scope as outlined in the contract documents. All existing junction boxes, poles, mounting surfaces and structures are assumed to be in acceptable condition to allow the installation of the products indicated in the scope. Required upgrades to meet safety or other codes, and/or to prepare the location for the installation as described above, can be performed on a time and material basis.

>Environmental Impact

There are no potential adverse environmental impacts associated with this lighting upgrade. During construction, Ameresco will remove, package, and recycle all existing lamps that contain mercury and ballasts that contain PCBs or DEHP according to applicable regulations.

Appendix for ESM 1:
Lighting System Improvements - Interior

I. Energy Savings Calculations

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

City of Bristol, CT	
Energy and Demand Savings Summary	
Measure ID:	**1**
Measure Name:	**Lighting System Improvements - Interior**
Measure Location:	
Engineers:	

Site Name:		**Central_High**	**Eastern_High**	**Chippens**	**NE_Middle**	**W_Bristol**
Item	Units	Savings	Savings	Savings	Savings	Savings
Electricity						
Energy On-Peak	kWh	176,198	135,922	135,923	40,488	58,603
Energy Off-Peak	kWh	0	0	0	0	0
Energy Total	kWh	176,198	135,922	135,923	40,488	58,603
Demand On-Peak, Monthly	kW	87.29	57.5	57.0	18.2	32.2
Demand On-Peak, Annual	kW	872.9	575.2	570.2	181.6	322.2
Demand Off-Peak, Monthly	kW	0.0	0.0	0.0	0.0	0.0
Demand Off-Peak, Annual	kW	0.0	0.0	0.0	0.0	0.0
Fossil Fuel						
Natural Gas (NG)	CCF	0	-3,081	-3,074	0	0
Liquid Propane Gas (LPG)	Gallons	0	0	0	0	0
Steam	Mlbs	0	0	0	0	0
Fuel Oil, #2	Gallons	-2,877	0	0	-696	0
Fuel Oil, #4	Gallons	0	0	0	0	0
Fuel Oil, #6	Gallons	0	0	0	0	0
Max Daily Demand (Natural Gas)	CCF (Demand)	0	0	0	0	0
Water						
Water Savings	CF					
Sewer						
Sewer Savings	CF					

Green-Hills	Hubbell	Stafford	Ivy_Drive	Edgewood	Mt_View	South_Side	Admin	City_Hall
Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings
31,250	39,368	32,218	25,251	31,286	19,885	33,676	18,493	34,862
0	0	0	0	0	0	0	0	50,165
31,250	39,368	32,218	25,251	31,286	19,885	33,676	18,493	85,027
18.8	16.9	18.4	15.0	14.0	11.4	17.8	8.8	29.2
187.9	169.2	184.1	150.3	139.9	114.0	177.6	106.0	350.5
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0	0	0	-550	0	-404	-798	-377	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	-678	-585	0	-500	0	0	0	-1,299
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

Water_Main	Filtration	Well_1	Well_2	Chem_Control	Chem_Mech_St	Pump_Peck_Lane	P_Control_Hill	P_Control_Wolcott
Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings
4,168	2,920	15	38	232	15	19	292	21
0	7,899	0	0	0	0	0	789	0
4,168	10,819	15	38	232	15	19	1,080	21
1.9	7.6	0.1	0.3	1.6	0.1	0.1	2.2	0.1
23.3	91.6	1.2	3.1	18.7	1.2	1.5	25.9	1.7
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
-69	-184	0	0	0	0	0	-19	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

Police	Rockwell_Park	Muzzy	Ski	Page_Park	Aquatic	Fire_HQ	Engine_2	Engine_3
Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings
37,459	337	387	63	600	27,675	8,495	840	618
78,723	0	0	0	0	0	0	0	0
116,183	337	387	63	600	27,675	8,495	840	618
28.3	0.6	3.0	0.3	0.5	5.8	4.8	0.8	0.6
339.8	7.6	36.2	3.2	6.4	69.8	57.9	9.1	7.2
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0	0	0	0	0	-660	0	0	-14
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
-1,814	-5	0	0	-10	0	-141	-14	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

Engine_5	Senior	Main_Library	Manross_Library	Youth	Animal	City_Yard	Transfer_Lake_Ave	Water_Pollution
Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings
662	20,649	48,866	9,562	6,410	308	18,888	876	1,974
0	9,581	65,187	0	0	0	0	0	6,251
662	30,230	114,053	9,562	6,410	308	18,888	876	8,225
0.6	15.8	30.1	3.2	3.2	0.6	14.4	2.3	6.9
7.0	190.2	361.2	38.7	38.8	7.3	173.2	28.0	82.3
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0	-610	-2,314	-214	0	-7	-428	0	-192
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
-11	0	0	0	-107	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

Pump_Stations	Pool	Summary
Savings	Savings	
387	529	1,006,731
0	0	218,594
387	529	1,225,324
2.6	1.1	542.2
31.2	12.7	5,777.5
0.0	0.0	0.0
0.0	0.0	0.0
		0
0	0	-12,724
0	0	0
0	0	0
0	-9	-9,018
0	0	0
0	0	0
0	0	0
		0
		0
		0
		0

City of Bristol, CT
Interactive Lighting Savings Calculation

AMERESCO

	Lighting Savings		Heating Penalty				Cooling Benefit			
A	B	C	D	E	F	G	H	I	J	K
Facility	Annual kW	Annual kWh	Heat Gain to Space	Heating Months	Heating System Efficiency	Heating Penalty MMBtu	Total Space Cooled	Cooling Months	Cooling System COP	Cooling Benefit MMBtu
Bristol Central High School	87.3	170,981	80.0%	8.0	78.0%	(399.0)	75.0%	2.0	3.28	17.8
Bristol Eastern High School	57.5	131,861	80.0%	8.0	76.0%	(315.8)	75.0%	2.0	3.25	13.9
Chippens Hill Middle Schoo	57.0	135,002	80.0%	8.0	78.0%	(315.1)	15.0%	2.0	2.93	3.1
Northeast Middle School	18.2	40,305	80.0%	8.0	76.0%	(96.5)	10.0%	2.0	2.93	0.6
West Bristol K8 School	32.2	64,246	80.0%	8.0	400.0%	(29.2)	100.0%	2.0	2.93	10.0
Green-Hills K8 Schoo	18.8	34,259	80.0%	8.0	400.0%	(15.6)	100.0%	2.0	2.93	5.3
Ellen P. Hubbell Elementary Schoo	16.9	39,278	80.0%	8.0	76.0%	(94.1)	5.0%	2.0	2.93	0.3
Stafford Elementary School	18.4	32,072	80.0%	8.0	72.0%	(81.1)	10.0%	2.0	2.93	0.5
Ivy Drive Elementary Schoo	15.0	24,152	80.0%	8.0	78.0%	(56.4)	100.0%	2.0	2.93	3.8
Edgewood Elementary Schoo	14.0	31,229	80.0%	8.0	82.0%	(69.3)	4.0%	2.0	2.93	0.2
Mountain View Elementary Schoo	11.4	19,133	80.0%	8.0	84.0%	(41.5)	95.0%	2.0	3.22	2.6
South Side Elementary Schoo	17.8	32,351	80.0%	8.0	72.0%	(81.8)	90.0%	2.0	2.93	4.5
Board of Education Administration Building & Warehous	8.8	17,409	80.0%	8.0	82.0%	(38.6)	65.0%	4.0	2.78	3.7
City Hall & Annex	29.2	77,176	80.0%	8.0	78.0%	(180.1)	95.0%	4.0	2.49	26.8
Water Main Office & Garage	1.9	3,967	80.0%	8.0	76.0%	(9.5)	50.0%	4.0	2.64	0.7
Water Filtration Plant & High Service Pump Station	7.6	10,393	80.0%	8.0	74.0%	(25.6)	45.0%	4.0	2.93	1.5
#1 Well House	0.1	52	80.0%	8.0	76.0%	(0.1)	0.0%	4.0	2.93	0.0
#2 Well House	0.3	129	80.0%	8.0	76.0%	(0.3)	0.0%	4.0	2.93	0.0
Chemical Control, Generator & #3-5 Well Houses	1.6	777	80.0%	8.0	76.0%	(1.9)	0.0%	4.0	2.93	0.0
Chemical Control - Mechanic St	0.1	52	80.0%	8.0	76.0%	(0.1)	0.0%	4.0	2.93	0.0
Pump Control - Peck Lane	0.1	64	80.0%	8.0	76.0%	(0.2)	0.0%	4.0	2.93	0.0
Pump Control & Generator - Hill St.	2.2	1,080	80.0%	8.0	76.0%	(2.6)	0.0%	4.0	2.93	0.0
Pump and Control - Wolcott St	0.1	72	80.0%	8.0	76.0%	(0.2)	0.0%	4.0	2.93	0.0
Police Court & Parking Garage	28.3	107,840	80.0%	8.0	78.0%	(251.7)	85.0%	4.0	2.93	28.5
Rockwell Park & Pavilion	0.6	315	80.0%	8.0	76.0%	(0.8)	60.0%	4.0	2.34	0.1
Muzzy Field	3.0	830	80.0%	8.0	100.0%	(1.5)	0.0%	4.0	2.93	0.0
Ski Lodge	0.3	135	80.0%	8.0	100.0%	(0.2)	0.0%	4.0	2.93	0.0
Page Park Pavilion	0.5	600	80.0%	8.0	76.0%	(1.4)	0.0%	4.0	2.93	0.0
Dennis Malone Aquatic Center	5.8	27,519	80.0%	8.0	74.0%	(67.7)	5.0%	4.0	2.34	0.5
Fire Head Quarters	4.8	8,165	80.0%	8.0	76.0%	(19.6)	40.0%	4.0	2.64	1.1
Engine 2	0.8	821	80.0%	8.0	76.0%	(2.0)	25.0%	4.0	2.93	0.1
Engine 3	0.6	604	80.0%	8.0	76.0%	(1.4)	25.0%	4.0	2.93	0.0
Engine 5	0.6	647	80.0%	8.0	78.0%	(1.5)	25.0%	4.0	2.93	0.1
Beals Senior Center	15.8	28,178	80.0%	8.0	82.0%	(62.6)	80.0%	4.0	2.93	7.0
Main Library	30.1	106,865	80.0%	8.0	82.0%	(237.2)	85.0%	4.0	3.37	24.5
Manross Library	3.2	9,146	80.0%	8.0	76.0%	(21.9)	50.0%	4.0	2.93	1.4
Youth Services Building	3.2	6,176	80.0%	8.0	76.0%	(14.8)	50.0%	4.0	3.52	0.8
Animal Control	0.6	301	80.0%	8.0	78.0%	(0.7)	25.0%	4.0	2.93	0.0
City Yard	14.4	18,803	80.0%	8.0	78.0%	(43.9)	5.0%	4.0	2.93	0.3
Transfer Stations - Lake Ave	2.3	2,549	80.0%	8.0	76.0%	(6.1)	50.0%	4.0	2.93	0.4
Water Pollution Control Park	6.9	8,225	80.0%	8.0	76.0%	(19.7)	0.0%	4.0	2.93	0.0
Remote Pumping Stations	2.6	1,299	80.0%	8.0	76.0%	(3.1)	0.0%	4.0	2.93	0.0
Pool	1.1	529	80.0%	8.0	76.0%	(1.3)	0.0%	4.0	2.93	0.0
Totals	**542.2**	**1,195,584**				**(2,613.5)**				**160.0**

Notes:	
A	Applicable building included in comprehensive energy audit
B	Lighting demand savings {kW} associated with lighting retrofit measures
C	Lighting energy savings {kWh} associated with lighting retrofit measures
D	Estimated percentage of lighting energy transmitted to conditioned space
E	Estimated length of heating season
F	Estimated heating system efficiency, interacted with other measures
G	Resulting heating penalty due to lighting upgrades = [col C] x [col D] x 3,413 x ([col E] / 12) / [col F] / 1,000,000
H	Estimated percentage of space cooled
I	Estimated Length of cooling season
J	Estimated cooling system efficiency, interacted with other measures
K	Resulting cooling benefit due to lighting upgrades = [col C] x [col D] x 3,413 x ([col I] / 12) / [col J] / 1,000,000

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
1	Bristol Central HS	Office 244	2	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	156	1,680	1,680
2	Bristol Central HS	Storage 244A	2	4L2' T8 17w/EL	trof parabolic	3	3	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	0.1	49	700	700
3	Bristol Central HS	Hall 244-230	2	4L2' T8 17w/EL	box acrylic	19	19	62	1.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	19	35	0.7	0.5	1,098	3,200	3,200
4	Bristol Central HS	Hall 230-224	2	4L2' T8 17w/EL	box acrylic	13	13	62	0.8	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	13	35	0.5	0.4	751	3,200	3,200
5	Bristol Central HS	Hall 224-206	2	4L2' T8 17w/EL	box acrylic	19	19	62	1.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	19	35	0.7	0.5	1,098	3,200	3,200
6	Bristol Central HS	Hall 206-244	2	4L2' T8 17w/EL	box acrylic	13	13	62	0.8	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	13	35	0.5	0.4	751	3,200	3,200
7	Bristol Central HS	Office 243	2	4L2' T8 17w/EL	trof parabolic	3	3	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	0.1	117	1,680	1,680
8	Bristol Central HS	Classroom 242	2	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' T8 28w/ELEE LO-12'	rlrb LF	6	132	0.8	0.3	477	1,960	1,960
9	Bristol Central HS	Classroom 241	2	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' T8 28w/ELEE LO-12'	rlrb LF	6	132	0.8	0.3	477	1,960	1,960
10	Bristol Central HS	Classroom 240	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
11	Bristol Central HS	Classroom 239	2	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' T8 28w/ELEE LO-12'	rlrb LF	6	132	0.8	0.3	477	1,960	1,960
12	Bristol Central HS	Classroom 237	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
13	Bristol Central HS	Lab 238	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	240	1,890	1,890
14	Bristol Central HS	Lab 238	2	6L4' T8 32w/EL-12'	trof para dbl switch	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	230	1,890	1,890
15	Bristol Central HS	Classroom 235	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
16	Bristol Central HS	Classroom 236	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
17	Bristol Central HS	Classroom 233	2	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' T8 28w/ELEE LO-12'	rlrb LF	6	132	0.8	0.3	477	1,960	1,960
18	Bristol Central HS	Classroom 234	2	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' T8 28w/ELEE LO-12'	rlrb LF	6	132	0.8	0.3	477	1,960	1,960
19	Bristol Central HS	Classroom 232	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
20	Bristol Central HS	Bath 2Nd Floor (4)	2	1L3' T8 25w/EL	trof acr	4	4	24	0.1	1L3' T8 21w/ELEE LO	rlrb LF	4	22	0.1	0.0	15	2,240	2,240
21	Bristol Central HS	Bath 2Nd Floor (4)	2	1L2' T8 17w/EL	trof acr	4	4	17	0.1	1L2' T8 15w/ELEE LO	rlrb LF	4	15	0.1	0.0	18	2,240	2,240
22	Bristol Central HS	Classroom 230	2	4L2' T8 17w/EL	trof acr	6	6	62	0.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	6	35	0.2	0.2	273	1,960	1,960
23	Bristol Central HS	Storage Custodial	2	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	5	350	350
24	Bristol Central HS	Bath Near C229 Men	2	2L4' T8 32w/EL-8'	trof acr 1' wide	4	4	60	0.2	2L4' T8 28w/ELEE LO-8'	rlrb LF	4	44	0.2	0.1	121	2,240	2,240
25	Bristol Central HS	Bath Near C229 Men	2	1L2' T8 17w/EL	trof acr 1' wide	1	1	17	0.0	1L2' T8 15w/ELEE LO	rlrb LF	1	15	0.0	0.0	4	2,240	2,240
26	Bristol Central HS	Bath Women	2	2L4' T8 32w/EL-8'	trof acr 1' wide	3	3	60	0.2	2L4' T8 28w/ELEE LO-8'	rlrb LF	3	44	0.1	0.0	91	2,240	2,240
27	Bristol Central HS	Bath Women	2	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	13	2,240	2,240
28	Bristol Central HS	Bath Women	2	1L3' T8 25w/EL	trof acr 1' wide	1	1	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	1	22	0.0	0.0	4	2,240	2,240
29	Bristol Central HS	Classroom 229	2	4L4' T8 32w/EL-8'	trof para dbl switch	4	4	112	0.4	4L4' T8 28w/ELEE LO-8'	rlrb LF	4	87	0.3	0.1	67	798	798
30	Bristol Central HS	Office 229	2	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	78	1,680	1,680
31	Bristol Central HS	Classroom 228	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
32	Bristol Central HS	Classroom 227	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
33	Bristol Central HS	Storage Mech Ac-2	2	2L4' T8 32w/EL	strip cage	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	19	350	350
34	Bristol Central HS	Classroom 226	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	148	1,166	1,166
35	Bristol Central HS	Storage Book Room	2	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	33	700	700
36	Bristol Central HS	Storage To Roof	2	2L4' T8 32w/EL	strip cage	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	5	350	350
37	Bristol Central HS	Office Ss	2	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	78	1,680	1,680
38	Bristol Central HS	Classroom 224	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
39	Bristol Central HS	Classroom 222	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
40	Bristol Central HS	Office 221	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	213	1,680	1,680
41	Bristol Central HS	Classroom 219	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
42	Bristol Central HS	Classroom 220	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
43	Bristol Central HS	Classroom 217	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
44	Bristol Central HS	Classroom 218	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	54	430	430
45	Bristol Central HS	Classroom 215	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
46	Bristol Central HS	Classroom 216	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
47	Bristol Central HS	Classroom 213	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
48	Bristol Central HS	Classroom 214	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
49	Bristol Central HS	Classroom 211	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	156	1,227	1,227
50	Bristol Central HS	Classroom 212	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
51	Bristol Central HS	Classroom 209	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
52	Bristol Central HS	Classroom 210	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
53	Bristol Central HS	Classroom 207	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
54	Bristol Central HS	Classroom 208	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
55	Bristol Central HS	Office 205	2	4L2' T8 17w/EL	box acrylic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	78	1,680	1,680
56	Bristol Central HS	Classroom 206	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
57	Bristol Central HS	Storage Custodian	2	2L4' T8 32w/EL	strip cage	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	5	350	350
58	Bristol Central HS	Bath Near C229 Men	2	2L4' T8 32w/EL-8'	trof acr 1' wide	4	4	60	0.2	2L4' T8 28w/ELEE LO-8'	rlrb LF	4	44	0.2	0.1	121	2,240	2,240
59	Bristol Central HS	Bath Near C229 Men	2	1L2' T8 17w/EL	trof acr 1' wide	1	1	17	0.0	1L2' T8 15w/ELEE LO	rlrb LF	1	15	0.0	0.0	4	2,240	2,240
60	Bristol Central HS	Bath Near C229 Men	2	1L3' T8 25w/EL	trof acr 1' wide	1	1	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	1	22	0.0	0.0	4	2,240	2,240
61	Bristol Central HS	Bath Women	2	2L4' T8 32w/EL-8'	trof acr 1' wide	4	4	60	0.2	2L4' T8 28w/ELEE LO-8'	rlrb LF	4	44	0.2	0.1	121	2,240	2,240
62	Bristol Central HS	Bath Women	2	1L4' T8 32w/EL	trof acr 1' wide	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	26	2,240	2,240
63	Bristol Central HS	Lab 204	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	240	1,890	1,890
64	Bristol Central HS	Classroom 203	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
65	Bristol Central HS	Classroom 202	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
66	Bristol Central HS	Lab 201	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	240	1,890	1,890
67	Bristol Central HS	Stair 1-2 (2)	stair	2L4' T8 32w/EL	wrap wall mt.	10	10	60	0.6	2L4' T8 28w/ELEE LO	rlrb LF	10	44	0.4	0.2	432	3,200	3,200
68	Bristol Central HS	Stair 1-2 (2)	stair	2L4' T8 32w/EL	wrap wall mt.	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	0.1	346	3,200	3,200
69	Bristol Central HS	Stair 3	stair	2L4' T8 32w/EL	wrap wall mt.	5	5	60	0.3	2L4' T8 28w/ELEE LO	rlrb LF	5	44	0.2	0.1	216	3,200	3,200
70	Bristol Central HS	Stair 3	stair	2L4' T8 32w/EL	wrap wall mt.	5	5	60	0.3	2L4' T8 28w/ELEE LO	rlrb LF	5	44	0.2	0.1	216	3,200	3,200
71	Bristol Central HS	Stair 4	stair	2L4' T8 32w/EL	wrap wall mt.	6	6	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	6	44	0.3	0.1	259	3,200	3,200
72	Bristol Central HS	Stair 4	stair	2L4' T8 32w/EL	wrap wall mt.	5	5	60	0.3	2L4' T8 28w/ELEE LO	rlrb LF	5	44	0.2	0.1	216	3,200	3,200
73	Bristol Central HS	Hall 106-Boys Locker	1	4L2' T8 17w/EL	box acrylic	13	13	62	0.8	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	13	35	0.5	0.4	751	3,200	3,200

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
74	Bristol Central HS	Hall 106-Boys Locker	1	8L4' T8 32w/EL	box acr 4x4	1	1	224	0.2	8L4' T8 28w/ELEE LO	rlrb LF	1	174	0.2	0.0	105	3,200	3,200
75	Bristol Central HS	Lobby Near Stair 2	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	298	3,200	3,200
76	Bristol Central HS	Hall 134-Lib	1	4L2' T8 17w/EL	box acrylic	11	11	62	0.7	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	11	35	0.4	0.3	635	3,200	3,200
77	Bristol Central HS	Hall 134-Lib	1	2x26W CF HARDWIRED/EL	can rec 8"	2	2	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	2	16	0.0	0.1	162	3,200	3,200
78	Bristol Central HS	Lobby Main	1	2x26W CF HARDWIRED/EL	can rec 8"	2	2	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	2	16	0.0	0.1	208	3,200	3,200
79	Bristol Central HS	Hall 124-Lib	1	4L2' T8 17w/EL	box acrylic	15	15	62	0.9	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	15	35	0.5	0.4	866	3,200	3,200
80	Bristol Central HS	Hall 124-Lib	1	8L4' T8 32w/EL	box acr 4x4	1	1	224	0.2	8L4' T8 28w/ELEE LO	rlrb LF	1	174	0.2	0.0	105	3,200	3,200
81	Bristol Central HS	Lobby Stair 1	1	4L2' T8 17w/EL	box acrylic	3	3	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	0.1	223	3,200	3,200
82	Bristol Central HS	Hall 124-106	1	4L2' T8 17w/EL	box acrylic	20	20	62	1.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	20	35	0.7	0.5	1,155	3,200	3,200
83	Bristol Central HS	Gym Wrestling	1	4L2' T8 17w/EL	box acrylic	24	24	62	1.5	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	24	35	0.8	0.7	1,663	2,980	2,980
84	Bristol Central HS	Storage Near Wrestling	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	14	1,000	700
85	Bristol Central HS	Bath Men	1	2L4' T8 32w/EL-8'	trof acr 1' wide	4	4	60	0.2	2L4' T8 28w/ELEE LO-8'	rlrb LF	4	44	0.2	0.1	121	2,240	2,240
86	Bristol Central HS	Bath Men	1	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	13	2,240	2,240
87	Bristol Central HS	Bath Men	1	1L3' T8 25w/EL	trof acr 1' wide	1	1	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	1	22	0.0	0.0	4	2,240	2,240
88	Bristol Central HS	Bath Women	1	2L4' T8 32w/EL-8'	trof acr 1' wide	3	3	60	0.2	2L4' T8 28w/ELEE LO-8'	rlrb LF	3	44	0.1	0.0	91	2,240	2,240
89	Bristol Central HS	Bath Women	1	1L4' T8 32w/EL	trof acr 1' wide	3	3	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	3	23	0.1	0.0	39	2,240	2,240
90	Bristol Central HS	Bath Women	1	1L2' T8 17w/EL	trof acr 1' wide	2	2	17	0.0	1L2' T8 15w/ELEE LO	rlrb LF	2	15	0.0	0.0	9	2,240	2,240
91	Bristol Central HS	Hall Near Gym	1	4L2' T8 17w/EL	box acrylic	8	8	62	0.5	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	8	35	0.3	0.2	462	3,200	3,200
92	Bristol Central HS	Office Ell	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	156	1,680	1,680
93	Bristol Central HS	Stair 6	stair	2L4' T8 32w/EL	wrap wall mt.	5	5	60	0.3	2L4' T8 28w/ELEE LO	rlrb LF	5	44	0.2	0.1	216	3,200	3,200
94	Bristol Central HS	Stair 6	stair	2L4' T8 32w/EL	wrap wall mt.	5	5	60	0.3	2L4' T8 28w/ELEE LO	rlrb LF	5	44	0.2	0.1	216	3,200	3,200
95	Bristol Central HS	Gym Main	1	4L4' T5 HO/EL	high bay	63	63	234	14.7	98 WATT LED/NEW	new LED hibay wg	63	103	6.5	8.3	20,921	2,980	2,086
96	Bristol Central HS	Locker Girls	1	2L4' T8 32w/EL	vapor tight	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	121	2,240	2,240
97	Bristol Central HS	Bath Girls	1	1L3' T8 25w/EL	trof acr 1' wide	1	1	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	1	22	0.0	0.0	4	2,240	2,240
98	Bristol Central HS	Bath Girls	1	1L2' T8 17w/EL	trof acr 1' wide	1	1	17	0.0	1L2' T8 15w/ELEE LO	rlrb LF	1	15	0.0	0.0	4	2,240	2,240
99	Bristol Central HS	Bath Girls	1	2L4' T8 32w/EL	vapor tight	7	7	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	7	44	0.3	0.1	212	2,240	2,240
100	Bristol Central HS	Bath Girls	1	2L4' T8 32w/EL	vapor tight	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	0.1	242	2,240	2,240
101	Bristol Central HS	Office 137B	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	78	1,680	1,680
102	Bristol Central HS	Storage Girls Locker	1	2L4' T8 32w/EL	vapor tight	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	5	350	350
103	Bristol Central HS	Storage Girls Locker	1	26W CF HARDWIRED	square surface mt.	1	1	28	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	350	350
104	Bristol Central HS	Bath Girls Locker	1	2L4' T8 32w/EL	vapor tight	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	91	2,240	2,240
105	Bristol Central HS	Bath Girls Locker	1	2L4' T8 32w/EL	vapor tight	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	0.1	242	2,240	2,240
106	Bristol Central HS	Locker Girls Locker	1	2L4' T8 32w/EL	vapor tight	5	5	60	0.3	2L4' T8 28w/ELEE LO	rlrb LF	5	44	0.2	0.1	151	2,240	2,240
107	Bristol Central HS	Storage Girls Locker	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	9	700	700
108	Bristol Central HS	Classroom 104	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	8	62	62
109	Bristol Central HS	Office 104	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	78	1,680	1,680
110	Bristol Central HS	Classroom Group Y	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	91	1,960	1,960
111	Bristol Central HS	Storage Group Y	1	2L4' T8 32w/EL	strip cage	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	5	350	350
112	Bristol Central HS	Classroom 103	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
113	Bristol Central HS	Classroom 102	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
114	Bristol Central HS	Classroom 101	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	140	1,104	1,104
115	Bristol Central HS	Storage Near Elevator	1	2L4' T8 32w/EL	strip cage	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	5	350	350
116	Bristol Central HS	Office 134	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	156	1,680	1,680
117	Bristol Central HS	Hall Boys Locker	1	4L2' T8 17w/EL	box acrylic	8	8	62	0.5	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	8	35	0.3	0.2	417	2,240	2,240
118	Bristol Central HS	Stair 5	stair	2L4' T8 32w/EL	wrap wall mt.	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	130	3,200	3,200
119	Bristol Central HS	Stair 5	stair	2L4' T8 32w/EL	wrap wall mt.	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	173	3,200	3,200
120	Bristol Central HS	Locker Boys	1	2L4' T8 32w/EL	vapor tight	13	13	60	0.8	2L4' T8 28w/ELEE LO	rlrb LF	13	44	0.6	0.2	562	3,200	3,200
121	Bristol Central HS	Storage Boys	1	2L4' T8 32w/EL	vapor tight	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	14	350	350
122	Bristol Central HS	Storage Boys	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	5	350	350
123	Bristol Central HS	Storage 135J	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	5	350	350
124	Bristol Central HS	Office Pe	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	78	1,680	1,680
125	Bristol Central HS	Bath Boys Locker	1	2L4' T8 32w/EL	vapor tight	5	5	60	0.3	2L4' T8 28w/ELEE LO	rlrb LF	5	44	0.2	0.1	151	2,240	2,240
126	Bristol Central HS	Bath Boys Locker	1	26W CF HARDWIRED	square surface mt.	1	1	28	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	30	3,200	3,200
127	Bristol Central HS	Storage Boys Locker	1	2L4' T8 32w/EL	vapor tight	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	19	350	350
128	Bristol Central HS	Storage 135C	1	2L4' T8 32w/EL	wrap	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	19	350	350
129	Bristol Central HS	Office 135B	1	2L4' T8 32w/EL	vapor tight	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	91	1,680	1,680
130	Bristol Central HS	Hall Near 135A	1	2L4' T8 32w/EL	vapor tight	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	61	2,240	2,240
131	Bristol Central HS	Office 135A	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	78	1,680	1,680
132	Bristol Central HS	Office 133	1	2x26W CF HARDWIRED/EL	can rec 8"	14	14	54	0.8	15 WATT LED/KIT	can kit LED Spectrum	14	16	0.2	0.5	765	1,680	1,680
133	Bristol Central HS	Office 133	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	156	1,680	1,680
134	Bristol Central HS	Medical 133 (6)	1	60W INCANDESCENT	decorative	6		60	0.4	NO RETRO	no change -specialized fixture		63	0.4			2,000	2,000
135	Bristol Central HS	Medical 133 (6)	1	2x26W CF HARDWIRED/EL	can rec 8"	6	6	54	0.3	15 WATT LED/KIT	can kit LED Spectrum	6	16	0.1	0.2	390	2,000	2,000
136	Bristol Central HS	Bath 133 (2)	1	1L3' T8 25w/EL	trof acr 1' wide	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	0.0	7	2,240	2,240
137	Bristol Central HS	Bath 133 (2)	1	1L2' T8 17w/EL	trof acr 1' wide	2	2	17	0.0	1L2' T8 15w/ELEE LO	rlrb LF	2	15	0.0	0.0	9	2,240	2,240
138	Bristol Central HS	Office 133	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	78	1,680	1,680
139	Bristol Central HS	Lounge Staff	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	150	1,610	1,610
140	Bristol Central HS	Office Guidance (5)	1	4L2' T8 17w/EL	trof parabolic	10	10	62	0.6	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	10	35	0.3	0.3	391	1,680	1,680
141	Bristol Central HS	Office Career	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	223	2,400	2,400
142	Bristol Central HS	Office Rossier	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	78	1,680	1,680
143	Bristol Central HS	Office 131A	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	156	1,680	1,680
144	Bristol Central HS	Office Open 131	1	2x26W CF HARDWIRED/EL	can rec 8"	4	4	54	0.2	15 WATT LED/KIT	can kit LED Spectrum	4	16	0.1	0.2	358	2,750	1,925
145	Bristol Central HS	Office Open 131	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	128	2,750	1,925
146	Bristol Central HS	Hall 131	1	2x26W CF HARDWIRED/EL	can rec 8"	13	13	54	0.7	15 WATT LED/KIT	can kit LED Spectrum	13	16	0.2	0.5	1,050	3,200	2,240

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
147	Bristol Central HS	Lounge 131	1	2x26W CF HARDWIRED/EL	can rec 8"	6	6	54	0.3	15 WATT LED/KIT	can kit LED Spectrum	6	16	0.1	0.2	449	2,300	1,610
148	Bristol Central HS	Office Open Main	1	4L2' T8 17w/EL	trof acr	6	6	62	0.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	6	35	0.2	0.2	330	2,366	2,366
149	Bristol Central HS	Office Open Main	1	4L2' T8 17w/EL	trof parabolic	8	8	62	0.5	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	8	35	0.3	0.2	511	2,750	2,750
150	Bristol Central HS	Office Open Main	1	50W INCANDESCENT	can rec 4"	4	4	50	0.2	8 WATT LED SI	screw in LED par20	4	8	0.0	0.2	389	2,750	2,750
151	Bristol Central HS	Office Police	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	39	1,680	1,680
152	Bristol Central HS	Hall Main Office	1	2x26W CF HARDWIRED/EL	can rec 8"	15	15	54	0.8	15 WATT LED/KIT	can kit LED Spectrum	15	16	0.2	0.6	1,212	3,200	3,200
153	Bristol Central HS	Office Vice Principal (2)	1	4L2' T8 17w/EL	trof parabolic	8	8	62	0.5	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	8	35	0.3	0.2	312	1,680	1,680
154	Bristol Central HS	Office Secretary	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	156	1,680	1,680
155	Bristol Central HS	Office Principal	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	156	1,680	1,680
156	Bristol Central HS	Office Principal	1	2x26W CF HARDWIRED/EL	can rec 8"	4	4	54	0.2	15 WATT LED/KIT	can kit LED Spectrum	4	16	0.1	0.2	218	1,680	1,680
157	Bristol Central HS	Conference Main Office	1	2L2' F36 BIAX/EL	indirect/direct	6	6	74	0.4	36 WATT LED/KIT	trof kit LED	6	38	0.2	0.2	310	1,680	1,680
158	Bristol Central HS	Conference Main Office	1	2x26W CF HARDWIRED/EL	can rec 8"	4	4	54	0.2	15 WATT LED/KIT	can kit LED Spectrum	4	16	0.1	0.2	218	1,680	1,680
159	Bristol Central HS	Storage Secure	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	5	350	350
160	Bristol Central HS	Bath Main Office (2)	1	1L3' T8 25w/EL	trof acr 1' wide	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	0.0	7	2,240	2,240
161	Bristol Central HS	Bath Main Office (2)	1	1L2' T8 17w/EL	trof acr 1' wide	2	2	17	0.0	1L2' T8 15w/ELEE LO	rlrb LF	2	15	0.0	0.0	9	2,240	2,240
162	Bristol Central HS	Office Copy	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	39	1,680	1,680
163	Bristol Central HS	Library Main	1	2L2' F36 BIAX/EL	indirect/direct	32	32	74	2.4	36 WATT LED/KIT	trof kit LED	32	38	1.2	1.2	2,166	2,200	2,200
164	Bristol Central HS	Library Main	1	60W INCANDESCENT	decorative	12		60	0.7	NO RETRO	no change -specialized fixture		63	0.7			2,200	2,200
165	Bristol Central HS	Library Main	1	8L4' T8 32w/EL	box acr 4x4	1	1	224	0.2	8L4' T8 28w/ELEE LO	rlrb LF	1	174	0.2	0.0	93	2,200	2,200
166	Bristol Central HS	Conference 130B	1	4L4' T8 32w/EL-8'	trof para dbl switch	4	4	112	0.4	4L4' T8 28w/ELEE LO-8'	rlrb LF	4	87	0.3	0.1	142	1,680	1,680
167	Bristol Central HS	Conference 130B	1	50W INCANDESCENT	can rec 4"	4	4	50	0.2	8 WATT LED SI	screw in LED par20	4	8	0.0	0.2	238	1,680	1,680
168	Bristol Central HS	Conference 130B	1	2x26W CF HARDWIRED/EL	can rec 8"	2	2	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	2	16	0.0	0.1	156	2,400	2,400
169	Bristol Central HS	Conference 130B	1	2x26W CF HARDWIRED/EL	can rec 8"	44	44	54	2.4	15 WATT LED/KIT	can kit LED Spectrum	44	16	0.7	1.7	3,433	2,400	2,400
170	Bristol Central HS	Conference 130B	1	4L4' T8 32w/EL-8'	trof parabolic	34	34	112	3.8	4L4' T8 28w/ELEE LO-8'	rlrb LF	34	87	3.0	0.8	1,724	2,400	2,400
171	Bristol Central HS	Storage Computers	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	65	700	700
172	Bristol Central HS	Storage Periodicals	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	65	700	700
173	Bristol Central HS	Bath Near Stair 1 (2)	1	1L3' T8 25w/EL	trof acr 1' wide	4	4	24	0.1	1L3' T8 21w/ELEE LO	rlrb LF	4	22	0.1	0.0	15	2,240	2,240
174	Bristol Central HS	Lobby Near Auditorium	1	2x26W CF HARDWIRED/EL	can rec 8"	26	26	54	1.4	15 WATT LED/KIT	can kit LED Spectrum	26	16	0.4	1.0	2,705	3,200	3,200
175	Bristol Central HS	Storage Aud Lobby	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	16	350	350
176	Bristol Central HS	Auditorium Main	1	15W INCANDESCENT	step light	16	16	15	0.2	3 WATT LED/KIT	aislelight kit LED	16	3	0.1	0.2	258	1,600	1,600
177	Bristol Central HS	Auditorium Main	1	500W INCANDESCENT	can rec 12"	93	93	500	46.5	46 WATT LED/KIT	can kit LED Spectrum	93	48	4.5	42.0	57,131	1,600	1,600
178	Bristol Central HS	Stage Main	1	2L4' T8 32w/EL	industrial	10	10	60	0.6	2L4' T8 28w/ELEE LO	rlrb LF	10	44	0.4	0.2	216	1,600	1,600
179	Bristol Central HS	Stage Main	1	2L4' T8 32w/EL	wrap	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	86	1,600	1,600
180	Bristol Central HS	Stage Main	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	74	1,600	1,600
181	Bristol Central HS	Storage Near Stair 1	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	7	500	350
182	Bristol Central HS	Bath Men	1	2L4' T8 32w/EL-8'	trof acr 1' wide	4	4	60	0.2	2L4' T8 28w/ELEE LO-8'	rlrb LF	4	44	0.2	0.1	121	2,240	2,240
183	Bristol Central HS	Bath Men	1	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	13	2,240	2,240
184	Bristol Central HS	Bath Women	1	2L4' T8 32w/EL-8'	trof acr 1' wide	3	3	60	0.2	2L4' T8 28w/ELEE LO-8'	rlrb LF	3	44	0.1	0.0	91	2,240	2,240
185	Bristol Central HS	Bath Women	1	1L4' T8 32w/EL	trof acr 1' wide	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	26	2,240	2,240
186	Bristol Central HS	Bath Women	1	1L2' T8 17w/EL	trof acr 1' wide	1	1	17	0.0	1L2' T8 15w/ELEE LO	rlrb LF	1	15	0.0	0.0	4	2,240	2,240
187	Bristol Central HS	Storage 129	1	2L4' T8 32w/EL	wrap	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	19	350	350
188	Bristol Central HS	Classroom 128	1	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' T8 28w/ELEE LO-12'	rlrb LF	6	132	0.8	0.3	477	1,960	1,960
189	Bristol Central HS	Classroom 128	1	2x26W CF HARDWIRED/EL	can rec 8"	1	1	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	1	16	0.0	0.0	91	2,800	2,800
190	Bristol Central HS	Classroom 127	1	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' T8 28w/ELEE LO-12'	rlrb LF	6	132	0.8	0.3	477	1,960	1,960
191	Bristol Central HS	Classroom 127	1	2x26W CF HARDWIRED/EL	can rec 8"	1	1	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	1	16	0.0	0.0	91	2,800	2,800
192	Bristol Central HS	Hall 125-126	1	4L2' T8 17w/EL	box acrylic	7	7	62	0.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	7	35	0.2	0.2	404	3,200	3,200
193	Bristol Central HS	Stair 7	stair	2L4' T8 32w/EL	wrap wall mt.	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	130	3,200	3,200
194	Bristol Central HS	Stair 7	stair	2L4' T8 32w/EL	wrap wall mt.	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	130	3,200	3,200
195	Bristol Central HS	Classroom 126	1	6L4' T8 32w/EL-12'	trof para dbl switch	10	10	180	1.8	6L4' T8 28w/ELEE LO-12'	rlrb LF	10	132	1.3	0.5	795	1,960	1,960
196	Bristol Central HS	Classroom 126	1	4L4' T8 32w/EL-8'	trof para dbl switch	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	41	1,960	1,960
197	Bristol Central HS	Office 126A	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	78	1,680	1,680
198	Bristol Central HS	Storage 126B	1	4L2' T8 17w/EL	trof acr	6	6	62	0.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	6	35	0.2	0.2	98	700	700
199	Bristol Central HS	Classroom 126C	1	20W INCANDESCENT	decorative	4		20	0.1	NO RETRO	no change -specialized fixture		21	0.1			2,800	2,800
200	Bristol Central HS	Classroom 126C	1	2x15W INCANDESCENTS	decorative	4		30	0.1	NO RETRO	no change -specialized fixture		32	0.1			2,800	2,800
201	Bristol Central HS	Bath Men	1	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	13	2,240	2,240
202	Bristol Central HS	Bath Men	1	1L3' T8 25w/EL	trof acr 1' wide	1	1	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	1	22	0.0	0.0	4	2,240	2,240
203	Bristol Central HS	Bath Women	1	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	13	2,240	2,240
204	Bristol Central HS	Bath Women	1	1L3' T8 25w/EL	trof acr 1' wide	1	1	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	1	22	0.0	0.0	4	2,240	2,240
205	Bristol Central HS	Classroom 125	1	6L4' T8 32w/EL-12'	trof para dbl switch	9	9	180	1.6	6L4' T8 28w/ELEE LO-12'	rlrb LF	9	132	1.2	0.4	715	1,960	1,960
206	Bristol Central HS	Office 125A	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	78	1,680	1,680
207	Bristol Central HS	Classroom 125B	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	46	1,960	1,960
208	Bristol Central HS	Storage 125C	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	33	700	700
209	Bristol Central HS	Storage Drama	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	16	350	350
210	Bristol Central HS	Storage Drama	1	2L4' T8 32w/EL	strip cage	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	14	500	500
211	Bristol Central HS	Storage 123	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	8	350	350
212	Bristol Central HS	Classroom 124	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
213	Bristol Central HS	Office 119	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	112	2,400	1,680
214	Bristol Central HS	Storage 119	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	12	500	350
215	Bristol Central HS	Classroom 122	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
216	Bristol Central HS	Classroom 117	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
217	Bristol Central HS	Classroom 120	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
218	Bristol Central HS	Classroom 118	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
219	Bristol Central HS	Classroom 115	1	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' T8 28w/ELEE LO-12'	rlrb LF	6	132	0.8	0.3	164	675	675

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
220	Bristol Central HS	Classroom 116	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
221	Bristol Central HS	Classroom 113	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
222	Bristol Central HS	Classroom 111	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
223	Bristol Central HS	Classroom 114	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
224	Bristol Central HS	Classroom 112	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
225	Bristol Central HS	Office Open 109	1	4L2' T8 17w/EL	trof parabolic	3	3	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	0.1	134	1,925	1,925
226	Bristol Central HS	Office 109 (4)	1	4L2' T8 17w/EL	trof parabolic	12	12	62	0.7	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	12	35	0.4	0.3	469	1,680	1,680
227	Bristol Central HS	Conference 109A	1	4L2' T8 17w/EL	trof parabolic	3	3	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	0.1	117	1,680	1,680
228	Bristol Central HS	Classroom 110	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
229	Bristol Central HS	Classroom 107	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	39	307	307
230	Bristol Central HS	Classroom 108	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
231	Bristol Central HS	Office 105	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	156	1,680	1,680
232	Bristol Central HS	Storage 105	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	8	350	350
233	Bristol Central HS	Classroom 106	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
234	Bristol Central HS	Bath 106 (2)	1	1L3' T8 25w/EL	trof acr 1' wide	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	0.0	7	2,240	2,240
235	Bristol Central HS	Bath 106 (2)	1	1L2' T8 17w/EL	trof acr 1' wide	2	2	17	0.0	1L2' T8 15w/ELEE LO	rlrb LF	2	15	0.0	0.0	9	2,240	2,240
236	Bristol Central HS	Hall Trophy Display Case	1	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	10	750	750
237	Bristol Central HS	Hall Art Display Case	1	2L4' T12 34w EE/EEMAG-8'	strip	1	1	70	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	17	750	750
238	Bristol Central HS	Hall Art Display Case	1	1L4' T12 34w EE/EEMAG	strip	1	1	40	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	11	750	750
239	Bristol Central HS	Hall Art Display Case	1	1L2' T12 20w STD/STD	strip	1	1	32	0.0	1L2' T8 15w/ELEE LO	rlrb LF	1	15	0.0	0.0	11	750	750
240	Bristol Central HS	Hall 35-23	b	8L4' T8 32w/EL	box acr 4x4	1	1	224	0.2	8L4' T8 28w/ELEE LO	rlrb LF	1	174	0.2	0.0	105	3,200	3,200
241	Bristol Central HS	Hall 35-23	b	4L2' T8 17w/EL	box acrylic	20	20	62	1.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	20	35	0.7	0.5	1,155	3,200	3,200
242	Bristol Central HS	Hall 21-14	b	8L4' T8 32w/EL	box acr 4x4	1	1	224	0.2	8L4' T8 28w/ELEE LO	rlrb LF	1	174	0.2	0.0	105	3,200	3,200
243	Bristol Central HS	Hall 21-14	b	4L2' T8 17w/EL	box acrylic	14	14	62	0.9	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	14	35	0.5	0.4	809	3,200	3,200
244	Bristol Central HS	Hall 14-4	b	8L4' T8 32w/EL	box acr 4x4	1	1	224	0.2	8L4' T8 28w/ELEE LO	rlrb LF	1	174	0.2	0.0	105	3,200	3,200
245	Bristol Central HS	Hall 14-4	b	4L2' T8 17w/EL	box acrylic	20	20	62	1.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	20	35	0.7	0.5	1,155	3,200	3,200
246	Bristol Central HS	Hall 4-35	b	8L4' T8 32w/EL	box acr 4x4	1	1	224	0.2	8L4' T8 28w/ELEE LO	rlrb LF	1	174	0.2	0.0	105	3,200	3,200
247	Bristol Central HS	Hall 4-35	b	4L2' T8 17w/EL	box acrylic	13	13	62	0.8	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	13	35	0.5	0.4	751	3,200	3,200
248	Bristol Central HS	Office 36	b	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	78	1,680	1,680
249	Bristol Central HS	Office 34	b	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	78	1,680	1,680
250	Bristol Central HS	Classroom 35	b	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' T8 28w/ELEE LO-12'	rlrb LF	6	132	0.8	0.3	477	1,960	1,960
251	Bristol Central HS	Lounge 30	b	4L2' T8 17w/EL	box acrylic	8	8	62	0.5	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	8	35	0.3	0.2	299	1,610	1,610
252	Bristol Central HS	Lounge 30	b	2x26W CF HARDWIRED/EL	can rec 8"	8	8	54	0.4	15 WATT LED/KIT	can kit LED Spectrum	8	16	0.1	0.3	419	1,610	1,610
253	Bristol Central HS	Storage 30	b	4L4' T8 32w/EL-8'	strip cage	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	15	350	350
254	Bristol Central HS	Classroom 33	b	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	156	1,227	1,227
255	Bristol Central HS	Storage 28	b	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	16	350	350
256	Bristol Central HS	Storage 26	b	4L4' T8 32w/EL-8'	strip cage	4	4	112	0.4	4L4' T8 28w/ELEE LO-8'	rlrb LF	4	87	0.3	0.1	42	500	350
257	Bristol Central HS	Storage 26	b	4L4' T8 32w/EL-8'	strip cage	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	11	500	350
258	Bristol Central HS	Classroom 31	b	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' T8 28w/ELEE LO-12'	rlrb LF	6	132	0.8	0.3	477	1,960	1,960
259	Bristol Central HS	Classroom 29	b	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
260	Bristol Central HS	Mechanical 24	b	4L4' T8 32w/EL-8'	strip cage	5	5	112	0.6	4L4' T8 28w/ELEE LO-8'	rlrb LF	5	87	0.4	0.1	53	500	500
261	Bristol Central HS	Exercise 22	b	4L2' T8 17w/EL	box acrylic	11	11	62	0.7	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	11	35	0.4	0.3	533	2,086	2,086
262	Bristol Central HS	Exercise 22	b	2L4' T8 32w/EL	box acrylic	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	28	2,086	2,086
263	Bristol Central HS	Exercise 22	b	8L4' T8 32w/EL	box acr 4x4	5	5	224	1.1	8L4' T8 28w/ELEE LO	rlrb LF	5	174	0.9	0.2	441	2,086	2,086
264	Bristol Central HS	Classroom 27	b	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	47	369	369
265	Bristol Central HS	Classroom 25	b	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' T8 28w/ELEE LO-12'	rlrb LF	6	132	0.8	0.3	477	1,960	1,960
266	Bristol Central HS	Classroom 23	b	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	179	1,411	1,411
267	Bristol Central HS	Bath Near Stair (2)	b	1L4' T8 32w/EL	trof acr 1' wide	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	26	2,240	2,240
268	Bristol Central HS	Bath Near Stair (2)	b	1L2' T8 17w/EL	trof acr 1' wide	2	2	17	0.0	1L2' T8 15w/ELEE LO	rlrb LF	2	15	0.0	0.0	9	2,240	2,240
269	Bristol Central HS	Storage Near Stair 1	b	2L4' T8 32w/EL	strip cage	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	20	500	500
270	Bristol Central HS	Storage 22B	b	2L4' T8 32w/EL	strip cage	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	5	350	350
271	Bristol Central HS	Storage Electric	b	2L4' T8 32w/EL	strip cage	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	5	350	350
272	Bristol Central HS	Storage Janitor	b	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	5	350	350
273	Bristol Central HS	Bath Men	b	2L4' T8 32w/EL-8'	trof acr 1' wide	4	4	60	0.2	2L4' T8 28w/ELEE LO-8'	rlrb LF	4	44	0.2	0.1	121	2,240	2,240
274	Bristol Central HS	Bath Men	b	1L3' T8 25w/EL	trof acr 1' wide	1	1	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	1	22	0.0	0.0	4	2,240	2,240
275	Bristol Central HS	Bath Women	b	2L4' T8 32w/EL-8'	trof acr 1' wide	3	3	60	0.2	2L4' T8 28w/ELEE LO-8'	rlrb LF	3	44	0.1	0.0	91	2,240	2,240
276	Bristol Central HS	Bath Women	b	1L4' T8 32w/EL	trof acr 1' wide	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	26	2,240	2,240
277	Bristol Central HS	Bath Women	b	1L2' T8 17w/EL	trof acr 1' wide	1	1	17	0.0	1L2' T8 15w/ELEE LO	rlrb LF	1	15	0.0	0.0	4	2,240	2,240
278	Bristol Central HS	Storage Chairs	b	4L2' T8 17w/EL	box acrylic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	23	500	500
279	Bristol Central HS	Classroom 21	b	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
280	Bristol Central HS	Classroom 20	b	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' T8 28w/ELEE LO-12'	rlrb LF	6	132	0.8	0.3	477	1,960	1,960
281	Bristol Central HS	Storage Supplies	b	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	33	350	350
282	Bristol Central HS	Classroom 19	b	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
283	Bristol Central HS	Storage 19A	b	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	16	350	350
284	Bristol Central HS	Hall 15-18	b	4L2' T8 17w/EL	box acrylic	7	7	62	0.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	7	35	0.2	0.2	404	3,200	3,200
285	Bristol Central HS	Lab 18	b	4L4' T8 32w/EL-8'	vapor tight	20	20	112	2.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	20	87	1.7	0.5	1,141	2,700	1,890
286	Bristol Central HS	Storage 18	b	4L4' T8 32w/EL-8'	vapor tight	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	7	350	350
287	Bristol Central HS	Storage 18	b	4L4' T8 32w/EL-8'	vapor tight	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	7	350	350
288	Bristol Central HS	Office 18	b	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	223	2,400	1,680
289	Bristol Central HS	Lab 17	b	4L4' T8 32w/EL-8'	vapor tight	25	25	112	2.8	4L4' T8 28w/ELEE LO-8'	rlrb LF	25	87	2.2	0.6	1,426	2,700	2,700
290	Bristol Central HS	Office 17	b	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	78	1,680	1,680
291	Bristol Central HS	Storage 17B	b	4L2' T8 17w/EL	box acrylic	1	1	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	12	500	350
292	Bristol Central HS	Storage 17C	b	4L2' T8 17w/EL	box acrylic	1	1	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	23	1,000	700

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
293	Bristol Central HS	Storage Clamps	b	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	93	1,000	700
294	Bristol Central HS	Classroom 16	b	4L4' T8 32w/EL-8'	vapor tight	16	16	112	1.8	4L4' T8 28w/ELEE LO-8'	rlrb LF	16	87	1.4	0.4	946	2,800	2,800
295	Bristol Central HS	Classroom 16	b	4L2' T8 17w/EL	trof acr	3	3	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	0.1	195	2,800	1,960
296	Bristol Central HS	Classroom 16	b	4L4' T8 32w/EL-8'	vapor tight	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	59	2,800	2,800
297	Bristol Central HS	Storage 16	b	4L4' T8 32w/EL-8'	vapor tight	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	11	500	350
298	Bristol Central HS	Storage 16	b	4L2' T8 17w/EL	box acrylic	1	1	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	8	350	350
299	Bristol Central HS	Storage Near C19	b	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	16	350	350
300	Bristol Central HS	Office 19B	b	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	156	1,680	1,680
301	Bristol Central HS	Storage 13C	b	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	5	350	350
302	Bristol Central HS	Classroom 14	b	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' T8 28w/ELEE LO-12'	rlrb LF	6	132	0.8	0.3	477	1,960	1,960
303	Bristol Central HS	Storage Across From C14	b	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	16	350	350
304	Bristol Central HS	Classroom 12	b	4L4' T8 32w/EL-8'	trof para dbl switch	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	83	1,960	1,960
305	Bristol Central HS	Classroom 13	b	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' T8 28w/ELEE LO-12'	rlrb LF	6	132	0.8	0.3	477	1,960	1,960
306	Bristol Central HS	Storage 13A	b	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	33	700	700
307	Bristol Central HS	Classroom 11	b	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' T8 28w/ELEE LO-12'	rlrb LF	6	132	0.8	0.3	477	1,960	1,960
308	Bristol Central HS	Classroom 10	b	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' T8 28w/ELEE LO-12'	rlrb LF	6	132	0.8	0.3	477	1,960	1,960
309	Bristol Central HS	Classroom 10	b	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
310	Bristol Central HS	Classroom 9	b	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' T8 28w/ELEE LO-12'	rlrb LF	6	132	0.8	0.3	477	1,960	1,960
311	Bristol Central HS	Classroom 8	b	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' T8 28w/ELEE LO-12'	rlrb LF	6	132	0.8	0.3	477	1,960	1,960
312	Bristol Central HS	Classroom 8	b	4L4' T8 32w/EL-8'	trof para dbl switch	4	4	112	0.4	4L4' T8 28w/ELEE LO-8'	rlrb LF	4	87	0.3	0.1	166	1,960	1,960
313	Bristol Central HS	Classroom 7	b	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' T8 28w/ELEE LO-12'	rlrb LF	6	132	0.8	0.3	477	1,960	1,960
314	Bristol Central HS	Classroom 5	b	6L4' T8 32w/EL-12'	trof para dbl switch	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
315	Bristol Central HS	Classroom 5	b	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
316	Bristol Central HS	Classroom 6	b	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' T8 28w/ELEE LO-12'	rlrb LF	6	132	0.8	0.3	477	1,960	1,960
317	Bristol Central HS	Classroom 6	b	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
318	Bristol Central HS	Office 6A	b	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	112	2,400	1,680
319	Bristol Central HS	Storage 6A	b	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	5	350	350
320	Bristol Central HS	Classroom 4	b	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
321	Bristol Central HS	Bath Near Stair 4 (2)	b	1L3' T8 25w/EL	trof acr 1' wide	4	4	24	0.1	1L3' T8 21w/ELEE LO	rlrb LF	4	22	0.1	0.0	15	2,240	2,240
322	Bristol Central HS	Storage Janitor	b	2L4' T8 32w/EL	strip cage	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	5	350	350
323	Bristol Central HS	Bath Men	b	2L4' T8 32w/EL-8'	trof acr 1' wide	4	4	60	0.2	2L4' T8 28w/ELEE LO-8'	rlrb LF	4	44	0.2	0.1	121	2,240	2,240
324	Bristol Central HS	Bath Men	b	1L4' T8 32w/EL	trof acr 1' wide	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	26	2,240	2,240
325	Bristol Central HS	Bath Woman	b	2L4' T8 32w/EL-8'	trof acr 1' wide	4	4	60	0.2	2L4' T8 28w/ELEE LO-8'	rlrb LF	4	44	0.2	0.1	121	2,240	2,240
326	Bristol Central HS	Bath Woman	b	1L4' T8 32w/EL	trof acr 1' wide	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	26	2,240	2,240
327	Bristol Central HS	Bath Woman	b	1L2' T8 17w/EL	trof acr 1' wide	1	1	17	0.0	1L2' T8 15w/ELEE LO	rlrb LF	1	15	0.0	0.0	4	2,240	2,240
328	Bristol Central HS	Storage Lamps	b	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	23	500	500
329	Bristol Central HS	Classroom 3	b	4L4' T8 32w/EL-8'	trof para dbl switch	5	5	112	0.6	4L4' T8 28w/ELEE LO-8'	rlrb LF	5	87	0.4	0.1	207	1,960	1,960
330	Bristol Central HS	Classroom 3	b	2x26W CF HARDWIRED/EL	can rec 8"	6	6	54	0.3	15 WATT LED/KIT	can kit LED Spectrum	6	16	0.1	0.2	382	1,960	1,960
331	Bristol Central HS	Storage 3A	b	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	19	700	700
332	Bristol Central HS	Storage 2	b	6L4' T8 32w/EL-12'	trof para dbl switch	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	85	700	700
333	Bristol Central HS	Storage 2	b	2x26W CF HARDWIRED/EL	can rec 8"	3	3	54	0.2	15 WATT LED/KIT	can kit LED Spectrum	3	16	0.0	0.1	68	700	700
334	Bristol Central HS	Cafeteria 43	b	4L2' T8 17w/EL	box acrylic	7	7	62	0.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	7	35	0.2	0.2	325	2,000	2,000
335	Bristol Central HS	Cafeteria 43	b	4L2' T8 17w/EL	trof acr	66	66	62	4.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	66	35	2.3	1.8	3,069	2,000	2,000
336	Bristol Central HS	Cafeteria 43	b	2x26W CF HARDWIRED/EL	can rec 8"	3	3	54	0.2	15 WATT LED/KIT	can kit LED Spectrum	3	16	0.0	0.1	195	2,000	2,000
337	Bristol Central HS	Cafeteria Senior	b	4L2' T8 17w/EL	trof acr	25	25	62	1.6	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	25	35	0.9	0.7	1,162	2,000	1,400
338	Bristol Central HS	Cafeteria Senior	b	2x26W CF HARDWIRED/EL	can rec 8"	5	5	54	0.3	15 WATT LED/KIT	can kit LED Spectrum	5	16	0.1	0.2	325	2,000	2,000
339	Bristol Central HS	Lounge 43D	b	4L2' T8 17w/EL	trof parabolic	6	6	62	0.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	6	35	0.2	0.2	225	1,610	1,610
340	Bristol Central HS	Retail School Store	b	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	104	1,120	1,120
341	Bristol Central HS	Kitchen 42	b	4L2' T8 17w/EL	trof acr	21	21	62	1.3	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	21	35	0.7	0.6	1,172	2,400	1,680
342	Bristol Central HS	Kitchen 42	b	4L2' T8 17w/EL	trof acr	36	36	62	2.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	36	35	1.2	1.0	2,009	2,400	1,680
343	Bristol Central HS	Office 42C	b	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	78	1,680	1,680
344	Bristol Central HS	Locker 42	b	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	30	2,240	2,240
345	Bristol Central HS	Locker 42	b	2x26W CF HARDWIRED/EL	can rec 8"	1	1	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	1	16	0.0	0.0	73	2,240	2,240
346	Bristol Central HS	Bath 42	b	1L3' T8 25w/EL	trof acr 1' wide	1	1	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	1	22	0.0	0.0	4	2,240	2,240
347	Bristol Central HS	Bath 42	b	1L2' T8 17w/EL	trof acr 1' wide	1	1	17	0.0	1L2' T8 15w/ELEE LO	rlrb LF	1	15	0.0	0.0	4	2,240	2,240
348	Bristol Central HS	Bath 42	b	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	140	3,200	3,200
349	Bristol Central HS	Hall 42	b	4L2' T8 17w/EL	box acrylic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	116	3,200	2,240
350	Bristol Central HS	Storage 42D	b	4L2' T8 17w/EL	trof acr	6	6	62	0.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	6	35	0.2	0.2	98	700	700
351	Bristol Central HS	Office 42E	b	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	156	1,680	1,680
352	Bristol Central HS	Freezer Walk-In	b	60W INCANDESCENT	jar cage	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	88	1,000	1,000
353	Bristol Central HS	Freezer Walk-In	b	60W INCANDESCENT	jar cage	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	44	1,000	1,000
354	Bristol Central HS	Kitchen 42	b	60W INCANDESCENT	range hood	8	8	60	0.5	8 WATT LED SI	screw in LED Alamp	8	8	0.1	0.4	842	2,400	2,400
355	Bristol Central HS	Storage Supplies	b	4L4' T8 32w/EL-8'	strip cage	4	4	112	0.4	4L4' T8 28w/ELEE LO-8'	rlrb LF	4	87	0.3	0.1	84	1,000	700
356	Bristol Central HS	Storage Supplies	b	2L4' T8 32w/EL	strip reflector	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	19	700	700
357	Bristol Central HS	Storage 43	b	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	19	700	700
358	Bristol Central HS	Storage 42A	b	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	16	700	700
359	Bristol Central HS	Hall Custodian	b	4L4' T8 32w/EL-8'	strip cage	13	13	112	1.5	4L4' T8 28w/ELEE LO-8'	rlrb LF	13	87	1.1	0.3	879	3,200	2,240
360	Bristol Central HS	Office 41A	b	4L2' T8 17w/EL	box acrylic	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	156	1,680	1,680
361	Bristol Central HS	Mechanical 41H	b	4L4' T8 32w/EL-8'	strip cage	22	22	112	2.5	4L4' T8 28w/ELEE LO-8'	rlrb LF	22	87	1.9	0.5	232	500	500
362	Bristol Central HS	Storage Tunnel Area	b	2x26W CF HARDWIRED/EL	square surface mt.	8	8	54	0.4	16 WATT LED/NEW	new LED drum	8	17	0.1	0.3	190	750	750
363	Bristol Central HS	Locker Maint	b	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	43	3,200	3,200
364	Bristol Central HS	Bath Maint	b	2L3' T8 25w/EL-6'	trof acr 1' wide	1	1	47	0.0	2L3' T8 21w/ELEE LO-6'	rlrb LF	1	42	0.0	0.0	10	2,240	2,240
365	Bristol Central HS	Storage 40	b	2L3' T8 25w/EL-6'	trof acr 1' wide			47		2L3' T8 21w/ELEE LO-6'	rlrb LF		42				500	500

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
366	Bristol Central HS	Classroom 1	b	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' T8 28w/ELEE LO-12'	rlrb LF	6	132	0.8	0.3	477	1,960	1,960
367	Bristol Central HS	Classroom 1	b	2x26W CF HARDWIRED/EL	can rec 8"	6	6	54	0.3	15 WATT LED/KIT	can kit LED Spectrum	6	16	0.1	0.2	382	1,960	1,960
368	Bristol Central HS	Office 1	b	4L2' T8 17w/EL	trof acr	3	3	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	0.1	167	2,400	1,680
369	Bristol Central HS	Office 1	b	1L4' T5 HO/EL	task strip	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,400	1,680
370	Bristol Central HS	Storage 39B	b	2L4' T8 32w/EL	wrap	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	38	700	700
371	Bristol Central HS	Storage Elevator	b	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	7	500	350
372	Bristol Central HS	Storage 38	b	4L2' T8 17w/EL	trof acr	5	5	62	0.3	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	5	35	0.2	0.1	116	1,000	700
373	Bristol Central HS	Locker 37K	b	2L4' T8 32w/EL	vapor tight	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	61	2,240	2,240
374	Bristol Central HS	Hall 37H	b	2L4' T8 32w/EL	vapor tight	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	30	2,240	2,240
375	Bristol Central HS	Locker 37G	b	2L4' T8 32w/EL	vapor tight	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	91	2,240	2,240
376	Bristol Central HS	Bath 37F	b	2L4' T8 32w/EL	vapor tight	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	61	2,240	2,240
377	Bristol Central HS	Bath 37F	b	2x26W CF HARDWIRED/EL	square recessed	4	4	54	0.2	16 WATT LED/NEW	new LED drum	4	17	0.1	0.1	283	2,240	2,240
378	Bristol Central HS	Office 37A	b	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	78	1,680	1,680
379	Bristol Central HS	Bath 37A	b	2L4' T8 32w/EL	vapor tight	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	43	3,200	2,240
380	Bristol Central HS	Bath 37A	b	2x26W CF HARDWIRED/EL	square recessed	1	1	54	0.1	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	101	3,200	2,240
381	Bristol Central HS	Bath Locker Room	b	2L4' T8 32w/EL	vapor tight	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	61	2,240	2,240
382	Bristol Central HS	Locker 37	b	2L4' T8 32w/EL	vapor tight	6	6	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	6	44	0.3	0.1	182	2,240	2,240
383	Bristol Central HS	Storage 37	b	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	16	350	350
384	Bristol Central HS	Locker Team Room	b	2L4' T8 32w/EL	vapor tight	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	121	2,240	2,240
385	Bristol Central HS	Bath Team Room	b	2L4' T8 32w/EL	vapor tight	5	5	60	0.3	2L4' T8 28w/ELEE LO	rlrb LF	5	44	0.2	0.1	151	2,240	2,240
386	Bristol Central HS	Locker Pads (3)	b	2L4' T8 32w/EL	vapor tight	12	12	60	0.7	2L4' T8 28w/ELEE LO	rlrb LF	12	44	0.5	0.2	363	2,240	2,240
387	Bristol Central HS	Office 37E	b	4L2' T8 17w/EL	trof parabolic	3	3	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	0.1	117	1,680	1,680
388	Bristol Central HS	Bath 37E	b	2L4' T8 32w/EL	vapor tight	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	61	2,240	2,240
389	Bristol Central HS	Bath 37E	b	2L4' T8 32w/EL-8'	trof acr 1' wide	3	3	60	0.2	2L4' T8 28w/ELEE LO-8'	rlrb LF	3	44	0.1	0.0	91	2,240	2,240
390	Bristol Central HS	Bath 37E	b	2x26W CF HARDWIRED/EL	square recessed	2	2	54	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.1	202	3,200	3,200
391	Bristol Central HS	Storage 32	b	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	33	700	700
392	Bristol Central HS	Storage 32	b	2L4' T8 32w/EL	strip cage	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	54	1,000	700
398	South Side ES	Classroom 21	2	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	4L4' T8 28w/ELEE LO	rlrb LF	9	87	0.8	0.2	187	982	982
399	South Side ES	Classroom 21	2	1L4' T5 HO/EL	task strip	3		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200
400	South Side ES	Classroom 20	2	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	4L4' T8 28w/ELEE LO	rlrb LF	9	87	0.8	0.2	293	1,540	1,540
401	South Side ES	Classroom 20	2	1L4' T5 HO/EL	task strip	3		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200
402	South Side ES	Classroom 22	2	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	4L4' T8 28w/ELEE LO	rlrb LF	9	87	0.8	0.2	187	982	982
403	South Side ES	Classroom 22	2	1L4' T5 HO/EL	task strip	3		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200
404	South Side ES	Classroom 19	2	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	4L4' T8 28w/ELEE LO	rlrb LF	9	87	0.8	0.2	140	737	737
405	South Side ES	Classroom 19	2	1L4' T5 HO/EL	task strip	3		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200
406	South Side ES	Classroom 23	2	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	4L4' T8 28w/ELEE LO	rlrb LF	9	87	0.8	0.2	187	982	982
407	South Side ES	Classroom 23	2	1L4' T5 HO/EL	task strip	3		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200
408	South Side ES	Classroom 18	2	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	4L4' T8 28w/ELEE LO	rlrb LF	9	87	0.8	0.2	198	1,043	1,043
409	South Side ES	Classroom 18	2	1L4' T5 HO/EL	task strip	3		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200
410	South Side ES	Classroom 24	2	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	4L4' T8 28w/ELEE LO	rlrb LF	9	87	0.8	0.2	293	1,540	1,540
411	South Side ES	Classroom 24	2	1L4' T5 HO/EL	task strip	3		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200
412	South Side ES	Classroom 17	2	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	4L4' T8 28w/ELEE LO	rlrb LF	9	87	0.8	0.2	293	1,540	1,540
413	South Side ES	Classroom 17	2	1L4' T5 HO/EL	task strip	3		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200
414	South Side ES	Library Main	2	4L4' T8 32w/EL	trof acr	29	29	112	3.2	4L4' T8 28w/ELEE LO	rlrb LF	29	87	2.5	0.7	902	1,473	1,473
415	South Side ES	Office Library	2	4L4' T8 32w/EL-8'	box acrylic	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	84	2,000	1,400
416	South Side ES	Office Library	2	2L4' T8 32w/EL	box acrylic	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	54	2,000	1,400
417	South Side ES	Conference Room F	2	4L4' T8 32w/EL-8'	box acrylic	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	30	1,400	1,400
418	South Side ES	Storage A	2	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	14	1,000	700
419	South Side ES	Lobby Elevator	2	2L4' T8 32w U/EL	box acrylic	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	65	3,000	2,100
420	South Side ES	Office Conf Ijk	2	2L4' T8 32w/EL	box acrylic	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	54	2,000	1,400
421	South Side ES	Conference I	2	2L4' T8 32w/EL	box acrylic	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	38	1,400	1,400
422	South Side ES	Conference K	2	2L4' T8 32w/ELEE	box acrylic	4	4	53	0.2	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	4	50	0.2	0.0	12	1,400	1,400
423	South Side ES	Conference J	2	2L4' T8 32w/EL	box acrylic	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	38	1,400	1,400
424	South Side ES	Conference G	2	4L4' T8 32w/EL-8'	box acrylic	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	30	1,400	1,400
425	South Side ES	Hall Lib-Conf K	2	2L4' T8 32w U/EL	box acrylic	12	12	60	0.7	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	12	35	0.4	0.3	776	3,000	2,100
426	South Side ES	Hall 24-20	2	2L4' T8 U 32w/ELEE	box acrylic	12	12	53	0.6	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	12	35	0.4	0.2	562	3,000	2,100
427	South Side ES	Bath Near Storage C (2)	2	1L4' T8 32w/EL	wrap narrow	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	25	2,100	2,100
428	South Side ES	Bath Near Storage C (2)	2	2L4' T8 32w/EL	vanity	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	57	2,100	2,100
429	South Side ES	Storage Custodial	2	1L4' T8 32w/EL	strip	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	2	350	350
430	South Side ES	Storage Books	2	4L4' T8 32w/EL-8'	box acrylic	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	15	700	700
431	South Side ES	Storage Classroom	2	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	9	700	700
432	South Side ES	Hall 25-30	2	2L4' T8 32w U/EL	box acrylic	18	18	60	1.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	18	35	0.6	0.5	1,164	3,000	2,100
433	South Side ES	Conference Room H	2	4L4' T8 32w/EL-8'	box acrylic	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	84	2,000	1,400
434	South Side ES	Classroom 25	2	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	4L4' T8 28w/ELEE LO	rlrb LF	9	87	0.8	0.2	293	1,540	1,540
435	South Side ES	Classroom 25	2	1L4' T5 HO/EL	task strip	3		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200
436	South Side ES	Classroom 26	2	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	4L4' T8 28w/ELEE LO	rlrb LF	9	87	0.8	0.2	293	1,540	1,540
437	South Side ES	Classroom 26	2	1L4' T5 HO/EL	task strip	3		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200
438	South Side ES	Bath Boys	2	2L4' T8 32w/EL-8'	wrap narrow	2	2	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	2	44	0.1	0.0	81	3,000	2,100
439	South Side ES	Bath Boys	2	1L4' T8 32w/EL	wrap narrow	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	18	3,000	2,100
440	South Side ES	Bath Girls	2	2L4' T8 32w/EL-8'	wrap narrow	2	2	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	2	44	0.1	0.0	81	3,000	2,100
441	South Side ES	Bath Girls	2	1L4' T8 32w/EL	wrap narrow	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	18	3,000	2,100
442	South Side ES	Classroom 32	2	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	4L4' T8 28w/ELEE LO	rlrb LF	9	87	0.8	0.2	140	737	737
443	South Side ES	Classroom 32	2	1L4' T5 HO/EL	task strip	3		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
444	South Side ES	Classroom 27	2	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	4L4' T8 28w/ELEE LO	rlrb LF	9	87	0.8	0.2	293	1,540	1,540
445	South Side ES	Classroom 27	2	1L4' T5 HO/EL	task strip	3		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200
446	South Side ES	Classroom 28	2	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	4L4' T8 28w/ELEE LO	rlrb LF	9	87	0.8	0.2	293	1,540	1,540
447	South Side ES	Classroom 28	2	1L4' T5 HO/EL	task strip	3		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200
448	South Side ES	Classroom 31	2	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	4L4' T8 28w/ELEE LO	rlrb LF	9	87	0.8	0.2	293	1,540	1,540
449	South Side ES	Classroom 31	2	1L4' T5 HO/EL	task strip	3		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200
450	South Side ES	Classroom 29	2	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	4L4' T8 28w/ELEE LO	rlrb LF	9	87	0.8	0.2	293	1,540	1,540
451	South Side ES	Classroom 29	2	1L4' T5 HO/EL	task strip	3		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200
452	South Side ES	Classroom 30	2	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	4L4' T8 28w/ELEE LO	rlrb LF	9	87	0.8	0.2	293	1,540	1,540
453	South Side ES	Classroom 30	2	1L4' T5 HO/EL	task strip	3		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200
454	South Side ES	Stair North	stair	4L4' T8 32w/EL-8'	box acr 1' wide	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	190	3,000	3,000
455	South Side ES	Stair North	stair	2L4' T8 32w/EL	box acrylic	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	41	3,000	3,000
456	South Side ES	Hall 8-14	1	2L4' T8 32w U/EL	box acrylic	18	18	60	1.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	18	35	0.6	0.5	1,164	3,000	2,100
457	South Side ES	Hall 5-Conf D	1	2L4' T8 32w U/EL	box acrylic	19	19	60	1.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	19	35	0.7	0.5	1,228	3,000	2,100
458	South Side ES	Stair West	stair	4L4' T8 32w/EL-8'	box acr 1' wide	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	190	3,000	3,000
459	South Side ES	Stair West	stair	2L4' T8 32w U/EL	box acrylic	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	129	3,000	3,000
460	South Side ES	Lobby Main	1	2L4' T8 32w U/EL	box acrylic	4	4	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	259	3,000	2,100
461	South Side ES	Lobby Main	1	4L4' T8 32w/EL	trof opaque 4x4	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	127	3,000	2,100
462	South Side ES	Hall Caf-Gym	1	2L4' T8 32w U/EL	box acrylic	17	17	60	1.0	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	17	35	0.6	0.4	1,099	3,000	2,100
463	South Side ES	Lounge Faculty	1	2L4' T8 32w/EL	box acrylic	6	6	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	6	44	0.3	0.1	102	1,260	1,260
464	South Side ES	Office K	1	4L4' T8 32w/EL-8'	wrap	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	84	2,000	1,400
465	South Side ES	Kitchen Main	1	4L4' T8 32w/EL	box acrylic	18	18	112	2.0	4L4' T8 28w/ELEE LO	rlrb LF	18	87	1.6	0.4	722	1,900	1,900
466	South Side ES	Bath Kitchen	1	1L4' T8 32w/EL	wrap narrow	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	18	3,000	2,100
467	South Side ES	Bath Kitchen	1	60W INCANDESCENT	jar	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	132	3,000	2,100
468	South Side ES	Bath Kitchen	1	2L2' T8 17w/EL	wrap	1	1	33	0.0	2L2' T8 15w/ELEE LO	rlrb LF	1	28	0.0	0.0	12	3,000	2,100
469	South Side ES	Office Kitchen	1	4L4' T8 32w/EL-8'	strip	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	42	2,000	1,400
470	South Side ES	Office Kitchen	1	2L4' T8 32w/EL	strip	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	27	2,000	1,400
471	South Side ES	Storage Cups	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	7	500	350
472	South Side ES	Cafeteria Main	1	4L4' T8 32w/EL	trof opaque 4x4	13	13	112	1.5	4L4' T8 28w/ELEE LO	rlrb LF	13	87	1.1	0.3	467	1,700	1,190
473	South Side ES	Cafeteria Main	1	300W INCANDESCENT	can eyeball rec	6	6	300	1.8	17 WATT LED SI	screw in LED par38	6	18	0.1	1.7	2,446	1,700	1,700
474	South Side ES	Stage Cafeteria	1	3x13W CF HARDWIRED	drum	2	2	45	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.1	77	1,600	1,120
475	South Side ES	Stage Cafeteria	1	4L4' T8 32w/EL-8'	wrap	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	203	1,600	1,120
476	South Side ES	Office Music	1	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	27	2,000	1,400
477	South Side ES	Gym Main	1	4L4' T5 HO/EL	high bay	18	18	234	4.2	98 WATT LED/NEW	new LED hibay wg	18	103	1.9	2.4	4,012	2,000	1,400
478	South Side ES	Gym Main	1	2L4' T8 32w U/EL	box acrylic	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	86	2,000	2,000
479	South Side ES	Office Phys Ed	1	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	27	2,000	1,400
480	South Side ES	Bath Phys Ed	1	3x13W CF HARDWIRED	drum	2	2	45	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.1	144	3,000	2,100
481	South Side ES	Mechanical Air Handler	1	60W INCANDESCENT	jar	3	3	60	0.2	8 WATT LED SI	screw in LED Alamp	3	8	0.0	0.2	66	500	500
482	South Side ES	Bath Gym Area	1	1L4' T8 32w/EL	wrap narrow	3	3	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	3	23	0.1	0.0	53	3,000	3,000
483	South Side ES	Bath Gym Area	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	3,000
484	South Side ES	Storage Gym Area	1	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	9	700	700
485	South Side ES	Storage Book Room	1	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	7	500	350
486	South Side ES	Stair Central	stair	2L4' T8 32w/EL	box acr 1' wide	5	5	60	0.3	2L4' T8 28w/ELEE LO	rlrb LF	5	44	0.2	0.1	203	3,000	3,000
487	South Side ES	Stair Central	stair	1L4' T8 32w/EL	strip	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	18	3,000	3,000
488	South Side ES	Office Open Main	1	4L4' T8 32w/EL-8'	box acrylic	5	5	112	0.6	4L4' T8 28w/ELEE LO-8'	rlrb LF	5	87	0.4	0.1	168	1,595	1,595
489	South Side ES	Office Open Main	1	4L4' T8 32w/EL	box acrylic	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	71	1,680	1,680
490	South Side ES	Hall Main Office	1	2L4' T8 32w/EL	box acrylic	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	114	2,100	2,100
491	South Side ES	Office Nurse	1	4L4' T8 32w/EL	box acrylic	7	7	112	0.8	4L4' T8 28w/ELEE LO	rlrb LF	7	87	0.6	0.2	296	2,000	1,400
492	South Side ES	Office Nurse	1	4L4' T8 32w/EL	box acrylic dbl switch	1	1	112	0.1	4L4' T8 28w/ELEE LO (2Lx2 BAL)	rlrb LF dbl switched	1	88	0.1	0.0	40	2,000	1,400
493	South Side ES	Conference A	1	4L4' T8 32w/EL-8'	box acrylic	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	59	1,400	1,400
494	South Side ES	Conference Main Office	1	2L4' T8 32w/EL	box acrylic	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	54	2,000	1,400
495	South Side ES	Bath Main Office	1	32W CIRCLELINE HARDWIRED	drum	1	1	34	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	44	3,000	2,100
496	South Side ES	Office Principal	1	4L4' T8 32w/EL	box acrylic	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	0.1	169	2,000	1,400
497	South Side ES	Bath Main Office	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	2,100
498	South Side ES	Storage Main Office	1	4L4' T8 32w/EL	box acrylic	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	42	1,000	700
499	South Side ES	Conference Room C	1	2L4' T8 32w/EL	box acrylic	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	27	2,000	1,400
500	South Side ES	Conference Room B	1	2L4' T8 32w/EL	box acrylic	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	27	2,000	1,400
501	South Side ES	Conference Room D	1	4L4' T8 32w/EL-8'	box acrylic	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	84	2,000	1,400
502	South Side ES	Storage Av	1	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	5	350	350
503	South Side ES	Bath Women	1	2L4' T8 32w/EL-8'	wrap narrow	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	41	3,000	2,100
504	South Side ES	Bath Women	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	41	3,000	2,100
505	South Side ES	Storage Women	1	100W INCANDESCENT	old drum	2	2	100	0.2	16 WATT LED/NEW	new LED drum	2	17	0.0	0.2	141	1,000	700
506	South Side ES	Bath Men	1	2L4' T8 32w/EL-8'	wrap narrow	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	41	3,000	2,100
507	South Side ES	Bath Men	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	41	3,000	2,100
508	South Side ES	Lobby Elevator	1	2L4' T8 32w U/EL	box acrylic	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	65	3,000	2,100
509	South Side ES	Classroom Art	1	4L4' T8 32w/EL	box acrylic	23	23	112	2.6	4L4' T8 28w/ELEE LO	rlrb LF	23	87	2.0	0.6	748	1,540	1,540
510	South Side ES	Classroom Art	1	2L4' T8 32w U/EL	box acrylic	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	33	1,540	1,540
511	South Side ES	Classroom Art	1	150W INCANDESCENT	track can	9	9	150	1.4	20 WATT LED/NEW	new LED track head	9	21	0.2	1.2	2,171	2,200	2,200
512	South Side ES	Classroom 1	1	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	4L4' T8 28w/ELEE LO	rlrb LF	9	87	0.8	0.2	293	1,540	1,540
513	South Side ES	Classroom 1	1	1L4' T5 HO/EL	task strip	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,200	2,200
514	South Side ES	Bath 1	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	2,100
515	South Side ES	Classroom 2	1	4L4' T8 32w/EL	box acrylic	12	12	112	1.3	4L4' T8 28w/ELEE LO	rlrb LF	12	87	1.0	0.3	390	1,540	1,540
516	South Side ES	Classroom 2	1	1L4' T5 HO/EL	task strip	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,200	2,200

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
517	South Side ES	Bath 2	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	2,100
518	South Side ES	Classroom 5	1	4L4' T8 32w/EL	box acrylic	12	12	112	1.3	4L4' T8 28w/ELEE LO	rlrb LF	12	87	1.0	0.3	390	1,540	1,540
519	South Side ES	Classroom 5	1	1L4' T5 HO/EL	task strip	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,200	2,200
520	South Side ES	Storage 5	1	1L4' T12 34w EE/EEMAG	strip	1	1	40	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	14	1,000	700
521	South Side ES	Bath 5	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	3,000
522	South Side ES	Classroom 6	1	4L4' T8 32w/EL	box acrylic	12	12	112	1.3	4L4' T8 28w/ELEE LO	rlrb LF	12	87	1.0	0.3	390	1,540	1,540
523	South Side ES	Classroom 6	1	1L4' T5 HO/EL	task strip	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,200	2,200
524	South Side ES	Bath 6	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	2,100
525	South Side ES	Storage 6	1	1L4' T8 32w/EL	strip	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	3	500	350
526	South Side ES	Classroom 3	1	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	4L4' T8 28w/ELEE LO	rlrb LF	9	87	0.8	0.2	293	1,540	1,540
527	South Side ES	Classroom 3	1	1L4' T5 HO/EL	task strip	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,200	2,200
528	South Side ES	Bath 3	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	2,100
529	South Side ES	Storage 3	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	7	500	350
530	South Side ES	Office Therapy	1	2L4' T8 32w/EL	box acrylic	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	54	2,000	1,400
531	South Side ES	Storage Therapy	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	14	1,000	700
532	South Side ES	Storage Therapy	1	2L4' T8 32w U/EL	box acrylic	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	22	1,000	700
533	South Side ES	Classroom 4	1	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	4L4' T8 28w/ELEE LO	rlrb LF	9	87	0.8	0.2	293	1,540	1,540
534	South Side ES	Classroom 4	1	1L4' T5 HO/EL	task strip	4		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200
535	South Side ES	Bath 4	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	2,100
536	South Side ES	Storage 4	1	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	7	500	350
537	South Side ES	Classroom 7	1	4L4' T8 32w/EL	box acrylic	12	12	112	1.3	4L4' T8 28w/ELEE LO	rlrb LF	12	87	1.0	0.3	390	1,540	1,540
538	South Side ES	Classroom 7	1	1L4' T5 HO/EL	task strip	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,200	2,200
539	South Side ES	Bath 7	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	2,100
540	South Side ES	Storage 7	1	1L4' T8 32w/EL	strip	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	3	500	350
541	South Side ES	Storage Workroom	1	4L4' T8 32w/EL-8'	box acrylic	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	42	1,000	700
542	South Side ES	Office Custodian	1	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	27	2,000	1,400
543	South Side ES	Storage Custodian	1	1L4' T8 32w/EL	strip	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	6	1,000	700
544	South Side ES	Conference Room E	1	4L4' T8 32w/EL-8'	box acrylic	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	59	1,400	1,400
545	South Side ES	Classroom 8	1	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	4L4' T8 28w/ELEE LO	rlrb LF	9	87	0.8	0.2	175	920	920
546	South Side ES	Classroom 8	1	1L4' T5 HO/EL	task strip	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,200	2,200
547	South Side ES	Bath 8	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	2,100
548	South Side ES	Classroom 9	1	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	4L4' T8 28w/ELEE LO	rlrb LF	9	87	0.8	0.2	257	1,350	1,350
549	South Side ES	Classroom 9	1	1L4' T5 HO/EL	task strip	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,200	2,200
550	South Side ES	Bath 9	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	2,100
551	South Side ES	Classroom 10	1	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	4L4' T8 28w/ELEE LO	rlrb LF	9	87	0.8	0.2	293	1,540	1,540
552	South Side ES	Classroom 10	1	1L4' T5 HO/EL	task strip	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,200	2,200
553	South Side ES	Bath 10	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	2,100
554	South Side ES	Classroom 16	1	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	4L4' T8 28w/ELEE LO	rlrb LF	9	87	0.8	0.2	257	1,350	1,350
555	South Side ES	Classroom 16	1	1L4' T5 HO/EL	task strip	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,200	2,200
556	South Side ES	Bath 16	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	2,100
557	South Side ES	Classroom 11	1	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	4L4' T8 28w/ELEE LO	rlrb LF	9	87	0.8	0.2	293	1,540	1,540
558	South Side ES	Classroom 11	1	1L4' T5 HO/EL	task strip	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,200	2,200
559	South Side ES	Bath 11	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	2,100
560	South Side ES	Classroom 15	1	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	4L4' T8 28w/ELEE LO	rlrb LF	9	87	0.8	0.2	245	1,288	1,288
561	South Side ES	Classroom 15	1	1L4' T5 HO/EL	task strip	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,200	2,200
562	South Side ES	Bath 15	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	2,100
563	South Side ES	Classroom 12	1	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	4L4' T8 28w/ELEE LO	rlrb LF	9	87	0.8	0.2	293	1,540	1,540
564	South Side ES	Classroom 12	1	1L4' T5 HO/EL	task strip	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,200	2,200
565	South Side ES	Bath 12	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	2,100
566	South Side ES	Classroom 14	1	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	4L4' T8 28w/ELEE LO	rlrb LF	9	87	0.8	0.2	293	1,540	1,540
567	South Side ES	Classroom 14	1	1L4' T5 HO/EL	task strip	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,200	2,200
568	South Side ES	Bath 14	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	2,100
569	South Side ES	Storage Hall	b	2L4' T8 32w/EL	box acr 1' wide	7	7	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	7	44	0.3	0.1	47	500	500
570	South Side ES	Lobby Elevator	b	1L4' T8 32w/EL	strip	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	18	3,000	3,000
571	South Side ES	Mechanical Boiler	b	2L4' T8 32w/EL	strip	12	12	60	0.7	2L4' T8 28w/ELEE LO	rlrb LF	12	44	0.5	0.2	81	500	500
572	South Side ES	Mechanical Elevator	b	2L4' T8 32w/EL	strip	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	7	500	500
573	South Side ES	Storage Electric	b	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	7	500	350
574	South Side ES	Storage Chairs Desks	b	2L4' T8 32w/EL-8'	strip	4	4	60	0.2	2L4' T8 28w/ELEE LO-8'	rlrb LF	4	44	0.2	0.1	27	500	350
575	South Side ES	Storage Chairs Desks	b	4L4' T8 32w/EL-8'	strip	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	21	500	350
576	South Side ES	Storage Chairs Desks	b	2L4' T8 32w/EL	strip	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	7	500	350
586	Green-Hills K8 School	Mechanical 140	1	2L4' T8 32w/EL	trof acr 1' wide	12	12	60	0.7	2L4' T8 28w/ELEE LO	rlrb LF	12	44	0.5	0.2	95	500	350
587	Green-Hills K8 School	Mechanical 140B	1	2L4' T8 32w/EL	trof acr 1' wide	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	32	500	350
588	Green-Hills K8 School	Mechanical 140A	1	2L4' T8 32w/EL	trof acr 1' wide	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	24	500	350
589	Green-Hills K8 School	Storage 142	1	2L4' T8 32w/EL	trof acr 1' wide	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	16	1,000	700
590	Green-Hills K8 School	Classroom 139	1	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
591	Green-Hills K8 School	Classroom 139	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
592	Green-Hills K8 School	Classroom 139	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	18	1,960	1,960
593	Green-Hills K8 School	Bath 139	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
594	Green-Hills K8 School	Storage 134	1	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	13	700	700
595	Green-Hills K8 School	Classroom 133	1	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	36	1,960	1,960
596	Green-Hills K8 School	Storage 141	1	2L4' T8 32w/EL	troffer indirect	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	22	700	700
597	Green-Hills K8 School	Storage 141A	1	2L4' T8 32w/EL	trof acr 1' wide	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
598	Green-Hills K8 School	Classroom 132	1	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	36	1,960	1,960

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
599	Green-Hills K8 School	Classroom 131	1	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	36	1,960	1,960
600	Green-Hills K8 School	Classroom 143	1	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
601	Green-Hills K8 School	Classroom 143	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	85	1,960	1,960
602	Green-Hills K8 School	Bath 143	1	2L3' T8 25w/EL-6'	soffit	1	1	47	0.0	2L3' T8 21w/ELEE LO-6'	rlrb LF	1	42	0.0	0.0	11	2,240	2,240
603	Green-Hills K8 School	Bath 143	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
604	Green-Hills K8 School	Office 143C	1	2L4' T8 32w/EL	trof acr 1' wide	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	27	1,680	1,680
605	Green-Hills K8 School	Storage 142C	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	3	350	350
606	Green-Hills K8 School	Storage 142B	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	3	350	350
607	Green-Hills K8 School	Storage 141B	1	2L4' T8 32w/EL	troffer indirect	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	45	700	700
608	Green-Hills K8 School	Classroom 135	1	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
609	Green-Hills K8 School	Classroom 135	1	2L4' T8 32w/EL	indirect/direct dim	3		60	0.2	NO RETRO	no change -dimming		63	0.2			1,960	1,960
610	Green-Hills K8 School	Classroom 135	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
611	Green-Hills K8 School	Classroom 135	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	18	1,960	1,960
612	Green-Hills K8 School	Bath 135	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
613	Green-Hills K8 School	Classroom 136	1	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
614	Green-Hills K8 School	Classroom 136	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
615	Green-Hills K8 School	Classroom 136	1	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	36	1,960	1,960
616	Green-Hills K8 School	Bath 136	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
617	Green-Hills K8 School	Classroom 137	1	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
618	Green-Hills K8 School	Classroom 137	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
619	Green-Hills K8 School	Classroom 137	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	18	1,960	1,960
620	Green-Hills K8 School	Bath 137	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
621	Green-Hills K8 School	Classroom 138	1	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
622	Green-Hills K8 School	Classroom 138	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
623	Green-Hills K8 School	Classroom 138	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	18	1,960	1,960
624	Green-Hills K8 School	Bath 138	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
625	Green-Hills K8 School	Hall 139-142C	1	2x26W CF HARDWIRED/EL	can rec	4	4	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	4	11	0.0	0.2	365	2,100	2,100
626	Green-Hills K8 School	Hall 139-142C	1	2L4' T5 HO/EL-8'	valance	28		117	3.3	NO RETRO	no change -specialized fixture		123	3.3			2,100	2,100
627	Green-Hills K8 School	Hall 139-142C	1	1L4' T5 HO/EL	valance	1		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,100	2,100
628	Green-Hills K8 School	Stair 4	S	1L4' T5 HO/EL	valance	6		59	0.4	NO RETRO	no change -specialized fixture		62	0.4			2,100	2,100
629	Green-Hills K8 School	Hall 142B-151	1	2L4' T5 HO/EL-8'	valance	26		117	3.0	NO RETRO	no change -specialized fixture		123	3.0			2,100	2,100
630	Green-Hills K8 School	Hall 142B-151	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	91	2,100	2,100
631	Green-Hills K8 School	Classroom 151	1	2L2' T8 17w/EL	troffer indirect	8	8	33	0.3	2L2' T8 15w/ELEE LO	rlrb LF	8	28	0.2	0.0	73	1,960	1,960
632	Green-Hills K8 School	Bath Boys	1	2L4' T8 32w/EL-8'	soffit	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
633	Green-Hills K8 School	Bath Boys	1	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	15	2,240	2,240
634	Green-Hills K8 School	Bath Boys	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
635	Green-Hills K8 School	Bath Girls	1	2L4' T8 32w/EL-8'	soffit	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
636	Green-Hills K8 School	Bath Girls	1	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	15	2,240	2,240
637	Green-Hills K8 School	Bath Girls	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
638	Green-Hills K8 School	Gym 148 (16)	1	70W CF HARDWIRED/EL	high bay dim	128		70	9.0	NO RETRO	no change -specialized fixture		74	9.0			2,000	2,000
639	Green-Hills K8 School	Gym 148	1	3 WATT LED	can rec	6		3	0.0	NO RETRO	no change		3	0.0			2,000	2,000
640	Green-Hills K8 School	Gym 148	1	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	174	2,000	2,000
641	Green-Hills K8 School	Storage 148A	1	2L4' T8 32w/EL	trof acr 1' wide	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	32	1,000	1,000
642	Green-Hills K8 School	Office 148E	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	16	1,680	1,680
643	Green-Hills K8 School	Locker 148D	1	2L2' T8 17w/EL	troffer indirect	6	6	33	0.2	2L2' T8 15w/ELEE LO	rlrb LF	6	28	0.2	0.0	62	2,240	2,240
644	Green-Hills K8 School	Locker 148D	1	1L4' T8 32w/EL	soffit	3	3	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	3	23	0.1	0.0	46	2,240	2,240
645	Green-Hills K8 School	Storage 148L	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	5	500	500
646	Green-Hills K8 School	Locker Boys	1	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	42	2,240	2,240
647	Green-Hills K8 School	Locker Boys	1	2L4' T8 32w/EL-8'	soffit	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
648	Green-Hills K8 School	Locker Boys	1	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	15	2,240	2,240
649	Green-Hills K8 School	Office 148C	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	16	1,680	1,680
650	Green-Hills K8 School	Stage 145F	1	4L4' T8 32w/EL-8'	trof acr 1' wide	12	12	112	1.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	12	87	1.0	0.3	477	1,600	1,600
651	Green-Hills K8 School	Storage 148G	1	2L4' T8 32w/EL	trof acr 1' wide	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	17	350	350
652	Green-Hills K8 School	Stair 7	S	1L4' T5 HO/EL	valance	4		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,100	2,100
653	Green-Hills K8 School	Stair 7	S	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	183	2,100	2,100
654	Green-Hills K8 School	Storage 148H	1	2L4' T8 32w/EL	trof acr 1' wide	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	16	500	500
655	Green-Hills K8 School	Bath Boys	1	2L4' T8 32w/EL-8'	soffit	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
656	Green-Hills K8 School	Bath Boys	1	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	15	2,240	2,240
657	Green-Hills K8 School	Bath Boys	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
658	Green-Hills K8 School	Bath Girls	1	2L4' T8 32w/EL-8'	soffit	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
659	Green-Hills K8 School	Bath Girls	1	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	15	2,240	2,240
660	Green-Hills K8 School	Bath Girls	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
661	Green-Hills K8 School	Bath By 145	1	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	15	2,240	2,240
662	Green-Hills K8 School	Bath By 145	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
663	Green-Hills K8 School	Hall 145	1	2L2' T8 17w/EL	troffer indirect	8	8	33	0.3	2L2' T8 15w/ELEE LO	rlrb LF	8	28	0.2	0.0	78	2,100	2,100
664	Green-Hills K8 School	Office 148J	1	2L2' T8 17w/EL	troffer indirect	3	3	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	3	28	0.1	0.0	23	1,680	1,680
665	Green-Hills K8 School	Office 148K	1	2L2' T8 17w/EL	troffer indirect	1	1	33	0.0	2L2' T8 15w/ELEE LO	rlrb LF	1	28	0.0	0.0	8	1,680	1,680
666	Green-Hills K8 School	Classroom 146	1	2L4' T8 32w/EL	troffer indirect	10	10	60	0.6	2L4' T8 28w/ELEE LO	rlrb LF	10	44	0.4	0.2	312	1,960	1,960
667	Green-Hills K8 School	Storage 145A	1	2L4' T8 32w/EL	troffer indirect	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	33	700	700
668	Green-Hills K8 School	Classroom 144	1	4L4' T8 32w/EL-8'	indirect/direct dim	7		112	0.8	NO RETRO	no change -dimming		118	0.8			1,960	1,960
669	Green-Hills K8 School	Classroom 144	1	2L4' T8 32w/EL	indirect/direct dim	1		60	0.1	NO RETRO	no change -dimming		63	0.1			1,960	1,960
670	Green-Hills K8 School	Hall Stair Atrium	1	2x26W CF HARDWIRED/EL	can rec	11	11	54	0.6	10 WATT LED/KIT	can kit LED Spectrum	11	11	0.1	0.5	1,005	2,100	2,100
671	Green-Hills K8 School	Hall 130-119	1	2L4' T5 HO/EL-8'	valance	26		117	3.0	NO RETRO	no change -specialized fixture		123	3.0			2,100	2,100

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
672	Green-Hills K8 School	Hall 130-119	1	2L4' T5 HO/EL-8'	valance	1		117	0.1	NO RETRO	no change -specialized fixture		123	0.1			2,100	2,100
673	Green-Hills K8 School	Hall 130-119	1	2x26W CF HARDWIRED/EL	can rec	7	7	54	0.4	10 WATT LED/KIT	can kit LED Spectrum	7	11	0.1	0.3	639	2,100	2,100
674	Green-Hills K8 School	Classroom 130	1	2L2' T8 17w/EL	troffer indirect	6	6	33	0.2	2L2' T8 15w/ELEE LO	rlrb LF	6	28	0.2	0.0	55	1,960	1,960
675	Green-Hills K8 School	Bath Men	1	2L4' T8 32w/EL-8'	soffit	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
676	Green-Hills K8 School	Bath Women	1	2L4' T8 32w/EL-8'	soffit	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
677	Green-Hills K8 School	Storage 128A	1	2L4' T8 32w/EL	trof acr 1' wide	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
678	Green-Hills K8 School	Storage 128	1	2L4' T8 32w/EL	trof acr 1' wide	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	11	350	350
679	Green-Hills K8 School	Classroom 127	1	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
680	Green-Hills K8 School	Classroom 127	1	2L4' T8 32w/EL	indirect/direct dim	3		60	0.2	NO RETRO	no change -dimming		63	0.2			1,960	1,960
681	Green-Hills K8 School	Classroom 127	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
682	Green-Hills K8 School	Classroom 127	1	2L2' T8 17w/EL	troffer indirect	3	3	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	3	28	0.1	0.0	27	1,960	1,960
683	Green-Hills K8 School	Bath 127	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
684	Green-Hills K8 School	Storage 127A	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	3	350	350
685	Green-Hills K8 School	Classroom 126	1	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
686	Green-Hills K8 School	Classroom 126	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
687	Green-Hills K8 School	Classroom 126	1	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	36	1,960	1,960
688	Green-Hills K8 School	Bath 126	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
689	Green-Hills K8 School	Classroom 125	1	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
690	Green-Hills K8 School	Classroom 125	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
691	Green-Hills K8 School	Classroom 125	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	18	1,960	1,960
692	Green-Hills K8 School	Bath 125	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
693	Green-Hills K8 School	Storage 125A	1	2L2' T8 17w/EL	troffer indirect	1	1	33	0.0	2L2' T8 15w/ELEE LO	rlrb LF	1	28	0.0	0.0	2	350	350
694	Green-Hills K8 School	Classroom 124	1	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
695	Green-Hills K8 School	Classroom 124	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
696	Green-Hills K8 School	Classroom 124	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	18	1,960	1,960
697	Green-Hills K8 School	Bath 124	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
698	Green-Hills K8 School	Classroom 123	1	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
699	Green-Hills K8 School	Classroom 123	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
700	Green-Hills K8 School	Classroom 123	1	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	36	1,960	1,960
701	Green-Hills K8 School	Bath 123	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
702	Green-Hills K8 School	Classroom 121	1	4L4' T8 32w/EL-8'	indirect/direct dim	8		112	0.9	NO RETRO	no change -dimming		118	0.9			1,960	1,960
703	Green-Hills K8 School	Classroom 121	1	2L4' T8 32w/EL	indirect/direct dim	2		60	0.1	NO RETRO	no change -dimming		63	0.1			1,960	1,960
704	Green-Hills K8 School	Classroom 121	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
705	Green-Hills K8 School	Storage 121B	1	2L2' T8 17w/EL	troffer indirect	1	1	33	0.0	2L2' T8 15w/ELEE LO	rlrb LF	1	28	0.0	0.0	2	350	350
706	Green-Hills K8 School	Storage 121A	1	2L2' T8 17w/EL	troffer indirect	1	1	33	0.0	2L2' T8 15w/ELEE LO	rlrb LF	1	28	0.0	0.0	2	350	350
707	Green-Hills K8 School	Bath Boys	1	2L4' T8 32w/EL-8'	soffit	2	2	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	2	44	0.1	0.0	71	2,240	2,240
708	Green-Hills K8 School	Bath Boys	1	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	15	2,240	2,240
709	Green-Hills K8 School	Bath Girls	1	2L4' T8 32w/EL-8'	soffit	2	2	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	2	44	0.1	0.0	71	2,240	2,240
710	Green-Hills K8 School	Bath Girls	1	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	15	2,240	2,240
711	Green-Hills K8 School	Office Open 119	1	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	36	1,925	1,925
712	Green-Hills K8 School	Office Open 119A	1	2L2' T8 17w/EL	troffer indirect	6	6	33	0.2	2L2' T8 15w/ELEE LO	rlrb LF	6	28	0.2	0.0	54	1,925	1,925
713	Green-Hills K8 School	Stair 2	S	2x26W CF HARDWIRED/EL	can rec	5	5	54	0.3	10 WATT LED/KIT	can kit LED Spectrum	5	11	0.1	0.2	457	2,100	2,100
714	Green-Hills K8 School	Stair 2	S	1L4' T5 HO/EL	valance	8		59	0.5	NO RETRO	no change -specialized fixture		62	0.5			2,100	2,100
715	Green-Hills K8 School	Hall 117-162	1	32W CF SCREWIN	cylinder wall mt.	10		34	0.3	NO RETRO	no change		36	0.3			2,100	2,100
716	Green-Hills K8 School	Hall 117-162 (6)	1	150W METAL HALIDE	cylinder indirect/direct wall mt.	12	12	190	2.3	17 WATT LED SI	screw in LED par38	12	18	0.2	2.1	4,338	2,100	2,100
717	Green-Hills K8 School	Hall 117-162	1	100W METAL HALIDE	indirect	8	8	120	1.0	20 WATT LED/NEW	new LED indirect	8	21	0.2	0.8	1,663	2,100	2,100
718	Green-Hills K8 School	Hall 117-162	1	2x26W CF HARDWIRED/EL	can rec	9	9	54	0.5	10 WATT LED/KIT	can kit LED Spectrum	9	11	0.1	0.4	822	2,100	2,100
719	Green-Hills K8 School	Classroom 117	1	2L4' T8 32w/EL-8'	indirect/direct dim	6		60	0.4	NO RETRO	no change -dimming		63	0.4			1,960	1,960
720	Green-Hills K8 School	Classroom 117	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
721	Green-Hills K8 School	Classroom 116B	1	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	36	1,960	1,960
722	Green-Hills K8 School	Classroom 116A	1	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	36	1,960	1,960
723	Green-Hills K8 School	Library 100	1	100W METAL HALIDE	indirect	6	6	120	0.7	20 WATT LED/NEW	new LED indirect	6	21	0.1	0.6	915	1,540	1,540
724	Green-Hills K8 School	Library 100 (2)	1	150W METAL HALIDE	cylinder indirect/direct wall mt.	4	4	190	0.8	17 WATT LED SI	screw in LED par38	4	18	0.1	0.7	1,060	1,540	1,540
725	Green-Hills K8 School	Library 100	1	2x26W CF HARDWIRED/EL	can rec	38	38	54	2.1	10 WATT LED/KIT	can kit LED Spectrum	38	11	0.4	1.7	2,546	1,540	1,540
726	Green-Hills K8 School	Library 100	1	2L4' T5/EL-8'	direct/indirect	14		63	0.9	NO RETRO	no change -specialized fixture		66	0.9			1,540	1,540
727	Green-Hills K8 School	Library 100	1	1L4' T5/EL	direct/indirect	4		32	0.1	NO RETRO	no change -specialized fixture		34	0.1			1,540	1,540
728	Green-Hills K8 School	Library 100	1	2L3' T5/EL-6'	direct/indirect	6		52	0.3	NO RETRO	no change -specialized fixture		55	0.3			1,540	1,540
729	Green-Hills K8 School	Library 100	1	70W CF HARDWIRED/EL	decorative	4		70	0.3	NO RETRO	no change -specialized fixture		74	0.3			1,540	1,540
730	Green-Hills K8 School	Storage 100C	1	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	7	350	350
731	Green-Hills K8 School	Office 167	1	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	31	1,680	1,680
732	Green-Hills K8 School	Office 166	1	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	31	1,680	1,680
733	Green-Hills K8 School	Office 164	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	16	1,680	1,680
734	Green-Hills K8 School	Office Open 106	1	2L2' T8 17w/EL	troffer indirect	15	15	33	0.5	2L2' T8 15w/ELEE LO	rlrb LF	15	28	0.4	0.1	134	1,925	1,925
735	Green-Hills K8 School	Office Open 106	1	2x26W CF HARDWIRED/EL	can rec	3	3	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	0.1	251	1,925	1,925
736	Green-Hills K8 School	Office Open 106	1	2L4' T8 32w/EL	troffer indirect	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	31	1,925	1,925
737	Green-Hills K8 School	Conference 108	1	4L4' T5/EL-8'	indirect/direct	1		126	0.1	NO RETRO	no change -specialized fixture		132	0.1			1,680	1,680
738	Green-Hills K8 School	Conference 108	1	2x26W CF HARDWIRED/EL	can rec	4	4	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	4	11	0.0	0.2	292	1,680	1,680
739	Green-Hills K8 School	Office 109	1	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	31	1,680	1,680
740	Green-Hills K8 School	Office 111	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	16	1,680	1,680
741	Green-Hills K8 School	Office 112	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	16	1,680	1,680
742	Green-Hills K8 School	Storage 114	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	7	700	700
743	Green-Hills K8 School	Bath Z	1	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	15	2,240	2,240
744	Green-Hills K8 School	Bath Z	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
745	Green-Hills K8 School	Storage 115	1	2L4' T8 32w/EL	trof acr 1' wide	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
746	Green-Hills K8 School	Office Open 101	1	2L2' T8 17w/EL	troffer indirect	5	5	33	0.2	2L2' T8 15w/ELEE LO	rlrb LF	5	28	0.1	0.0	45	1,925	1,925
747	Green-Hills K8 School	Office 105	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	16	1,680	1,680
748	Green-Hills K8 School	Office 104	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	16	1,680	1,680
749	Green-Hills K8 School	Conference 102	1	4L4' T5/EL-8'	indirect/direct	1		126	0.1	NO RETRO	no change -specialized fixture		132	0.1			1,680	1,680
750	Green-Hills K8 School	Conference 102	1	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	146	1,680	1,680
751	Green-Hills K8 School	Office 103	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	16	1,680	1,680
752	Green-Hills K8 School	Office Open 162A	1	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	36	1,925	1,925
753	Green-Hills K8 School	Office Open 162	1	2L2' T8 17w/EL	troffer indirect	3	3	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	3	28	0.1	0.0	27	1,925	1,925
754	Green-Hills K8 School	Office Open 162	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	18	1,925	1,925
755	Green-Hills K8 School	Office Open 162	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	18	1,925	1,925
756	Green-Hills K8 School	Office 163E	1	2L4' T8 32w/EL	troffer indirect	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	27	1,680	1,680
757	Green-Hills K8 School	Office 163F	1	2L4' T8 32w/EL	troffer indirect	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	27	1,680	1,680
758	Green-Hills K8 School	Office 163G	1	2L4' T8 32w/EL	troffer indirect	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	27	1,680	1,680
759	Green-Hills K8 School	Bath 162	1	2L3' T8 25w/EL-6'	soffit	1	1	47	0.0	2L3' T8 21w/ELEE LO-6'	rlrb LF	1	42	0.0	0.0	11	2,240	2,240
760	Green-Hills K8 School	Bath 162	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
761	Green-Hills K8 School	Hall Stair1-5	1	2L4' T5 HO/EL-8'	valance	14		117	1.6	NO RETRO	no change -specialized fixture		123	1.6			2,100	2,100
762	Green-Hills K8 School	Hall Stair1-5	1	1L4' T5 HO/EL	valance	5		59	0.3	NO RETRO	no change -specialized fixture		62	0.3			2,100	2,100
763	Green-Hills K8 School	Hall Stair1-5	1	1L3' T5/EL	valance	1		27	0.0	NO RETRO	no change -specialized fixture		28	0.0			2,100	2,100
764	Green-Hills K8 School	Hall Stair1-5	1	2x26W CF HARDWIRED/EL	can rec	9	9	54	0.5	10 WATT LED/KIT	can kit LED Spectrum	9	11	0.1	0.4	822	2,100	2,100
765	Green-Hills K8 School	Stair 1	S	1L4' T5 HO/EL	valance	13		59	0.8	NO RETRO	no change -specialized fixture		62	0.8			2,100	2,100
766	Green-Hills K8 School	Classroom 161	1	4L4' T8 32w/EL-8'	indirect/direct dim	4		112	0.4	NO RETRO	no change -dimming		118	0.4			1,960	1,960
767	Green-Hills K8 School	Classroom 161	1	2L4' T8 32w/EL	indirect/direct dim	2		60	0.1	NO RETRO	no change -dimming		63	0.1			1,960	1,960
768	Green-Hills K8 School	Classroom 161	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
769	Green-Hills K8 School	Classroom 160	1	4L4' T8 32w/EL-8'	indirect/direct dim	4		112	0.4	NO RETRO	no change -dimming		118	0.4			1,960	1,960
770	Green-Hills K8 School	Classroom 160	1	2L4' T8 32w/EL	indirect/direct dim	2		60	0.1	NO RETRO	no change -dimming		63	0.1			1,960	1,960
771	Green-Hills K8 School	Classroom 160	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
772	Green-Hills K8 School	Storage 160A	1	2L4' T8 32w/EL	troffer indirect	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
773	Green-Hills K8 School	Classroom 158	1	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
774	Green-Hills K8 School	Classroom 158	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
775	Green-Hills K8 School	Storage 156	1	2L4' T8 32w/EL	troffer indirect	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	22	700	700
776	Green-Hills K8 School	Classroom 157	1	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
777	Green-Hills K8 School	Bath Girls	1	2L4' T8 32w/EL-8'	soffit	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
778	Green-Hills K8 School	Bath Girls	1	1L4' T8 32w/EL	soffit	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	31	2,240	2,240
779	Green-Hills K8 School	Classroom 154	1	4L4' T8 32w/EL-8'	indirect/direct dim	4		112	0.4	NO RETRO	no change -dimming		118	0.4			1,960	1,960
780	Green-Hills K8 School	Classroom 154	1	2L4' T8 32w/EL	indirect/direct dim	2		60	0.1	NO RETRO	no change -dimming		63	0.1			1,960	1,960
781	Green-Hills K8 School	Classroom 154	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
782	Green-Hills K8 School	Classroom 153	1	4L4' T8 32w/EL-8'	indirect/direct dim	4		112	0.4	NO RETRO	no change -dimming		118	0.4			1,960	1,960
783	Green-Hills K8 School	Classroom 153	1	2L4' T8 32w/EL	indirect/direct dim	2		60	0.1	NO RETRO	no change -dimming		63	0.1			1,960	1,960
784	Green-Hills K8 School	Classroom 153	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
785	Green-Hills K8 School	Bath Boys	1	2L4' T8 32w/EL-8'	soffit	2	2	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	2	44	0.1	0.0	71	2,240	2,240
786	Green-Hills K8 School	Bath Boys	1	2L2' T8 17w/EL	soffit	1	1	33	0.0	2L2' T8 15w/ELEE LO	rlrb LF	1	28	0.0	0.0	10	2,240	2,240
787	Green-Hills K8 School	Bath Boys	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
788	Green-Hills K8 School	Stair 5	S	1L4' T5 HO/EL	valance	12		59	0.7	NO RETRO	no change -specialized fixture		62	0.7			2,100	2,100
789	Green-Hills K8 School	Hall 2Nd	2	2L4' T5 HO/EL-8'	valance	91		117	10.6	NO RETRO	no change -specialized fixture		123	10.6			2,100	2,100
790	Green-Hills K8 School	Hall 2Nd	2	1L4' T5 HO/EL	valance	6		59	0.4	NO RETRO	no change -specialized fixture		62	0.4			2,100	2,100
791	Green-Hills K8 School	Hall 2Nd	2	2L3' T5/EL-6'	valance	3		52	0.2	NO RETRO	no change -specialized fixture		55	0.2			2,100	2,100
792	Green-Hills K8 School	Hall 2Nd	2	2x26W CF HARDWIRED/EL	can rec	55	55	54	3.0	10 WATT LED/KIT	can kit LED Spectrum	55	11	0.6	2.4	5,024	2,100	2,100
793	Green-Hills K8 School	Hall 2Nd	2	100W METAL HALIDE	indirect	8	8	120	1.0	20 WATT LED/NEW	new LED indirect	8	21	0.2	0.8	1,663	2,100	2,100
794	Green-Hills K8 School	Classroom 250	2	4L4' T8 32w/EL-8'	indirect/direct dim	4		112	0.4	NO RETRO	no change -dimming		118	0.4			1,960	1,960
795	Green-Hills K8 School	Classroom 250	2	2L4' T8 32w/EL	indirect/direct dim	2		60	0.1	NO RETRO	no change -dimming		63	0.1			1,960	1,960
796	Green-Hills K8 School	Classroom 250	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
797	Green-Hills K8 School	Classroom 248	2	4L4' T8 32w/EL-8'	indirect/direct dim	4		112	0.4	NO RETRO	no change -dimming		118	0.4			1,960	1,960
798	Green-Hills K8 School	Classroom 248	2	2L4' T8 32w/EL	indirect/direct dim	2		60	0.1	NO RETRO	no change -dimming		63	0.1			1,960	1,960
799	Green-Hills K8 School	Classroom 248	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
800	Green-Hills K8 School	Office Open 249	2	2L2' T8 17w/EL	troffer indirect	3	3	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	3	28	0.1	0.0	27	1,925	1,925
801	Green-Hills K8 School	Storage 247	2	2L4' T8 32w/EL	troffer indirect	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	11	350	350
802	Green-Hills K8 School	Classroom 246	2	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
803	Green-Hills K8 School	Classroom 246	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
804	Green-Hills K8 School	Storage 244	2	2L4' T8 32w/EL	troffer indirect	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	11	350	350
805	Green-Hills K8 School	Classroom 245	2	4L4' T8 32w/EL-8'	indirect/direct dim	8		112	0.9	NO RETRO	no change -dimming		118	0.9			1,960	1,960
806	Green-Hills K8 School	Classroom 245	2	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	171	1,960	1,960
807	Green-Hills K8 School	Storage 245B	2	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	61	700	700
808	Green-Hills K8 School	Storage 245A	2	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	13	700	700
809	Green-Hills K8 School	Bath Girls	2	2L4' T8 32w/EL-8'	soffit	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
810	Green-Hills K8 School	Bath Girls	2	1L4' T8 32w/EL	soffit	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	31	2,240	2,240
811	Green-Hills K8 School	Classroom 241	2	4L4' T8 32w/EL-8'	indirect/direct dim	4		112	0.4	NO RETRO	no change -dimming		118	0.4			1,960	1,960
812	Green-Hills K8 School	Classroom 241	2	2L4' T8 32w/EL	indirect/direct dim	2		60	0.1	NO RETRO	no change -dimming		63	0.1			1,960	1,960
813	Green-Hills K8 School	Classroom 241	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
814	Green-Hills K8 School	Classroom 240	2	4L4' T8 32w/EL-8'	indirect/direct dim	4		112	0.4	NO RETRO	no change -dimming		118	0.4			1,960	1,960
815	Green-Hills K8 School	Classroom 240	2	2L4' T8 32w/EL	indirect/direct dim	2		60	0.1	NO RETRO	no change -dimming		63	0.1			1,960	1,960
816	Green-Hills K8 School	Classroom 240	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
817	Green-Hills K8 School	Bath Boys	2	1L4' T8 32w/EL	soffit	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	31	2,240	2,240

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
818	Green-Hills K8 School	Bath Boys	2	1L2' T8 17w/EL	soffit	1	1	17	0.0	1L2' T8 15w/ELEE LO	rlrb LF	1	15	0.0	0.0	5	2,240	2,240
819	Green-Hills K8 School	Bath Boys	2	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
820	Green-Hills K8 School	Classroom 238	2	4L4' T8 32w/EL-8'	indirect/direct dim	7		112	0.8	NO RETRO	no change -dimming		118	0.8			1,960	1,960
821	Green-Hills K8 School	Classroom 238A	2	4L4' T8 32w/EL-8'	indirect/direct dim	8		112	0.9	NO RETRO	no change -dimming		118	0.9			1,960	1,960
822	Green-Hills K8 School	Mechanical 238B	2	2L4' T8 32w/EL	trof acr 1' wide	12	12	60	0.7	2L4' T8 28w/ELEE LO	rlrb LF	12	44	0.5	0.2	95	500	350
823	Green-Hills K8 School	Bath Women	2	2L4' T8 32w/EL-8'	soffit	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
824	Green-Hills K8 School	Bath Women	2	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	15	2,240	2,240
825	Green-Hills K8 School	Bath Women	2	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	195	2,240	2,240
826	Green-Hills K8 School	Bath Men	2	2L4' T8 32w/EL-8'	soffit	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
827	Green-Hills K8 School	Bath Men	2	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	15	2,240	2,240
828	Green-Hills K8 School	Bath Men	2	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	195	2,240	2,240
829	Green-Hills K8 School	Storage 235	2	2L4' T8 32w/EL	trof acr 1' wide	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	0.1	89	700	700
830	Green-Hills K8 School	Storage 235C	2	2L4' T8 32w/EL	troffer indirect	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	11	350	350
831	Green-Hills K8 School	Storage 235E	2	2L4' T8 32w/EL	trof acr 1' wide	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	11	700	700
832	Green-Hills K8 School	Storage 235F	2	2L4' T8 32w/EL	trof acr 1' wide	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	33	700	700
833	Green-Hills K8 School	Storage 235I	2	2L4' T8 32w/EL	trof acr 1' wide	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	22	350	350
834	Green-Hills K8 School	Hall 232	2	2L4' T5 HO/EL-8'	valance	3		117	0.4	NO RETRO	no change -specialized fixture		123	0.4			2,100	2,100
835	Green-Hills K8 School	Kitchen 234	2	3L4' T8 32w/EL	trof acr	28	28	88	2.5	3L4' T8 28w/ELEE LO	rlrb LF	28	66	1.9	0.6	1,028	1,680	1,680
836	Green-Hills K8 School	Kitchen 234	2	2x26W CF HARDWIRED/EL	can rec	18	18	54	1.0	10 WATT LED/KIT	can kit LED Spectrum	18	11	0.2	0.8	1,315	1,680	1,680
837	Green-Hills K8 School	Kitchen 234	2	3 WATT LED	range hood	6		3	0.0	NO RETRO	no change		3	0.0			2,400	2,400
838	Green-Hills K8 School	Office 234A	2	2L4' T8 32w/EL	troffer indirect	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	53	1,680	1,680
839	Green-Hills K8 School	Cafeteria 232	2	3x42W CF HARDWIRED/EL	decorative	24		129	3.1	NO RETRO	no change -specialized fixture		135	3.1			1,400	1,400
840	Green-Hills K8 School	Classroom 251	2	2L4' T8 32w/EL	troffer indirect	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	62	1,960	1,960
841	Green-Hills K8 School	Classroom 252	2	2L4' T8 32w/EL	troffer indirect	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	62	1,960	1,960
842	Green-Hills K8 School	Classroom 253	2	2L4' T8 32w/EL	troffer indirect	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	62	1,960	1,960
843	Green-Hills K8 School	Classroom 254	2	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
844	Green-Hills K8 School	Classroom 254	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
845	Green-Hills K8 School	Classroom 254	2	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	171	1,960	1,960
846	Green-Hills K8 School	Classroom 201	2	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
847	Green-Hills K8 School	Classroom 201	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
848	Green-Hills K8 School	Bath Men	2	1L4' T8 32w/EL	soffit	3	3	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	3	23	0.1	0.0	46	2,240	2,240
849	Green-Hills K8 School	Bath Men	2	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
850	Green-Hills K8 School	Bath Women	2	1L4' T8 32w/EL	soffit	3	3	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	3	23	0.1	0.0	46	2,240	2,240
851	Green-Hills K8 School	Bath Women	2	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
852	Green-Hills K8 School	Classroom 204	2	2L2' T8 17w/EL	troffer indirect	6	6	33	0.2	2L2' T8 15w/ELEE LO	rlrb LF	6	28	0.2	0.0	55	1,960	1,960
853	Green-Hills K8 School	Storage 206	2	2L4' T8 32w/EL	trof acr 1' wide	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
854	Green-Hills K8 School	Classroom 207	2	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
855	Green-Hills K8 School	Classroom 207	2	2L4' T8 32w/EL	indirect/direct dim	3		60	0.2	NO RETRO	no change -dimming		63	0.2			1,960	1,960
856	Green-Hills K8 School	Classroom 207	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
857	Green-Hills K8 School	Mechanical 207A	2	2L4' T8 32w/EL	trof acr 1' wide	6	6	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	6	44	0.3	0.1	48	500	350
858	Green-Hills K8 School	Bath Girls	2	2L4' T8 32w/EL-8'	soffit	2	2	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	2	44	0.1	0.0	71	2,240	2,240
859	Green-Hills K8 School	Bath Girls	2	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	15	2,240	2,240
860	Green-Hills K8 School	Bath Girls	2	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
861	Green-Hills K8 School	Bath Boys	2	2L4' T8 32w/EL-8'	soffit	2	2	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	2	44	0.1	0.0	71	2,240	2,240
862	Green-Hills K8 School	Bath Boys	2	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	15	2,240	2,240
863	Green-Hills K8 School	Bath Boys	2	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
864	Green-Hills K8 School	Classroom 209	2	4L4' T8 32w/EL-8'	indirect/direct dim	8		112	0.9	NO RETRO	no change -dimming		118	0.9			1,960	1,960
865	Green-Hills K8 School	Classroom 209	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
866	Green-Hills K8 School	Classroom 211	2	4L4' T8 32w/EL-8'	indirect/direct dim	8		112	0.9	NO RETRO	no change -dimming		118	0.9			1,960	1,960
867	Green-Hills K8 School	Classroom 211	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
868	Green-Hills K8 School	Classroom 212	2	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
869	Green-Hills K8 School	Classroom 212	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
870	Green-Hills K8 School	Classroom 213	2	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
871	Green-Hills K8 School	Classroom 213	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
872	Green-Hills K8 School	Classroom 214	2	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
873	Green-Hills K8 School	Classroom 214	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
874	Green-Hills K8 School	Classroom 215	2	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
875	Green-Hills K8 School	Classroom 215	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
876	Green-Hills K8 School	Classroom 216	2	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
877	Green-Hills K8 School	Classroom 216	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
878	Green-Hills K8 School	Classroom 217	2	4L4' T8 32w/EL-8'	indirect/direct dim	8		112	0.9	NO RETRO	no change -dimming		118	0.9			1,960	1,960
879	Green-Hills K8 School	Classroom 217	2	2L4' T8 32w/EL	indirect/direct dim	1		60	0.1	NO RETRO	no change -dimming		63	0.1			1,960	1,960
880	Green-Hills K8 School	Classroom 217	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
881	Green-Hills K8 School	Classroom 218	2	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
882	Green-Hills K8 School	Classroom 218	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
883	Green-Hills K8 School	Storage 218	2	2L4' T8 32w/EL	trof acr 1' wide	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	11	350	350
884	Green-Hills K8 School	Storage 230A	2	2L4' T8 32w/EL	trof acr 1' wide	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	11	350	350
885	Green-Hills K8 School	Bath Girls	2	2L4' T8 32w/EL-8'	soffit	2	2	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	2	44	0.1	0.0	71	2,240	2,240
886	Green-Hills K8 School	Bath Girls	2	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	15	2,240	2,240
887	Green-Hills K8 School	Bath Girls	2	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
888	Green-Hills K8 School	Bath Boys	2	2L4' T8 32w/EL-8'	soffit	2	2	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	2	44	0.1	0.0	71	2,240	2,240
889	Green-Hills K8 School	Bath Boys	2	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	15	2,240	2,240
890	Green-Hills K8 School	Bath Boys	2	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
891	Green-Hills K8 School	Classroom 221	2	4L4' T8 32w/EL-8'	indirect/direct dim	8		112	0.9	NO RETRO	no change -dimming		118	0.9			1,960	1,960
892	Green-Hills K8 School	Classroom 221	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
893	Green-Hills K8 School	Classroom 223	2	4L4' T8 32w/EL-8'	indirect/direct dim	8		112	0.9	NO RETRO	no change -dimming		118	0.9			1,960	1,960
894	Green-Hills K8 School	Classroom 223	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
895	Green-Hills K8 School	Classroom 224	2	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
896	Green-Hills K8 School	Classroom 224	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
897	Green-Hills K8 School	Classroom 225	2	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
898	Green-Hills K8 School	Classroom 225	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
899	Green-Hills K8 School	Classroom 226	2	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
900	Green-Hills K8 School	Classroom 226	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
901	Green-Hills K8 School	Classroom 227	2	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
902	Green-Hills K8 School	Classroom 227	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
903	Green-Hills K8 School	Classroom 228	2	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
904	Green-Hills K8 School	Classroom 228	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
905	Green-Hills K8 School	Classroom 229	2	4L4' T8 32w/EL-8'	indirect/direct dim	8		112	0.9	NO RETRO	no change -dimming		118	0.9			1,960	1,960
906	Green-Hills K8 School	Classroom 229	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
907	Green-Hills K8 School	Classroom 231	2	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
908	Green-Hills K8 School	Classroom 231	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
909	Green-Hills K8 School	Storage 230	2	2L4' T8 32w/EL	trof acr 1' wide	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	11	350	350
910	Green-Hills K8 School	Lounge 233	2	4L4' T8 32w/EL-8'	indirect/direct dim	4		112	0.4	NO RETRO	no change -dimming		118	0.4			1,890	1,890
911	Green-Hills K8 School	Lounge 233	2	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	164	1,890	1,890
912	Green-Hills K8 School	Hall 3Rd	3	2L4' T5 HO/EL-8'	valance	16		117	1.9	NO RETRO	no change -specialized fixture		123	1.9			2,100	2,100
913	Green-Hills K8 School	Hall 3Rd	3	1L4' T5 HO/EL	valance	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,100	2,100
914	Green-Hills K8 School	Hall 3Rd	3	2L3' T5/EL-6'	valance	1		52	0.1	NO RETRO	no change -specialized fixture		55	0.1			2,100	2,100
915	Green-Hills K8 School	Hall 3Rd	3	2x26W CF HARDWIRED/EL	can rec	8	8	54	0.4	10 WATT LED/KIT	can kit LED Spectrum	8	11	0.1	0.3	731	2,100	2,100
916	Green-Hills K8 School	Classroom 309	3	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
917	Green-Hills K8 School	Classroom 309	3	2L4' T8 32w/EL	indirect/direct dim	3		60	0.2	NO RETRO	no change -dimming		63	0.2			1,960	1,960
918	Green-Hills K8 School	Classroom 309	3	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
919	Green-Hills K8 School	Classroom 308	3	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
920	Green-Hills K8 School	Classroom 308	3	2L4' T8 32w/EL	indirect/direct dim	3		60	0.2	NO RETRO	no change -dimming		63	0.2			1,960	1,960
921	Green-Hills K8 School	Classroom 308	3	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
922	Green-Hills K8 School	Storage 310	3	2L4' T8 32w/EL	troffer indirect	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
923	Green-Hills K8 School	Bath Staff	3	2L4' T8 32w/EL-8'	soffit	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
924	Green-Hills K8 School	Classroom 306	3	4L4' T8 32w/EL-8'	indirect/direct dim	8		112	0.9	NO RETRO	no change -dimming		118	0.9			1,960	1,960
925	Green-Hills K8 School	Classroom 306	3	2L4' T8 32w/EL	indirect/direct dim	3		60	0.2	NO RETRO	no change -dimming		63	0.2			1,960	1,960
926	Green-Hills K8 School	Classroom 306	3	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
927	Green-Hills K8 School	Storage 305	3	2L4' T8 32w/EL	troffer indirect	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	11	350	350
928	Green-Hills K8 School	Bath Girls	3	2L4' T8 32w/EL-8'	soffit	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
929	Green-Hills K8 School	Bath Girls	3	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	15	2,240	2,240
930	Green-Hills K8 School	Bath Girls	3	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
931	Green-Hills K8 School	Classroom 303	3	4L4' T8 32w/EL-8'	indirect/direct dim	4		112	0.4	NO RETRO	no change -dimming		118	0.4			1,960	1,960
932	Green-Hills K8 School	Classroom 303	3	2L4' T8 32w/EL	indirect/direct dim	2		60	0.1	NO RETRO	no change -dimming		63	0.1			1,960	1,960
933	Green-Hills K8 School	Classroom 303	3	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
934	Green-Hills K8 School	Classroom 302	3	4L4' T8 32w/EL-8'	indirect/direct dim	4		112	0.4	NO RETRO	no change -dimming		118	0.4			1,960	1,960
935	Green-Hills K8 School	Classroom 302	3	2L4' T8 32w/EL	indirect/direct dim	2		60	0.1	NO RETRO	no change -dimming		63	0.1			1,960	1,960
936	Green-Hills K8 School	Classroom 302	3	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
937	Green-Hills K8 School	Storage 302A	3	2L4' T8 32w/EL	troffer indirect	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
938	Green-Hills K8 School	Bath Boys	3	1L4' T8 32w/EL	soffit	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	31	2,240	2,240
939	Green-Hills K8 School	Bath Boys	3	1L2' T8 17w/EL	soffit	1	1	17	0.0	1L2' T8 15w/ELEE LO	rlrb LF	1	15	0.0	0.0	5	2,240	2,240
940	Green-Hills K8 School	Bath Boys	3	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
944	Chippens Hill MS	Classroom 311	3	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
945	Chippens Hill MS	Classroom 312	3	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
946	Chippens Hill MS	Classroom 313	3	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
947	Chippens Hill MS	Classroom Resource	3	4L4' T8 32w/EL	trof acr	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	0.1	242	2,700	1,890
948	Chippens Hill MS	Storage Science	3	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	20	500	350
949	Chippens Hill MS	Storage Electric	3	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	10	500	350
950	Chippens Hill MS	Office Faculty Workroom	3	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	189	2,400	1,680
951	Chippens Hill MS	Classroom 314	3	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
952	Chippens Hill MS	Classroom 315	3	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
953	Chippens Hill MS	Hall 311-315	3	2L4' T8 32w/EL	trof para 1' wide	15	15	60	0.9	2L4' T8 28w/ELEE LO	rlrb LF	15	44	0.7	0.2	687	3,200	2,240
954	Chippens Hill MS	Hall 311-315	3	2x13W CF HARDWIRED	can rec 8"	9	9	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	9	11	0.1	0.2	505	3,200	2,240
955	Chippens Hill MS	Hall To Stair 4	3	2L4' T8 32w/EL	trof para 1' wide	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	183	3,200	3,200
956	Chippens Hill MS	Hall To Stair 4	3	2x13W CF HARDWIRED	can rec 8"	8	8	30	0.2	10 WATT LED/KIT	can kit LED Spectrum	8	11	0.1	0.2	449	3,200	3,200
957	Chippens Hill MS	Hall Elevator	3	2L4' T8 32w/EL	trof para 1' wide	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	137	3,200	3,200
958	Chippens Hill MS	Bath Boys (2)	3	3L4' T8 32w/EL	industrial	24	24	88	2.1	3L4' T8 28w/ELEE LO	rlrb LF	24	66	1.6	0.5	1,321	2,800	1,960
959	Chippens Hill MS	Classroom 320	3	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
960	Chippens Hill MS	Classroom 321	3	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
961	Chippens Hill MS	Office Faculty Workroom	3	4L4' T8 32w/EL	trof acr	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	0.1	215	2,400	1,680
962	Chippens Hill MS	Office Multi Purpose Room	3	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	189	2,400	1,680
963	Chippens Hill MS	Classroom 322	3	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
964	Chippens Hill MS	Classroom 323	3	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
965	Chippens Hill MS	Classroom 324	3	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	192	1,288	1,288
966	Chippens Hill MS	Classroom 325	3	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
967	Chippens Hill MS	Storage Custodian	3	3L4' T8 32w/EL	industrial cage	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	10	500	350
968	Chippens Hill MS	Storage Science	3	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	20	500	350
969	Chippens Hill MS	Storage Janitor Supplies	3	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	10	500	350
970	Chippens Hill MS	Bath Men (2)	3	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	220	2,800	1,960
971	Chippens Hill MS	Hall 320-325	3	2L4' T8 32w/EL	trof parabolic	18	18	60	1.1	2L4' T8 28w/ELEE LO	rlrb LF	18	44	0.8	0.3	824	3,200	2,240
972	Chippens Hill MS	Hall 320-325	3	2x13W CF HARDWIRED	can rec 8"	14	14	30	0.4	10 WATT LED/KIT	can kit LED Spectrum	14	11	0.1	0.3	786	3,200	3,200
973	Chippens Hill MS	Hall To Stair 6	3	2L4' T8 32w/EL	trof parabolic	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	183	3,200	3,200
974	Chippens Hill MS	Hall To Stair 6	3	2x13W CF HARDWIRED	can rec 8"	10	10	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	10	11	0.1	0.2	562	3,200	3,200
975	Chippens Hill MS	Bath Boys (2)	3	3L4' T8 32w/EL	industrial	24	24	88	2.1	3L4' T8 28w/ELEE LO	rlrb LF	24	66	1.6	0.5	1,321	2,800	1,960
976	Chippens Hill MS	Classroom 331	3	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
977	Chippens Hill MS	Classroom 332	3	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	210	1,411	1,411
978	Chippens Hill MS	Classroom 333	3	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
979	Chippens Hill MS	Classroom 334	3	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
980	Chippens Hill MS	Classroom 335	3	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
981	Chippens Hill MS	Office Resource Room	3	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	189	2,400	1,680
982	Chippens Hill MS	Storage Electric	3	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	10	500	350
983	Chippens Hill MS	Storage Science	3	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	20	500	350
984	Chippens Hill MS	Office Faculty Work Room	3	4L4' T8 32w/EL	trof acr	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	0.1	215	2,400	1,680
985	Chippens Hill MS	Hall 331-335	3	2L4' T8 32w/EL	trof parabolic	15	15	60	0.9	2L4' T8 28w/ELEE LO	rlrb LF	15	44	0.7	0.2	687	3,200	2,240
986	Chippens Hill MS	Hall 331-335	3	2x13W CF HARDWIRED	can rec 8"	9	9	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	9	11	0.1	0.2	505	3,200	2,240
987	Chippens Hill MS	Stair 2,7 (2)	stair	2L4' T8 32w/EL	trof parabolic	6	6	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	6	44	0.3	0.1	275	3,200	3,200
988	Chippens Hill MS	Stair 2,7 (2)	stair	3L4' T8 32w/EL	indirect/direct	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	126	3,200	3,200
989	Chippens Hill MS	Stair 2,7 (2)	stair	2L4' T8 32w/EL	strip cage	6	6	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	6	44	0.3	0.1	275	3,200	3,200
990	Chippens Hill MS	Classroom 211	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
991	Chippens Hill MS	Classroom 212	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
992	Chippens Hill MS	Classroom 213	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
993	Chippens Hill MS	Classroom 214	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
994	Chippens Hill MS	Classroom 215	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
995	Chippens Hill MS	Office Resource Room	2	4L4' T8 32w/EL	trof acr	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	0.1	215	2,400	1,680
996	Chippens Hill MS	Storage Science	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	20	500	350
997	Chippens Hill MS	Storage Ladder	2	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	10	500	350
998	Chippens Hill MS	Office Faculty Workroom	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	189	2,400	1,680
999	Chippens Hill MS	Bath Boys (2)	2	3L4' T8 32w/EL	industrial	24	24	88	2.1	3L4' T8 28w/ELEE LO	rlrb LF	24	66	1.6	0.5	1,321	2,800	1,960
1000	Chippens Hill MS	Hall 211-215	2	2L4' T8 32w/EL	trof parabolic	15	15	60	0.9	2L4' T8 28w/ELEE LO	rlrb LF	15	44	0.7	0.2	687	3,200	2,240
1001	Chippens Hill MS	Hall 211-215	2	2x13W CF HARDWIRED	can rec 8"	9	9	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	9	11	0.1	0.2	505	3,200	3,200
1002	Chippens Hill MS	Hall To Stair 4	2	2L4' T8 32w/EL	trof parabolic	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	183	3,200	2,240
1003	Chippens Hill MS	Hall To Stair 4	2	2x13W CF HARDWIRED	can rec 8"	10	10	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	10	11	0.1	0.2	562	3,200	2,240
1004	Chippens Hill MS	Hall Elevator Lobby	2	2x13W CF HARDWIRED	can rec 8"	6	6	30	0.2	10 WATT LED/KIT	can kit LED Spectrum	6	11	0.1	0.1	337	3,200	2,240
1005	Chippens Hill MS	Hall Elev-Stair 3	2	2L4' T8 32w/EL	trof parabolic	5	5	60	0.3	2L4' T8 28w/ELEE DIM	rlrb LF dim powersense & elogic control	5	54	0.3	0.0	93	3,200	3,200
1006	Chippens Hill MS	Classroom 220	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
1007	Chippens Hill MS	Classroom 221	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
1008	Chippens Hill MS	Classroom 222	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
1009	Chippens Hill MS	Classroom 223	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
1010	Chippens Hill MS	Classroom 224	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
1011	Chippens Hill MS	Classroom 225	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	165	1,104	1,104
1012	Chippens Hill MS	Office Faculty Work Room	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	189	2,400	1,680
1013	Chippens Hill MS	Office Multi Purpose	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	189	2,400	1,680
1014	Chippens Hill MS	Storage Custodian	2	3L4' T8 32w/EL	industrial cage	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	10	500	350
1015	Chippens Hill MS	Storage Science	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	20	500	350
1016	Chippens Hill MS	Office Resource	2	4L4' T8 32w/EL	trof acr	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	0.1	215	2,400	1,680
1017	Chippens Hill MS	Storage File	2	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	10	500	350
1018	Chippens Hill MS	Hall 220-225	2	2L4' T8 32w/EL	trof para 1' wide	18	18	60	1.1	2L4' T8 28w/ELEE LO	rlrb LF	18	44	0.8	0.3	824	3,200	2,240
1019	Chippens Hill MS	Hall 220-225	2	2x13W CF HARDWIRED	can rec 6"	14	14	30	0.4	10 WATT LED/KIT	can kit LED Spectrum	14	11	0.1	0.3	786	3,200	2,240
1020	Chippens Hill MS	Hall To Stair 6	2	2L4' T8 32w/EL	trof para 1' wide	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	183	3,200	3,200
1021	Chippens Hill MS	Hall To Stair 6	2	2x13W CF HARDWIRED	can rec 6"	10	10	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	10	11	0.1	0.2	562	3,200	3,200
1022	Chippens Hill MS	Bath Boys (2)	2	3L4' T8 32w/EL	industrial	24	24	88	2.1	3L4' T8 28w/ELEE LO	rlrb LF	24	66	1.6	0.5	1,321	2,800	1,960
1023	Chippens Hill MS	Classroom 231	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
1024	Chippens Hill MS	Classroom 232	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
1025	Chippens Hill MS	Classroom 233	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	156	1,043	1,043
1026	Chippens Hill MS	Classroom 234	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
1027	Chippens Hill MS	Classroom 235	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	174	1,166	1,166
1028	Chippens Hill MS	Storage Science	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	20	500	350
1029	Chippens Hill MS	Office Faculty Room	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	4L4' T8 28w/ELEE LO	rlrb LF	3	87	0.3	0.1	161	2,400	1,680
1030	Chippens Hill MS	Hall 231-235	2	2L4' T8 32w/EL	trof para 1' wide	15	15	60	0.9	2L4' T8 28w/ELEE LO	rlrb LF	15	44	0.7	0.2	687	3,200	2,240
1031	Chippens Hill MS	Hall 231-235	2	2x13W CF HARDWIRED	can rec 6"	10	10	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	10	11	0.1	0.2	562	3,200	2,240
1032	Chippens Hill MS	Auditorium Main	2	120W INCANDESCENT	cylinder surf mt.	51	51	120	6.1	25 WATT LED/KIT	can kit LED Spectrum	51	26	1.3	4.8	6,885	1,600	1,600
1033	Chippens Hill MS	Stage Aud	2	3L4' T8 32w/EL	wrap wide	30	30	88	2.6	3L4' T8 28w/ELEE LO	rlrb LF	30	66	2.0	0.7	944	1,600	1,600
1034	Chippens Hill MS	Hall Stage	2	2L4' T8 32w/EL	trof parabolic	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	92	3,200	3,200
1035	Chippens Hill MS	Storage Stage	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	20	500	350
1036	Chippens Hill MS	Lobby Aud	2	100W MERCURY VAPOR	can rec 8"	19	19	120	2.3	25 WATT LED/KIT	can kit LED Spectrum	19	26	0.5	1.8	5,130	3,200	2,240
1037	Chippens Hill MS	Lobby Aud	2	2x13W CF HARDWIRED	can rec 8"	8	8	30	0.2	10 WATT LED/KIT	can kit LED Spectrum	8	11	0.1	0.2	449	3,200	2,240
1038	Chippens Hill MS	Storage Mechanical Room	2	3L4' T8 32w/EL	industrial cage	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	10	500	350
1039	Chippens Hill MS	Bath Woman	2	3L4' T8 32w/EL	industrial	10	10	88	0.9	3L4' T8 28w/ELEE LO	rlrb LF	10	66	0.7	0.2	428	1,960	1,960

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
1040	Chippens Hill MS	Bath Men	2	3L4' T8 32w/EL	industrial	7	7	88	0.6	3L4' T8 28w/ELEE LO	rlrb LF	7	66	0.5	0.2	300	1,960	1,960
1041	Chippens Hill MS	Lobby Main	2	3L4' T8 32w/EL	trof acr	6	6	88	0.5	3L4' T8 28w/ELEE LO	rlrb LF	6	66	0.4	0.1	378	3,200	3,200
1042	Chippens Hill MS	Lobby Main	2	4L4' T8 32w/EL-8'	indirect	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	72	3,200	3,200
1043	Chippens Hill MS	Lobby Main	2	2L4' T8 32w/EL-8'	drum	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	46	3,200	3,200
1044	Chippens Hill MS	Lobby Main	2	2x13W CF HARDWIRED	can rec 8"	2	2	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.0	112	3,200	3,200
1045	Chippens Hill MS	Office Open Guidance	2	3L4' T8 32w/EL	trof acr	6	6	88	0.5	3L4' T8 28w/ELEE LO	rlrb LF	6	66	0.4	0.1	324	2,750	1,925
1046	Chippens Hill MS	Hall Guidance	2	2x13W CF HARDWIRED	can rec 8"	6	6	30	0.2	10 WATT LED/KIT	can kit LED Spectrum	6	11	0.1	0.1	337	3,200	3,200
1047	Chippens Hill MS	Office Kids In The Middle	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	94	2,400	1,680
1048	Chippens Hill MS	Office A	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	94	2,400	1,680
1049	Chippens Hill MS	Office B	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	94	2,400	1,680
1050	Chippens Hill MS	Office C	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	94	2,400	1,680
1051	Chippens Hill MS	Office Social Worker	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	94	2,400	1,680
1052	Chippens Hill MS	Office Psych	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	94	2,400	1,680
1053	Chippens Hill MS	Office File	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	94	2,400	1,680
1054	Chippens Hill MS	Conference Guidance	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	189	2,400	1,680
1055	Chippens Hill MS	Foyer Main	2	2x13W CF HARDWIRED	can rec 8"	4	4	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	4	11	0.0	0.1	225	3,200	3,200
1056	Chippens Hill MS	Office Open Main	2	3L4' T8 32w/EL	trof acr	9	9	88	0.8	3L4' T8 28w/ELEE LO	rlrb LF	9	66	0.6	0.2	434	2,453	1,717
1057	Chippens Hill MS	Hall Main Office	2	2x26W CF HARDWIRED/EL	can rec 6"	12	12	54	0.6	15 WATT LED/KIT	can kit LED Spectrum	12	16	0.2	0.5	1,322	3,200	2,240
1058	Chippens Hill MS	Office Asst Principal (2)	2	3L4' T8 32w/EL	trof acr	8	8	88	0.7	3L4' T8 28w/ELEE LO	rlrb LF	8	66	0.5	0.2	378	2,400	1,680
1059	Chippens Hill MS	Office Principal	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	189	2,400	1,680
1060	Chippens Hill MS	Office Open Workroom	2	4L4' T8 32w/EL	trof acr	6	6	112	0.7	4L4' T8 28w/ELEE LO	rlrb LF	6	87	0.5	0.1	369	2,750	1,925
1061	Chippens Hill MS	Hall Main Lobby - Nurse	2	4L4' T8 32w/EL-8'	indirect	5	5	112	0.6	4L4' T8 28w/ELEE LO-8'	rlrb LF	5	87	0.4	0.1	358	3,200	3,200
1062	Chippens Hill MS	Hall Main Lobby - Nurse	2	2L4' T8 32w/EL-8'	drum	5	5	60	0.3	2L4' T8 28w/ELEE LO-8'	rlrb LF	5	44	0.2	0.1	229	3,200	3,200
1063	Chippens Hill MS	Hall Main Lobby - Nurse	2	2x13W CF HARDWIRED	can rec 8"	4	4	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	4	11	0.0	0.1	225	3,200	3,200
1064	Chippens Hill MS	Hall Main Lobby - Nurse	2	2x26W CF HARDWIRED/EL	can rec 8"	5	5	54	0.3	15 WATT LED/KIT	can kit LED Spectrum	5	16	0.1	0.2	551	3,200	3,200
1065	Chippens Hill MS	Classroom Music	2	4L4' T8 32w/EL-8'	trof para 1' wide	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	423	1,890	1,890
1066	Chippens Hill MS	Classroom Music	2	2L4' T8 32w/EL	trof para 1' wide	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	30	1,890	1,890
1067	Chippens Hill MS	Storage Music	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	20	500	350
1068	Chippens Hill MS	Office Music	2	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	47	2,400	1,680
1069	Chippens Hill MS	Storage Percussion	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	39	1,000	700
1070	Chippens Hill MS	Storage Practice A	2	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	10	500	350
1071	Chippens Hill MS	Classroom Choral Room	2	4L4' T8 32w/EL-8'	trof parabolic	8	8	112	0.9	4L4' T8 28w/ELEE LO-8'	rlrb LF	8	87	0.7	0.2	376	1,890	1,890
1072	Chippens Hill MS	Hall Music	2	2x13W CF HARDWIRED	can rec 8"	3	3	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	0.1	168	3,200	2,240
1073	Chippens Hill MS	Office Open Nurse	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	216	2,750	1,925
1074	Chippens Hill MS	Office Open Nurse	2	3L4' T8 32w/EL	trof acr	3	3	88	0.3	3L4' T8 28w/ELEE LO	rlrb LF	3	66	0.2	0.1	162	2,750	2,750
1075	Chippens Hill MS	Office Nurse	2	3L4' T8 32w/EL	trof acr	3	3	88	0.3	3L4' T8 28w/ELEE LO	rlrb LF	3	66	0.2	0.1	142	2,400	1,680
1076	Chippens Hill MS	Bath Nurse	2	2L4' T8 32w/EL	trof para 1' wide	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	40	2,800	1,960
1077	Chippens Hill MS	Hall Stair 5-Stair 3	2	4L4' T8 32w/EL-8'	indirect	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	429	3,200	3,200
1078	Chippens Hill MS	Hall Stair 5-Stair 3	2	2L4' T8 32w/EL-8'	drum	6	6	60	0.4	2L4' T8 28w/ELEE LO-8'	rlrb LF	6	44	0.3	0.1	275	3,200	3,200
1079	Chippens Hill MS	Hall Stair 5-Stair 3	2	2x13W CF HARDWIRED	can rec 8"	12	12	30	0.4	10 WATT LED/KIT	can kit LED Spectrum	12	11	0.1	0.2	674	3,200	3,200
1080	Chippens Hill MS	Hall Stair 5-Stair 3	2	2x26W CF HARDWIRED/EL	can rec 8"	6	6	54	0.3	15 WATT LED/KIT	can kit LED Spectrum	6	16	0.1	0.2	661	3,200	3,200
1081	Chippens Hill MS	Classroom Art C	2	4L4' T8 32w/EL-8'	indirect/direct	8	8	112	0.9	4L4' T8 28w/ELEE LO-8'	rlrb LF	8	87	0.7	0.2	376	1,890	1,890
1082	Chippens Hill MS	Storage Art C	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	39	1,000	700
1083	Chippens Hill MS	Storage Kiln	2	3L4' T8 32w/EL	trof minicube	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	10	500	350
1084	Chippens Hill MS	Classroom Art B	2	4L4' T8 32w/EL-8'	indirect/direct	8	8	112	0.9	4L4' T8 28w/ELEE LO-8'	rlrb LF	8	87	0.7	0.2	376	1,890	1,890
1085	Chippens Hill MS	Classroom Art B	2	2L4' T8 32w/EL	indirect/direct	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	39	2,700	1,890
1086	Chippens Hill MS	Classroom Art B	2	2L4' T8 32w/EL	indirect/direct	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	39	2,700	1,890
1087	Chippens Hill MS	Storage Art B	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	39	1,000	700
1088	Chippens Hill MS	Storage Kiln	2	3L4' T8 32w/EL	trof minicube	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	10	500	350
1089	Chippens Hill MS	Classroom Art A	2	4L4' T8 32w/EL-8'	indirect/direct	8	8	112	0.9	4L4' T8 28w/ELEE LO-8'	rlrb LF	8	87	0.7	0.2	376	1,890	1,890
1090	Chippens Hill MS	Classroom Art A	2	2L4' T8 32w/EL	indirect/direct	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	39	2,700	1,890
1091	Chippens Hill MS	Classroom Art A	2	2L4' T8 32w/EL	indirect/direct	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	39	2,700	1,890
1092	Chippens Hill MS	Storage Art A	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	39	1,000	700
1093	Chippens Hill MS	Storage Near Art A	2	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	20	1,000	700
1094	Chippens Hill MS	Classroom 205	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
1095	Chippens Hill MS	Hall Elev-Stair 3	2	2L4' T8 32w/EL	trof parabolic	5	5	60	0.3	2L4' T8 28w/ELEE DIM	rlrb LF dim powersense & elogic control	5	54	0.3	0.0	93	3,200	3,200
1096	Chippens Hill MS	Storage Computer	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	45	1,000	700
1097	Chippens Hill MS	Storage Drama	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	22	500	350
1098	Chippens Hill MS	Hall Drama	2	2x13W CF HARDWIRED	can rec 8"	10	10	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	10	11	0.1	0.2	562	3,200	3,200
1099	Chippens Hill MS	Hall Drama	2	2L4' T8 32w/EL	trof para 1' wide	19	19	60	1.1	2L4' T8 28w/ELEE LO	rlrb LF	19	44	0.8	0.3	870	3,200	3,200
1100	Chippens Hill MS	Lobby Library	2	2x13W CF HARDWIRED	can rec 8"	6	6	30	0.2	10 WATT LED/KIT	can kit LED Spectrum	6	11	0.1	0.1	337	3,200	3,200
1101	Chippens Hill MS	Lobby Library	2	2x13W CF HARDWIRED	can rec 8"	2	2	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.0	112	3,200	3,200
1102	Chippens Hill MS	Library Main	2	400W METAL HALIDE	indirect	8	8	455	3.6	137 WATT LED/NEW	new LED flood	8	144	1.2	2.5	4,929	2,200	2,200
1103	Chippens Hill MS	Library Main	2	2x13W CF HARDWIRED	can rec 8"	71	71	30	2.1	10 WATT LED/KIT	can kit LED Spectrum	71	11	0.7	1.4	2,741	2,200	2,200
1104	Chippens Hill MS	Library Main	2	4L4' T8 32w/EL-8'	indirect/direct	18	18	112	2.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	18	87	1.6	0.4	886	2,200	2,200
1105	Chippens Hill MS	Lab B Food	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
1106	Chippens Hill MS	Classroom Capitani	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
1107	Chippens Hill MS	Storage Capitani	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	39	1,000	700
1108	Chippens Hill MS	Storage Av	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	45	1,000	700
1109	Chippens Hill MS	Storage Av	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	79	1,000	700
1110	Chippens Hill MS	Office Home Ec	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	189	2,400	1,680
1111	Chippens Hill MS	Lab Sewing B	2	4L4' T8 32w/EL-8'	indirect/direct	8	8	112	0.9	4L4' T8 28w/ELEE LO-8'	rlrb LF	8	87	0.7	0.2	376	1,890	1,890
1112	Chippens Hill MS	Lab Computer B	2	4L4' T8 32w/EL-8'	indirect	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
1113	Chippens Hill MS	Lab Computer A	2	4L4' T8 32w/EL-8'	indirect	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
1114	Chippens Hill MS	Lab Sewing	2	4L4' T8 32w/EL-8'	indirect/direct	8	8	112	0.9	4L4' T8 28w/ELEE LO-8'	rlrb LF	8	87	0.7	0.2	376	1,890	1,890
1115	Chippens Hill MS	Stair 1	stair	6L4' T8 32w/EL	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO	rlrb LF	6	132	0.8	0.3	824	3,200	2,240
1116	Chippens Hill MS	Stair 1	stair	4L4' T8 32w/EL-8'	strip cage	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	72	3,200	3,200
1117	Chippens Hill MS	Hall Stair 1-Caf	1	2L4' T8 32w/EL	trof para 1' wide	19	19	60	1.1	2L4' T8 28w/ELEE LO	rlrb LF	19	44	0.8	0.3	870	3,200	3,200
1118	Chippens Hill MS	Hall Stair 1-Caf	1	2x13W CF HARDWIRED	can rec 8"	9	9	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	9	11	0.1	0.2	505	3,200	3,200
1119	Chippens Hill MS	Classroom Computer	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	141	1,890	1,890
1120	Chippens Hill MS	Classroom Computer	1	2L4' T8 32w/EL	indirect/direct	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	60	1,890	1,890
1121	Chippens Hill MS	Exercise Life Skills A	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	311	2,086	2,086
1122	Chippens Hill MS	Exercise Life Skills B	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	311	2,086	2,086
1123	Chippens Hill MS	Hall Maintenance	1	4L4' T8 32w/EL	industrial cage	10	10	112	1.1	4L4' T8 28w/ELEE LO	rlrb LF	10	87	0.9	0.2	716	3,200	3,200
1124	Chippens Hill MS	Storage Garage	1	3L4' T8 32w/EL	industrial cage	6	6	88	0.5	3L4' T8 28w/ELEE LO	rlrb LF	6	66	0.4	0.1	118	1,000	700
1125	Chippens Hill MS	Mechanical Boiler	1	3L4' T8 32w/EL	industrial cage	11	11	88	1.0	3L4' T8 28w/ELEE LO	rlrb LF	11	66	0.7	0.2	108	500	500
1126	Chippens Hill MS	Storage Electric	1	3L4' T8 32w/EL	industrial cage	10	10	88	0.9	3L4' T8 28w/ELEE LO	rlrb LF	10	66	0.7	0.2	197	1,000	700
1127	Chippens Hill MS	Office Bldg Super	1	4L4' T8 32w/EL	industrial cage	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	0.0	54	2,400	1,680
1128	Chippens Hill MS	Locker Men/Women (2)	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	110	2,800	1,960
1129	Chippens Hill MS	Locker Men/Women (2)	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	110	2,800	1,960
1130	Chippens Hill MS	Locker Men/Women (2)	1	22W & 32W CIRCLELINE HARDWIRED	drum	4	4	58	0.2	16 WATT LED/NEW	new LED drum	4	17	0.1	0.2	415	2,800	1,960
1131	Chippens Hill MS	Hall Locker Room	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	126	3,200	2,240
1132	Chippens Hill MS	Kitchen Disposal	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	67	1,700	1,190
1133	Chippens Hill MS	Kitchen Main	1	3L4' T8 32w/EL	trof acr	26	26	88	2.3	3L4' T8 28w/ELEE LO	rlrb LF	26	66	1.7	0.6	869	1,700	1,190
1134	Chippens Hill MS	Kitchen Main	1	2x26W CF HARDWIRED/EL	can rec 8"	19	19	54	1.0	15 WATT LED/KIT	can kit LED Spectrum	19	16	0.3	0.7	1,112	1,700	1,190
1135	Chippens Hill MS	Kitchen Hood	1	60W INCANDESCENT	range hood	12	12	60	0.7	8 WATT LED SI	screw in LED Alamp	12	8	0.1	0.6	947	1,700	1,700
1136	Chippens Hill MS	Office Main Kitchen	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	94	2,400	1,680
1137	Chippens Hill MS	Storage Main Kitchen	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	39	1,000	700
1138	Chippens Hill MS	Storage Cans	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	39	1,000	700
1139	Chippens Hill MS	Storage Garage	1	3L4' T8 32w/EL	industrial cage	6	6	88	0.5	3L4' T8 28w/ELEE LO	rlrb LF	6	66	0.4	0.1	118	1,000	700
1140	Chippens Hill MS	Storage Can Wash	1	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	20	1,000	700
1141	Chippens Hill MS	Freezer Kitchen (2)	1	60W INCANDESCENT	jar	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	93	1,000	1,000
1142	Chippens Hill MS	Cafeteria Main (2)	1	4L4' T8 32w/EL-8'	indirect/direct	70	70	112	7.8	4L4' T8 28w/ELEE LO-8'	rlrb LF	70	87	6.1	1.7	2,975	1,900	1,900
1143	Chippens Hill MS	Cafeteria Main (2)	1	2L4' T8 32w/EL	indirect/direct	66	66	60	4.0	2L4' T8 28w/ELEE LO	rlrb LF	66	44	2.9	1.0	1,794	1,900	1,900
1144	Chippens Hill MS	Bath Men (2)	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	220	2,800	1,960
1145	Chippens Hill MS	Lounge Faculty	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
1146	Chippens Hill MS	Hall Gym-Caf	1	2L4' T8 32w/EL	trof para 1' wide	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	0.1	366	3,200	2,240
1147	Chippens Hill MS	Gym Main	1	4L4' T5 HO/EL	high bay	74	74	234	17.3	98 WATT LED/NEW	new LED hibay wg	74	103	7.6	9.7	26,019	2,980	2,086
1148	Chippens Hill MS	Storage Janitor	1	3L4' T8 32w/EL	industrial cage	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	10	500	350
1149	Chippens Hill MS	Storage Balls	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	22	500	350
1150	Chippens Hill MS	Storage Elevator	1	3L4' T8 32w/EL	industrial cage	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	10	500	350
1151	Chippens Hill MS	Hall Gym-Stair 5	1	2L4' T8 32w/EL	trof para 1' wide	19	19	60	1.1	2L4' T8 28w/ELEE LO	rlrb LF	19	44	0.8	0.3	870	3,200	2,240
1152	Chippens Hill MS	Hall Gym-Stair 5	1	2x13W CF HARDWIRED	can rec 8"	10	10	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	10	11	0.1	0.2	562	3,200	2,240
1153	Chippens Hill MS	Classroom Tech A	1	4L4' T8 32w/EL-8'	indirect/direct	12	12	112	1.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	12	87	1.0	0.3	564	1,890	1,890
1154	Chippens Hill MS	Storage Tech A	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	79	1,000	700
1155	Chippens Hill MS	Storage Tech A	1	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	10	500	350
1156	Chippens Hill MS	Storage Custodian	1	3L4' T8 32w/EL	industrial cage	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	10	500	350
1157	Chippens Hill MS	Classroom Tech B	1	3L4' T8 32w/EL	trof acr	24	24	88	2.1	3L4' T8 28w/ELEE LO	rlrb LF	24	66	1.6	0.5	991	1,890	1,890
1158	Chippens Hill MS	Storage Tech B	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	79	1,000	700
1159	Chippens Hill MS	Storage Tech B	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	20	500	350
1160	Chippens Hill MS	Classroom Tech C	1	3L4' T8 32w/EL	trof acr	27	27	88	2.4	3L4' T8 28w/ELEE LO	rlrb LF	27	66	1.8	0.6	1,115	1,890	1,890
1161	Chippens Hill MS	Hall Display	1	2x13W CF HARDWIRED	can rec 8"	6	6	30	0.2	10 WATT LED/KIT	can kit LED Spectrum	6	11	0.1	0.1	337	3,200	3,200
1162	Chippens Hill MS	Hall Boys Locker-Girls Locker	1	2L4' T8 32w/EL	trof para 1' wide	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	0.1	366	3,200	3,200
1163	Chippens Hill MS	Hall Boys Locker-Girls Locker	1	2x13W CF HARDWIRED	can rec 8"	6	6	30	0.2	10 WATT LED/KIT	can kit LED Spectrum	6	11	0.1	0.1	337	3,200	2,240
1164	Chippens Hill MS	Locker Boys (2)	1	3L4' T8 32w/EL	trof acr	36	36	88	3.2	3L4' T8 28w/ELEE LO	rlrb LF	36	66	2.4	0.8	1,982	2,800	1,960
1165	Chippens Hill MS	Locker Boys (2)	1	22W & 32W CIRCLELINE HARDWIRED	drum	14	14	58	0.8	16 WATT LED/NEW	new LED drum	14	17	0.2	0.6	1,454	2,800	1,960
1166	Chippens Hill MS	Locker Boys (2)	1	22W & 32W CIRCLELINE HARDWIRED	drum	8	8	58	0.5	16 WATT LED/NEW	new LED drum	8	17	0.1	0.3	831	2,800	2,800
1167	Chippens Hill MS	Locker Boys (2)	1	2x13W CF HARDWIRED	square recessed	2	2	30	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.0	67	2,800	1,960
1168	Chippens Hill MS	Locker Boys (2)	1	2x13W CF HARDWIRED	can rec 8"	10	10	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	10	11	0.1	0.2	491	2,800	1,960
1169	Chippens Hill MS	Storage Locker (2)	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	79	1,000	700
1170	Chippens Hill MS	Office Trainer (2)	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	189	2,400	1,680
1171	Chippens Hill MS	Bath Trainer (2)	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	110	2,800	1,960
1172	Chippens Hill MS	Bath Trainer (2)	1	22W & 32W CIRCLELINE HARDWIRED	drum	2	2	58	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.1	208	2,800	1,960
1173	Chippens Hill MS	Office Pe (2)	1	3L4' T8 32w/EL	trof acr	6	6	88	0.5	3L4' T8 28w/ELEE LO	rlrb LF	6	66	0.4	0.1	283	2,400	1,680
1174	Chippens Hill MS	Classroom 135	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
1175	Chippens Hill MS	Classroom 134	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
1176	Chippens Hill MS	Classroom 133	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	183	1,227	1,227
1177	Chippens Hill MS	Classroom 132	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
1178	Chippens Hill MS	Classroom 131	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
1179	Chippens Hill MS	Office Faculty Work Room	1	4L4' T8 32w/EL	trof acr	3	3	112	0.3	4L4' T8 28w/ELEE LO	rlrb LF	3	87	0.3	0.1	161	2,400	1,680
1180	Chippens Hill MS	Storage Science	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	20	500	350
1181	Chippens Hill MS	Storage Band	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	0.0	11	500	350
1182	Chippens Hill MS	Office Resource	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	189	2,400	1,680
1183	Chippens Hill MS	Hall 135-131	1	2L4' T8 32w/EL	trof para 1' wide	15	15	60	0.9	2L4' T8 28w/ELEE LO	rlrb LF	15	44	0.7	0.2	687	3,200	2,240
1184	Chippens Hill MS	Hall 135-131	1	2x13W CF HARDWIRED	can rec 8"	9	9	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	9	11	0.1	0.2	505	3,200	2,240
1185	Chippens Hill MS	Hall Stair 6-B	1	2L4' T8 32w/EL	trof para 1' wide	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	137	3,200	2,240

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
1186	Chippens Hill MS	Hall Stair 6-B	1	2x13W CF HARDWIRED	can rec 8"	10	10	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	10	11	0.1	0.2	562	3,200	2,240
1187	Chippens Hill MS	Bath Boys (2)	1	3L4' T8 32w/EL	industrial	24	24	88	2.1	3L4' T8 28w/ELEE LO	rlrb LF	24	66	1.6	0.5	1,028	1,960	1,960
1188	Chippens Hill MS	Stair 6	stair	2L4' T8 32w/EL	trof para 1' wide	6	6	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	6	44	0.3	0.1	275	3,200	3,200
1189	Chippens Hill MS	Stair 6 (2)	stair	6L4' T8 32w/EL-12'	indirect/direct	4	4	180	0.7	6L4' T8 28w/ELEE LO-12'	rlrb LF	4	132	0.5	0.2	550	3,200	2,240
1190	Chippens Hill MS	Stair 6 (2)	stair	4L4' T8 32w/EL-8'	indirect/direct	4	4	112	0.4	4L4' T8 28w/ELEE LO-8'	rlrb LF	4	87	0.3	0.1	286	3,200	2,240
1191	Chippens Hill MS	Stair 6	stair	4L4' T8 32w/EL-8'	strip cage	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	143	3,200	2,240
1192	Chippens Hill MS	Classroom 125	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
1193	Chippens Hill MS	Classroom 124	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
1194	Chippens Hill MS	Classroom 123	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	201	1,350	1,350
1195	Chippens Hill MS	Classroom 122	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	220	1,473	1,473
1196	Chippens Hill MS	Classroom 121	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
1197	Chippens Hill MS	Classroom 120	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
1198	Chippens Hill MS	Hall 125-120	1	2L4' T8 32w/EL	trof para 1' wide	18	18	60	1.1	2L4' T8 28w/ELEE LO	rlrb LF	18	44	0.8	0.3	824	3,200	2,240
1199	Chippens Hill MS	Storage Janitor	1	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	10	500	350
1200	Chippens Hill MS	Storage Science	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	20	500	350
1201	Chippens Hill MS	Storage Custodian	1	3L4' T8 32w/EL	industrial cage	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	10	500	350
1202	Chippens Hill MS	Office Multipurpose	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	189	2,400	1,680
1203	Chippens Hill MS	Office Faculty Workroom	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	189	2,400	1,680
1204	Chippens Hill MS	Hall Stair 4-B	1	3L4' T8 32w/EL	trof acr	3	3	88	0.3	3L4' T8 28w/ELEE LO	rlrb LF	3	66	0.2	0.1	189	3,200	3,200
1205	Chippens Hill MS	Hall Stair 4-B	1	2L4' T8 32w/EL	trof para 1' wide	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	137	3,200	2,240
1206	Chippens Hill MS	Hall Stair 4-B	1	2x13W CF HARDWIRED	can rec 8"	10	10	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	10	11	0.1	0.2	562	3,200	2,240
1207	Chippens Hill MS	Bath Boys	1	3L4' T8 32w/EL	industrial	12	12	88	1.1	3L4' T8 28w/ELEE LO	rlrb LF	12	66	0.8	0.3	514	1,960	1,960
1208	Chippens Hill MS	Stair 4	stair	2L4' T8 32w/EL	trof para 1' wide	6	6	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	6	44	0.3	0.1	275	3,200	3,200
1209	Chippens Hill MS	Stair 4	stair	6L4' T8 32w/EL-12'	indirect/direct	2	2	180	0.4	6L4' T8 28w/ELEE LO-12'	rlrb LF	2	132	0.3	0.1	275	3,200	2,240
1210	Chippens Hill MS	Stair 4	stair	4L4' T8 32w/EL-8'	indirect/direct	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	143	3,200	2,240
1211	Chippens Hill MS	Stair 4	stair	4L4' T8 32w/EL-8'	strip cage	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	143	3,200	2,240
1212	Chippens Hill MS	Classroom 115	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
1213	Chippens Hill MS	Classroom 114	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	210	1,411	1,411
1214	Chippens Hill MS	Classroom 113	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
1215	Chippens Hill MS	Classroom 112	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	183	1,227	1,227
1216	Chippens Hill MS	Classroom 111	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	282	1,890	1,890
1217	Chippens Hill MS	Office Faculty Workroom	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	189	2,400	1,680
1218	Chippens Hill MS	Storage Cleaning Supplies	1	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	10	500	350
1219	Chippens Hill MS	Storage Science	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	20	500	350
1220	Chippens Hill MS	Office Resources	1	4L4' T8 32w/EL	trof acr	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	0.1	215	2,400	1,680
1221	Chippens Hill MS	Stair 3	stair	70W METAL HALIDE	can rec 8"	10	10	95	1.0	15 WATT LED/KIT	can kit LED Spectrum	10	16	0.2	0.8	2,282	3,200	2,240
1222	Chippens Hill MS	Stair 3	stair	2x13W CF HARDWIRED	can rec 8"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	56	3,200	2,240
1223	Chippens Hill MS	Stair 5	stair	4L4' T8 32w/EL-8'	strip cage	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	72	3,200	3,200
1224	Chippens Hill MS	Stair 5	stair	2x13W CF HARDWIRED	can rec 8"	2	2	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.0	112	3,200	3,200
1225	Chippens Hill MS	Stair 5	stair	70W METAL HALIDE	can rec 8"	3	3	95	0.3	15 WATT LED/KIT	can kit LED Spectrum	3	16	0.0	0.2	685	3,200	3,200
1226	Chippens Hill MS	Storage Paper	1	3L4' T8 32w/EL	industrial cage	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	39	1,000	700
1227	Chippens Hill MS	Storage Wood Shop	1	3L4' T8 32w/EL	industrial cage	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	79	1,000	700
1228	Chippens Hill MS	Storage Garage	1	3L4' T8 32w/EL	industrial cage	16	16	88	1.4	3L4' T8 28w/ELEE LO	rlrb LF	16	66	1.1	0.3	315	1,000	700
1229	Chippens Hill MS	Storage Garage	1	2L4' T8 32w/EL	strip reflector	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	14	1,000	1,000
1239	Bristol Eastern HS	Classroom 200	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
1240	Bristol Eastern HS	Office 200A	1	4L4' T8 32w/EL	trof parabolic	6	6	112	0.7	4L4' T8 28w/ELEE LO	rlrb LF	6	87	0.5	0.1	213	1,680	1,680
1241	Bristol Eastern HS	Storage 200B	1	4L2' T8 17w/EL	trof acr	3	3	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	0.1	35	500	350
1242	Bristol Eastern HS	Storage Janitor	1	2L4' T8 32w/EL-8'	trof acr 1' wide	4	4	60	0.2	2L4' T8 28w/ELEE LO-8'	rlrb LF	4	44	0.2	0.1	19	350	350
1243	Bristol Eastern HS	Storage Janitor	1	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	2	350	350
1244	Bristol Eastern HS	Storage Janitor	1	2x26W CF HARDWIRED/EL	can rec 8"	1	1	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	1	16	0.0	0.0	11	350	350
1245	Bristol Eastern HS	Bath Men	1	2L4' T8 32w/EL-8'	trof acr 1' wide	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	30	2,240	2,240
1246	Bristol Eastern HS	Bath Men	1	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	13	2,240	2,240
1247	Bristol Eastern HS	Storage 224B	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	12	500	350
1248	Bristol Eastern HS	Bath Woman	1	2L4' T8 32w/EL-8'	trof acr 1' wide	4	4	60	0.2	2L4' T8 28w/ELEE LO-8'	rlrb LF	4	44	0.2	0.1	121	2,240	2,240
1249	Bristol Eastern HS	Bath Woman	1	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	13	2,240	2,240
1250	Bristol Eastern HS	Bath Woman	1	2x26W CF HARDWIRED/EL	can rec 8"	1	1	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	1	16	0.0	0.0	73	2,240	2,240
1251	Bristol Eastern HS	Bath Women	1	2L4' T8 32w/EL-8'	trof acr 1' wide	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	30	2,240	2,240
1252	Bristol Eastern HS	Bath Women	1	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	13	2,240	2,240
1253	Bristol Eastern HS	Classroom 201	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1254	Bristol Eastern HS	Classroom 201	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1255	Bristol Eastern HS	Classroom 202	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1256	Bristol Eastern HS	Classroom 202	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1257	Bristol Eastern HS	Classroom 203	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
1258	Bristol Eastern HS	Classroom 204	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1259	Bristol Eastern HS	Classroom 204	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1260	Bristol Eastern HS	Classroom 205	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
1261	Bristol Eastern HS	Office 205A	1	4L2' T8 17w/EL	trof parabolic	6	6	62	0.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	6	35	0.2	0.2	234	1,680	1,680
1262	Bristol Eastern HS	Classroom 206	1	4L2' T8 17w/EL	trof parabolic	6	6	62	0.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	6	35	0.2	0.2	391	2,800	2,800
1263	Bristol Eastern HS	Classroom 207	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1264	Bristol Eastern HS	Classroom 207	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1265	Bristol Eastern HS	Classroom 208	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1266	Bristol Eastern HS	Classroom 208	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1267	Bristol Eastern HS	Classroom 209	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
1268	Bristol Eastern HS	Classroom 209	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1269	Bristol Eastern HS	Classroom 210	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1270	Bristol Eastern HS	Classroom 210	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1271	Bristol Eastern HS	Classroom 211	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1272	Bristol Eastern HS	Classroom 211	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1273	Bristol Eastern HS	Classroom 212	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1274	Bristol Eastern HS	Classroom 212	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1275	Bristol Eastern HS	Classroom 213	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1276	Bristol Eastern HS	Classroom 213	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
1277	Bristol Eastern HS	Classroom 214	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1278	Bristol Eastern HS	Classroom 214	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1279	Bristol Eastern HS	Bath Woman	1	1L2' T8 17w/EL	trof acr 1' wide	2	2	17	0.0	1L2' T8 15w/ELEE LO	rlrb LF	2	15	0.0	0.0	9	2,240	2,240
1280	Bristol Eastern HS	Bath Woman	1	1L3' T8 25w/EL	trof acr 1' wide	1	1	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	1	22	0.0	0.0	4	2,240	2,240
1281	Bristol Eastern HS	Bath Men	1	1L2' T8 17w/EL	trof acr 1' wide	1	1	17	0.0	1L2' T8 15w/ELEE LO	rlrb LF	1	15	0.0	0.0	4	2,240	2,240
1282	Bristol Eastern HS	Bath Men	1	1L3' T8 25w/EL	trof acr 1' wide	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	0.0	7	2,240	2,240
1283	Bristol Eastern HS	Bath Men (2)	1	1L3' T8 25w/EL	trof acr 1' wide	12	12	24	0.3	1L3' T8 21w/ELEE LO	rlrb LF	12	22	0.3	0.0	45	2,240	2,240
1284	Bristol Eastern HS	Bath Men (2)	1	1L4' T8 32w/EL	trof acr 1' wide	6	6	30	0.2	1L4' T8 28w/ELEE LO	rlrb LF	6	23	0.1	0.0	79	2,240	2,240
1285	Bristol Eastern HS	Classroom 215	1	6L4' T8 32w/EL-12'	indirect/direct	7	7	180	1.3	6L4' T8 28w/ELEE LO-12'	rlrb LF	7	132	0.9	0.3	556	1,960	1,960
1286	Bristol Eastern HS	Classroom 215	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1287	Bristol Eastern HS	Classroom 216	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
1288	Bristol Eastern HS	Storage Electric	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	7	500	350
1289	Bristol Eastern HS	Office Open Guidance	1	4L2' T8 17w/EL	trof parabolic	6	6	62	0.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	6	35	0.2	0.2	384	2,750	2,750
1290	Bristol Eastern HS	Hall Guidance	1	4L2' T8 17w/EL	trof parabolic	8	8	62	0.5	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	8	35	0.3	0.2	595	3,200	3,200
1291	Bristol Eastern HS	Office Wininger	1	4L2' T8 17w/EL	trof parabolic	6	6	62	0.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	6	35	0.2	0.2	335	2,400	2,400
1292	Bristol Eastern HS	Office Kalfayan	1	4L4' T8 32w/EL-8'	indirect/direct	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	101	2,400	1,680
1293	Bristol Eastern HS	Office Kalfayan	1	2x26W CF HARDWIRED/EL	can rec 8"	6	6	54	0.3	15 WATT LED/KIT	can kit LED Spectrum	6	16	0.1	0.2	468	2,400	1,680
1294	Bristol Eastern HS	Office Russo	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	156	1,680	1,680
1295	Bristol Eastern HS	Office Lombardo	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	156	1,680	1,680
1296	Bristol Eastern HS	Office Lefrancois	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	223	2,400	1,680
1297	Bristol Eastern HS	Office Tullacro	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	156	1,680	1,680
1298	Bristol Eastern HS	Lounge Staff	1	4L4' T8 32w/EL-8'	indirect/direct	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	68	1,610	1,610
1299	Bristol Eastern HS	Lounge Staff	1	2x26W CF HARDWIRED/EL	can rec 8"	5	5	54	0.3	15 WATT LED/KIT	can kit LED Spectrum	5	16	0.1	0.2	262	1,610	1,610
1300	Bristol Eastern HS	Office Work Room	1	4L2' T8 17w/EL	trof parabolic	6	6	62	0.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	6	35	0.2	0.2	234	1,680	1,680
1301	Bristol Eastern HS	Office Work Room	1	2x26W CF HARDWIRED/EL	can rec 8"	5	5	54	0.3	15 WATT LED/KIT	can kit LED Spectrum	5	16	0.1	0.2	273	1,680	1,680
1302	Bristol Eastern HS	Office Near Lounge	1	4L2' T8 17w/EL	trof parabolic	1	1	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	39	1,680	1,680
1303	Bristol Eastern HS	Classroom 218	1	6L4' T8 32w/EL-12'	indirect/direct	8	8	180	1.4	6L4' T8 28w/ELEE LO-12'	rlrb LF	8	132	1.1	0.4	636	1,960	1,960
1304	Bristol Eastern HS	Classroom 219	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
1305	Bristol Eastern HS	Classroom 229	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
1306	Bristol Eastern HS	Classroom 230	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
1307	Bristol Eastern HS	Classroom 231	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
1308	Bristol Eastern HS	Classroom 232	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
1309	Bristol Eastern HS	Classroom 234	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
1310	Bristol Eastern HS	Classroom 233	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
1311	Bristol Eastern HS	Classroom 236	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
1312	Bristol Eastern HS	Classroom 235	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
1313	Bristol Eastern HS	Classroom 237	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
1314	Bristol Eastern HS	Classroom 239	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1315	Bristol Eastern HS	Classroom 239	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1316	Bristol Eastern HS	Bath Male	1	1L4' T8 32w/EL	trof acr 1' wide	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	26	2,240	2,240
1317	Bristol Eastern HS	Bath Men (2)	1	2L4' T8 32w/EL-8'	trof acr 1' wide	2	2	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	2	44	0.1	0.0	61	2,240	2,240
1318	Bristol Eastern HS	Bath Men (2)	1	1L4' T8 32w/EL	trof acr 1' wide	6	6	30	0.2	1L4' T8 28w/ELEE LO	rlrb LF	6	23	0.1	0.0	79	2,240	2,240
1319	Bristol Eastern HS	Bath Men (2)	1	1L3' T8 25w/EL	trof acr 1' wide	4	4	24	0.1	1L3' T8 21w/ELEE LO	rlrb LF	4	22	0.1	0.0	15	2,240	2,240
1320	Bristol Eastern HS	Classroom 241	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1321	Bristol Eastern HS	Classroom 241	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1322	Bristol Eastern HS	Classroom 240	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1323	Bristol Eastern HS	Classroom 240	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1324	Bristol Eastern HS	Classroom 243	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1325	Bristol Eastern HS	Classroom 243	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1326	Bristol Eastern HS	Classroom 242	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
1327	Bristol Eastern HS	Classroom 245	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
1328	Bristol Eastern HS	Classroom 244	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
1329	Bristol Eastern HS	Classroom 247	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
1330	Bristol Eastern HS	Classroom 246	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
1331	Bristol Eastern HS	Classroom 249	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1332	Bristol Eastern HS	Classroom 249	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1333	Bristol Eastern HS	Storage 246A	1	2L4' T8 32w/EL	strip	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	14	500	350
1334	Bristol Eastern HS	Office Open 251	1	4L2' T8 17w/EL	trof acr	3	3	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	0.1	134	1,925	1,925
1335	Bristol Eastern HS	Classroom 251A	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
1336	Bristol Eastern HS	Storage 251C	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	65	700	700
1337	Bristol Eastern HS	Office Near 251C	1	4L2' T8 17w/EL	trof parabolic	5	5	62	0.3	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	5	35	0.2	0.1	195	1,680	1,680
1338	Bristol Eastern HS	Mechanical 251F	1	2L4' T8 32w/EL	strip	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	20	500	500
1339	Bristol Eastern HS	Storage 250	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	65	700	700
1340	Bristol Eastern HS	Classroom 225	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
1341	Bristol Eastern HS	Classroom 225	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1342	Bristol Eastern HS	Classroom 224	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1343	Bristol Eastern HS	Classroom 224	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1344	Bristol Eastern HS	Classroom 226	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1345	Bristol Eastern HS	Classroom 226	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1346	Bristol Eastern HS	Classroom 223	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1347	Bristol Eastern HS	Classroom 223	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1348	Bristol Eastern HS	Classroom 227	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1349	Bristol Eastern HS	Classroom 227	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1350	Bristol Eastern HS	Classroom 222	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1351	Bristol Eastern HS	Classroom 222	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1352	Bristol Eastern HS	Classroom 228	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1353	Bristol Eastern HS	Classroom 228	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1354	Bristol Eastern HS	Classroom 221	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1355	Bristol Eastern HS	Classroom 221	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1356	Bristol Eastern HS	Office Open 220A	1	4L4' T8 32w/EL	trof parabolic	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	0.0	58	2,750	2,750
1357	Bristol Eastern HS	Office Open 220A	1	2x26W CF HARDWIRED/EL	can rec 8"	2	2	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	2	16	0.0	0.1	179	2,750	2,750
1358	Bristol Eastern HS	Office Copy	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	78	1,680	1,680
1359	Bristol Eastern HS	Office Printer	1	4L2' T8 17w/EL	trof parabolic	1	1	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	39	1,680	1,680
1360	Bristol Eastern HS	Office 220A	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	78	1,680	1,680
1361	Bristol Eastern HS	Storage 220A	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	16	350	350
1362	Bristol Eastern HS	Storage 220A Elect	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	5	350	350
1363	Bristol Eastern HS	Classroom 220	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
1364	Bristol Eastern HS	Hall Stair 3-2	1	4L2' T8 17w/EL	box acrylic	16	16	62	1.0	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	16	35	0.6	0.4	1,190	3,200	3,200
1365	Bristol Eastern HS	Hall Stair 3-2	1	8L4' T8 32w/EL	box acr 4x4	2	2	224	0.4	8L4' T8 28w/ELEE LO	rlrb LF	2	174	0.3	0.1	270	3,200	3,200
1366	Bristol Eastern HS	Hall Display	1	50W INCANDESCENT	can rec 6"	6	6	50	0.3	8 WATT LED SI	screw in LED par20	6	8	0.1	0.2	679	3,200	3,200
1367	Bristol Eastern HS	Stair 2	stair	2L4' T8 32w/EL	wrap wall mt.	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	173	3,200	3,200
1368	Bristol Eastern HS	Stair 2	stair	2L4' T8 32w/EL	wrap wall mt.	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	43	3,200	3,200
1369	Bristol Eastern HS	Hall Stair2-Stair 1	1	4L2' T8 17w/EL	box acrylic	12	12	62	0.7	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	12	35	0.4	0.3	893	3,200	2,240
1370	Bristol Eastern HS	Hall Display	1	50W INCANDESCENT	can rec 6"	3	3	50	0.2	8 WATT LED SI	screw in LED par20	3	8	0.0	0.1	339	3,200	3,200
1371	Bristol Eastern HS	Stair 1	stair	2L4' T8 32w/EL	wrap wall mt.	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	43	3,200	3,200
1372	Bristol Eastern HS	Stair 1	stair	2L4' T8 32w/EL	wrap wall mt.	7	7	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	7	44	0.3	0.1	303	3,200	3,200
1373	Bristol Eastern HS	Stair 1	stair	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	43	3,200	3,200
1374	Bristol Eastern HS	Hall Stair 1-C200	1	8L4' T8 32w/EL	box acr 4x4	2	2	224	0.4	8L4' T8 28w/ELEE LO	rlrb LF	2	174	0.3	0.1	270	3,200	3,200
1375	Bristol Eastern HS	Hall Stair 1-C200	1	4L2' T8 17w/EL	box acrylic	18	18	62	1.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	18	35	0.6	0.5	1,339	3,200	2,240
1376	Bristol Eastern HS	Hall Stair 1-C200	1	2x26W CF HARDWIRED/EL	can rec 8"	2	2	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	2	16	0.0	0.1	208	3,200	2,240
1377	Bristol Eastern HS	Hall Display	1	50W INCANDESCENT	can rec 6"	3	3	50	0.2	8 WATT LED SI	screw in LED par20	3	8	0.0	0.1	339	3,200	3,200
1378	Bristol Eastern HS	Hall 200-Stair 5	1	4L2' T8 17w/EL	box acrylic	14	14	62	0.9	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	14	35	0.5	0.4	1,041	3,200	2,240
1379	Bristol Eastern HS	Hall 200-Stair 5	1	8L4' T8 32w/EL	box acr 4x4	1	1	224	0.2	8L4' T8 28w/ELEE LO	rlrb LF	1	174	0.2	0.0	135	3,200	2,240
1380	Bristol Eastern HS	Stair 5	stair	2L4' T8 32w/EL	wrap wall mt.	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	130	3,200	3,200
1381	Bristol Eastern HS	Stair 5	stair	2L4' T8 32w/EL	wrap wall mt.	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	173	3,200	3,200
1382	Bristol Eastern HS	Hall Stair 5-C241	1	4L2' T8 17w/EL	box acrylic	12	12	62	0.7	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	12	35	0.4	0.3	893	3,200	2,240
1383	Bristol Eastern HS	Hall Stair 5-C241	1	2x26W CF HARDWIRED/EL	can rec 8"	1	1	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	1	16	0.0	0.0	104	3,200	3,200
1384	Bristol Eastern HS	Stair 4	stair	2L4' T8 32w/EL	wrap wall mt.	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	130	3,200	3,200
1385	Bristol Eastern HS	Stair 4	stair	2L4' T8 32w/EL	wrap wall mt.	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	130	3,200	3,200
1386	Bristol Eastern HS	Hall Stair 4-C230	1	4L2' T8 17w/EL	box acrylic	12	12	62	0.7	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	12	35	0.4	0.3	893	3,200	3,200
1387	Bristol Eastern HS	Hall Stair 4-C230	1	8L4' T8 32w/EL	box acr 4x4	1	1	224	0.2	8L4' T8 28w/ELEE LO	rlrb LF	1	174	0.2	0.0	135	3,200	3,200
1388	Bristol Eastern HS	Hall Stair 4-C230	1	2x26W CF HARDWIRED/EL	can rec 8"	1	1	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	1	16	0.0	0.0	104	3,200	3,200
1389	Bristol Eastern HS	Stair 3	stair	2L4' T8 32w/EL	wrap wall mt.	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	173	3,200	3,200
1390	Bristol Eastern HS	Stair 3	stair	2L4' T8 32w/EL	wrap wall mt.	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	130	3,200	3,200
1391	Bristol Eastern HS	Hall C220-C225	1	4L2' T8 17w/EL	box acrylic	11	11	62	0.7	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	11	35	0.4	0.3	818	3,200	2,240
1392	Bristol Eastern HS	Classroom 141	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1393	Bristol Eastern HS	Classroom 141	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1394	Bristol Eastern HS	Storage 140	1	2L4' T8 32w/EL	strip	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	7	500	350
1395	Bristol Eastern HS	Classroom 138	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1396	Bristol Eastern HS	Classroom 138	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1397	Bristol Eastern HS	Classroom 139	1	4L4' T8 32w/EL-8'	indirect/direct	12	12	112	1.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	12	87	1.0	0.3	497	1,960	1,960
1398	Bristol Eastern HS	Classroom 136	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
1399	Bristol Eastern HS	Classroom 134	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
1400	Bristol Eastern HS	Classroom 135	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
1401	Bristol Eastern HS	Classroom 132	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1402	Bristol Eastern HS	Classroom 132	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1403	Bristol Eastern HS	Classroom 133	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1404	Bristol Eastern HS	Classroom 133A	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1405	Bristol Eastern HS	Bath Men (2)	1	2L4' T8 32w/EL-8'	trof acr 1' wide	6	6	60	0.4	2L4' T8 28w/ELEE LO-8'	rlrb LF	6	44	0.3	0.1	182	2,240	2,240
1406	Bristol Eastern HS	Bath Men (2)	1	1L4' T8 32w/EL	trof acr 1' wide	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	26	2,240	2,240
1407	Bristol Eastern HS	Bath Men (2)	1	1L4' T8 32w/EL	trof acr 1' wide	4	4	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	4	23	0.1	0.0	53	2,240	2,240
1408	Bristol Eastern HS	Hall 133-141	1	4L2' T8 17w/EL	box acrylic	11	11	62	0.7	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	11	35	0.4	0.3	818	3,200	2,240
1409	Bristol Eastern HS	Hall 133-141	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	74	3,200	2,240
1410	Bristol Eastern HS	Classroom 131	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1411	Bristol Eastern HS	Classroom 131	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1412	Bristol Eastern HS	Storage 131A	1	4L2' T8 17w/EL	box acrylic	1	1	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	12	500	350
1413	Bristol Eastern HS	Storage 131A	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	7	500	350

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
1414	Bristol Eastern HS	Classroom 129	1	6L4' T8 32w/EL-12'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-12'	rlrb LF	6	132	0.8	0.3	477	1,960	1,960
1415	Bristol Eastern HS	Classroom 128	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1416	Bristol Eastern HS	Classroom 128	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1417	Bristol Eastern HS	Classroom 127	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
1418	Bristol Eastern HS	Classroom 126	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1419	Bristol Eastern HS	Classroom 126	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1420	Bristol Eastern HS	Classroom 125	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
1421	Bristol Eastern HS	Lab 124	1	6L4' T8 32w/EL-12'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-12'	rlrb LF	6	132	0.8	0.3	460	1,890	1,890
1422	Bristol Eastern HS	Storage 124	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	33	700	700
1423	Bristol Eastern HS	Classroom 123	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
1424	Bristol Eastern HS	Hall C124-C131	1	4L2' T8 17w/EL	box acrylic	11	11	62	0.7	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	11	35	0.4	0.3	818	3,200	2,240
1425	Bristol Eastern HS	Hall C124-C131	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	74	3,200	2,240
1426	Bristol Eastern HS	Hall C124-C131	1	8L4' T8 32w/EL	box acr 4x4	1	1	224	0.2	8L4' T8 28w/ELEE LO	rlrb LF	1	174	0.2	0.0	135	3,200	2,240
1427	Bristol Eastern HS	Classroom 113	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
1428	Bristol Eastern HS	Lab 112	1	6L4' T8 32w/EL-12'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-12'	rlrb LF	6	132	0.8	0.3	460	1,890	1,890
1429	Bristol Eastern HS	Storage 112	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	65	700	700
1430	Bristol Eastern HS	Lab 111	1	6L4' T8 32w/EL-12'	indirect/direct	8	8	180	1.4	6L4' T8 28w/ELEE LO-12'	rlrb LF	8	132	1.1	0.4	613	1,890	1,890
1431	Bristol Eastern HS	Storage 111	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	65	700	700
1432	Bristol Eastern HS	Lab 110	1	6L4' T8 32w/EL-12'	indirect/direct	4	4	180	0.7	6L4' T8 28w/ELEE LO-12'	rlrb LF	4	132	0.5	0.2	307	1,890	1,890
1433	Bristol Eastern HS	Lab 110	1	4L4' T8 32w/EL-8'	indirect/direct	4	4	112	0.4	4L4' T8 28w/ELEE LO-8'	rlrb LF	4	87	0.3	0.1	160	1,890	1,890
1434	Bristol Eastern HS	Storage 110	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	16	700	700
1435	Bristol Eastern HS	Storage 110	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	33	700	700
1436	Bristol Eastern HS	Classroom 109	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1437	Bristol Eastern HS	Classroom 109	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1438	Bristol Eastern HS	Hall C109-C113	1	4L2' T8 17w/EL	box acrylic	15	15	62	0.9	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	15	35	0.5	0.4	1,116	3,200	2,240
1439	Bristol Eastern HS	Hall C109-C113	1	8L4' T8 32w/EL	box acr 4x4	2	2	224	0.4	8L4' T8 28w/ELEE LO	rlrb LF	2	174	0.3	0.1	270	3,200	2,240
1440	Bristol Eastern HS	Bath Men	1	2L4' T8 32w/EL-8'	trof acr 1' wide	3	3	60	0.2	2L4' T8 28w/ELEE LO-8'	rlrb LF	3	44	0.1	0.0	91	2,240	2,240
1441	Bristol Eastern HS	Bath Men	1	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	13	2,240	2,240
1442	Bristol Eastern HS	Bath Men	1	1L2' T8 17w/EL	trof acr 1' wide	2	2	17	0.0	1L2' T8 15w/ELEE LO	rlrb LF	2	15	0.0	0.0	9	2,240	2,240
1443	Bristol Eastern HS	Bath Male (2)	1	1L4' T8 32w/EL	trof acr 1' wide	4	4	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	4	23	0.1	0.0	53	2,240	2,240
1444	Bristol Eastern HS	Bath Male (2)	1	1L2' T8 17w/EL	trof acr 1' wide	2	2	17	0.0	1L2' T8 15w/ELEE LO	rlrb LF	2	15	0.0	0.0	9	2,240	2,240
1445	Bristol Eastern HS	Storage Custodian	1	2L4' T8 32w/EL-8'	trof acr 1' wide	3	3	60	0.2	2L4' T8 28w/ELEE LO-8'	rlrb LF	3	44	0.1	0.0	28	700	700
1446	Bristol Eastern HS	Storage Custodian	1	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	4	700	700
1447	Bristol Eastern HS	Storage Custodian	1	2x26W CF HARDWIRED/EL	can rec 8"	1	1	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	1	16	0.0	0.0	23	700	700
1448	Bristol Eastern HS	Classroom 105	1	6L4' T8 32w/EL-12'	indirect/direct	18	18	180	3.2	6L4' T8 28w/ELEE LO-12'	rlrb LF	18	132	2.4	0.9	1,430	1,960	1,960
1449	Bristol Eastern HS	Classroom 105	1	2x26W CF HARDWIRED/EL	can rec 8"	5	5	54	0.3	15 WATT LED/KIT	can kit LED Spectrum	5	16	0.1	0.2	319	1,960	1,960
1450	Bristol Eastern HS	Classroom 105	1	50W INCANDESCENT	track head	12	12	50	0.6	8 WATT LED SI	screw in LED par20	12	8	0.1	0.5	832	1,960	1,960
1451	Bristol Eastern HS	Storage 105A	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	8	350	350
1452	Bristol Eastern HS	Classroom 106	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
1453	Bristol Eastern HS	Classroom 106	1	2x26W CF HARDWIRED/EL	can rec 8"	7	7	54	0.4	15 WATT LED/KIT	can kit LED Spectrum	7	16	0.1	0.3	446	1,960	1,960
1454	Bristol Eastern HS	Classroom 103	1	6L4' T8 32w/EL-12'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-12'	rlrb LF	6	132	0.8	0.3	681	2,800	2,800
1455	Bristol Eastern HS	Classroom 103	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	177	2,800	2,800
1456	Bristol Eastern HS	Classroom 103	1	2x26W CF HARDWIRED/EL	can rec 8"	2	2	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	2	16	0.0	0.1	182	2,800	2,800
1457	Bristol Eastern HS	Classroom 103	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	260	2,800	2,800
1458	Bristol Eastern HS	Classroom 103	1	50W INCANDESCENT	track head	12	12	50	0.6	8 WATT LED SI	screw in LED par20	12	8	0.1	0.5	1,188	2,800	2,800
1459	Bristol Eastern HS	Office 103B	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	156	1,680	1,680
1460	Bristol Eastern HS	Classroom 102	1	6L4' T8 32w/EL-12'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-12'	rlrb LF	6	132	0.8	0.3	477	1,960	1,960
1461	Bristol Eastern HS	Hall C105-C102	1	4L2' T8 17w/EL	box acrylic	15	15	62	0.9	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	15	35	0.5	0.4	1,116	3,200	2,240
1462	Bristol Eastern HS	Hall C105-C102	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	149	3,200	2,240
1463	Bristol Eastern HS	Hall C105-C102	1	8L4' T8 32w/EL	box acr 4x4	2	2	224	0.4	8L4' T8 28w/ELEE LO	rlrb LF	2	174	0.3	0.1	270	3,200	2,240
1464	Bristol Eastern HS	Retail 100A	1	4L2' T8 17w/EL	trof parabolic	6	6	62	0.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	6	35	0.2	0.2	156	1,120	1,120
1465	Bristol Eastern HS	Office 100A	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	156	1,680	1,680
1466	Bristol Eastern HS	Bath Male	1	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	13	2,240	2,240
1467	Bristol Eastern HS	Bath Male	1	1L3' T8 25w/EL	trof acr 1' wide	1	1	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	1	22	0.0	0.0	4	2,240	2,240
1468	Bristol Eastern HS	Bath Woman	1	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	13	2,240	2,240
1469	Bristol Eastern HS	Bath Woman	1	1L3' T8 25w/EL	trof acr 1' wide	1	1	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	1	22	0.0	0.0	4	2,240	2,240
1470	Bristol Eastern HS	Lounge 100C	1	4L2' T8 17w/EL	trof parabolic	11	11	62	0.7	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	11	35	0.4	0.3	588	2,300	1,610
1471	Bristol Eastern HS	Cafeteria Main	1	3L4' T8 32w/EL	trof parabolic	48	48	88	4.2	3L4' T8 28w/ELEE LO	rlrb LF	48	66	3.2	1.0	1,783	2,000	1,400
1472	Bristol Eastern HS	Kitchen Main	1	3L4' T8 32w/EL	trof acr	23	23	88	2.0	3L4' T8 28w/ELEE LO	rlrb LF	23	66	1.5	0.5	1,025	2,400	2,400
1473	Bristol Eastern HS	Kitchen Main	1	60W INCANDESCENT	range hood	6	6	60	0.4	8 WATT LED SI	screw in LED Alamp	6	8	0.1	0.3	632	2,400	2,400
1474	Bristol Eastern HS	Office K1	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	78	1,680	1,680
1475	Bristol Eastern HS	Storage Near K1	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	65	700	700
1476	Bristol Eastern HS	Storage Paper	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	33	700	700
1477	Bristol Eastern HS	Hall Bath	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	74	3,200	3,200
1478	Bristol Eastern HS	Bath Woman	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	61	2,240	2,240
1479	Bristol Eastern HS	Storage Elect	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	5	350	350
1480	Bristol Eastern HS	Kitchen Emulsifier	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	78	1,680	1,680
1481	Bristol Eastern HS	Cooler Walk In (2)	1	60W INCANDESCENT	jar	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	88	1,000	1,000
1482	Bristol Eastern HS	Classroom 100	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1483	Bristol Eastern HS	Classroom 100	1	4L4' T8 32w/EL-8'	jar	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1484	Bristol Eastern HS	Classroom 100	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	182	1,960	1,960
1485	Bristol Eastern HS	Storage 100	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	65	700	700
1486	Bristol Eastern HS	Office Open Administration	1	4L2' T8 17w/EL	trof parabolic	19	19	62	1.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	19	35	0.7	0.5	850	1,925	1,925

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
1487	Bristol Eastern HS	Office Wathen	1	4L2' T8 17w/EL	trof parabolic	3	3	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	0.1	167	2,400	2,400
1488	Bristol Eastern HS	Office Janick	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	156	1,680	1,680
1489	Bristol Eastern HS	Office Asst Principal	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	156	1,680	1,680
1490	Bristol Eastern HS	Office Tager	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	156	1,680	1,680
1491	Bristol Eastern HS	Office Fortin	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	156	1,680	1,680
1492	Bristol Eastern HS	Conference Admin	1	6L4' T8 32w/EL-12'	indirect/direct	1	1	180	0.2	6L4' T8 28w/ELEE LO-12'	rlrb LF	1	132	0.1	0.0	68	1,680	1,680
1493	Bristol Eastern HS	Conference Admin	1	2x26W CF HARDWIRED/EL	can rec 8"	4	4	54	0.2	15 WATT LED/KIT	can kit LED Spectrum	4	16	0.1	0.2	218	1,680	1,680
1494	Bristol Eastern HS	Storage Conf	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	12	500	350
1495	Bristol Eastern HS	Hall Caf-Gym	1	4L2' T8 17w/EL	box acrylic	13	13	62	0.8	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	13	35	0.5	0.4	967	3,200	2,240
1496	Bristol Eastern HS	Hall Caf-Gym	1	8L4' T8 32w/EL	box acr 4x4	3	3	224	0.7	8L4' T8 28w/ELEE LO	rlrb LF	3	174	0.5	0.1	406	3,200	2,240
1497	Bristol Eastern HS	Hall Caf-Gym	1	2x26W CF HARDWIRED/EL	can rec 8"	1	1	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	1	16	0.0	0.0	104	3,200	2,240
1498	Bristol Eastern HS	Bath Men (2)	1	2L4' T8 32w/EL-8'	trof acr 1' wide	8	8	60	0.5	2L4' T8 28w/ELEE LO-8'	rlrb LF	8	44	0.4	0.1	242	2,240	2,240
1499	Bristol Eastern HS	Bath Male (2)	1	2L4' T8 32w/EL-8'	trof acr 1' wide	2	2	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	2	44	0.1	0.0	61	2,240	2,240
1500	Bristol Eastern HS	Bath Male (2)	1	1L4' T8 32w/EL	trof acr 1' wide	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	26	2,240	2,240
1501	Bristol Eastern HS	Office Security	1	4L2' T8 17w/EL	trof acr	6	6	62	0.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	6	35	0.2	0.2	234	1,680	1,680
1502	Bristol Eastern HS	Hall C113-C119	1	4L2' T8 17w/EL	box acrylic	13	13	62	0.8	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	13	35	0.5	0.4	967	3,200	3,200
1503	Bristol Eastern HS	Hall C113-C119	1	8L4' T8 32w/EL	box acr 4x4	1	1	224	0.2	8L4' T8 28w/ELEE LO	rlrb LF	1	174	0.2	0.0	135	3,200	3,200
1504	Bristol Eastern HS	Office Science	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	78	1,680	1,680
1505	Bristol Eastern HS	Hall Science	1	2x26W CF HARDWIRED/EL	can rec 8"	3	3	54	0.2	15 WATT LED/KIT	can kit LED Spectrum	3	16	0.0	0.1	218	2,240	2,240
1506	Bristol Eastern HS	Storage Science	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	5	350	350
1507	Bristol Eastern HS	Office It	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	78	1,680	1,680
1508	Bristol Eastern HS	Storage Files	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	16	350	350
1509	Bristol Eastern HS	Office Flowers	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	78	1,680	1,680
1510	Bristol Eastern HS	Classroom 114	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	248	1,960	1,960
1511	Bristol Eastern HS	Lab 115	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	230	1,890	1,890
1512	Bristol Eastern HS	Lab 115	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	120	1,890	1,890
1513	Bristol Eastern HS	Classroom 122	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1514	Bristol Eastern HS	Classroom 122	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1515	Bristol Eastern HS	Lab 116	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	230	1,890	1,890
1516	Bristol Eastern HS	Lab 116	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	120	1,890	1,890
1517	Bristol Eastern HS	Classroom 121	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1518	Bristol Eastern HS	Classroom 121	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1519	Bristol Eastern HS	Classroom 117	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1520	Bristol Eastern HS	Classroom 117	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1521	Bristol Eastern HS	Classroom 120	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	238	1,960	1,960
1522	Bristol Eastern HS	Classroom 120	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1523	Bristol Eastern HS	Classroom 118	1	6L4' T8 32w/EL-12'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-12'	rlrb LF	6	132	0.8	0.3	477	1,960	1,960
1524	Bristol Eastern HS	Lab 119	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' T8 28w/ELEE LO-12'	rlrb LF	3	132	0.4	0.1	230	1,890	1,890
1525	Bristol Eastern HS	Lab 119	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	120	1,890	1,890
1526	Bristol Eastern HS	Hall C119-C141	1	4L2' T8 17w/EL	box acrylic	15	15	62	0.9	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	15	35	0.5	0.4	1,116	3,200	2,240
1527	Bristol Eastern HS	Hall Gymnasium	1	4L2' T8 17w/EL	box acrylic	9	9	62	0.6	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	9	35	0.3	0.2	670	3,200	2,240
1528	Bristol Eastern HS	Storage Trainer	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	23	500	350
1529	Bristol Eastern HS	Office Trainer	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	156	1,680	1,680
1530	Bristol Eastern HS	Locker Woman	1	2L4' T8 32w/EL	vapor tight	13	13	60	0.8	2L4' T8 28w/ELEE LO	rlrb LF	13	44	0.6	0.2	394	2,240	2,240
1531	Bristol Eastern HS	Locker Woman	1	2L4' T8 32w/EL-8'	vanity	2	2	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	2	44	0.1	0.0	86	3,200	3,200
1532	Bristol Eastern HS	Locker Woman	1	2x26W CF HARDWIRED/EL	square recessed	11	11	54	0.6	16 WATT LED/NEW	new LED drum	11	17	0.2	0.4	1,113	3,200	3,200
1533	Bristol Eastern HS	Locker Woman	1	2L4' T8 32w/EL	vapor tight	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	43	3,200	3,200
1534	Bristol Eastern HS	Storage Snack	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	16	350	350
1535	Bristol Eastern HS	Storage 147B	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	14	500	500
1536	Bristol Eastern HS	Gym 2	1	4L4' T5 HO/EL	high bay	24	24	234	5.6	98 WATT LED/NEW	new LED hibay wg	24	103	2.5	3.1	7,970	2,980	2,086
1537	Bristol Eastern HS	Exercise 2	1	4L4' T5 HO/EL	high bay	6	6	234	1.4	98 WATT LED/NEW	new LED hibay wg	6	103	0.6	0.8	1,992	2,980	2,980
1538	Bristol Eastern HS	Storage 143E	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	33	700	700
1539	Bristol Eastern HS	Gym Main	1	4L4' T5 HO/EL	high bay	48	48	234	11.2	98 WATT LED/NEW	new LED hibay wg	48	103	4.9	6.3	15,940	2,980	2,086
1540	Bristol Eastern HS	Storage Main	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	9	700	700
1541	Bristol Eastern HS	Hall Between Gym 1-2	1	2x26W CF HARDWIRED/EL	can rec 8"	2	2	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	2	16	0.0	0.1	146	2,240	2,240
1542	Bristol Eastern HS	Hall Near Boys Locker	1	4L2' T8 17w/EL	trof acr	8	8	62	0.5	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	8	35	0.3	0.2	595	3,200	2,240
1543	Bristol Eastern HS	Locker Boys (2)	1	2L4' T8 32w/EL	vapor tight	12	12	60	0.7	2L4' T8 28w/ELEE LO	rlrb LF	12	44	0.5	0.2	363	2,240	2,240
1544	Bristol Eastern HS	Locker 148C (2)	1	2L4' T8 32w/EL	vapor tight	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	0.1	242	2,240	2,240
1545	Bristol Eastern HS	Office Op 148C	1	4L2' T8 17w/EL	trof acr	3	3	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	0.1	117	1,680	1,680
1546	Bristol Eastern HS	Bath Locker Room	1	2L4' T8 32w/EL	vapor tight	5	5	60	0.3	2L4' T8 28w/ELEE LO	rlrb LF	5	44	0.2	0.1	151	2,240	2,240
1547	Bristol Eastern HS	Locker Men	1	2L4' T8 32w/EL	vapor tight	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	0.1	242	2,240	2,240
1548	Bristol Eastern HS	Locker 148G	1	2L4' T8 32w/EL	vapor tight	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	61	2,240	2,240
1549	Bristol Eastern HS	Exercise Weights	1	4L2' T8 17w/EL	trof acr	20	20	62	1.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	20	35	0.7	0.5	970	2,086	2,086
1550	Bristol Eastern HS	Office Main Gym	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	78	1,680	1,680
1551	Bristol Eastern HS	Office Athletic Coordinator	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	78	1,680	1,680
1552	Bristol Eastern HS	Storage Custodian	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	5	350	350
1553	Bristol Eastern HS	Office Blue Wall	1	4L2' T8 17w/EL	trof acr	6	6	62	0.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	6	35	0.2	0.2	234	1,680	1,680
1554	Bristol Eastern HS	Locker 144 Woman	1	2L4' T8 32w/EL	vapor tight	14	14	60	0.8	2L4' T8 28w/ELEE LO	rlrb LF	14	44	0.6	0.2	424	2,240	2,240
1555	Bristol Eastern HS	Bath 144 Woman	1	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	13	2,240	2,240
1556	Bristol Eastern HS	Bath 144 Woman	1	1L3' T8 25w/EL	trof acr 1' wide	1	1	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	1	22	0.0	0.0	4	2,240	2,240
1557	Bristol Eastern HS	Bath 144 Woman	1	2x26W CF HARDWIRED/EL	square recessed	4	4	54	0.2	16 WATT LED/NEW	new LED drum	4	17	0.1	0.1	283	2,240	2,240
1558	Bristol Eastern HS	Storage 144A	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	5	350	350
1559	Bristol Eastern HS	Storage 144B	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	5	350	350

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
1560	Bristol Eastern HS	Exercise 143	1	4L2' T8 17w/EL	box acrylic	12	12	62	0.7	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	12	35	0.4	0.3	582	2,086	2,086
1561	Bristol Eastern HS	Hall 143	1	2L4' T8 32w/EL	vapor tight	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	30	2,240	2,240
1562	Bristol Eastern HS	Hall Gym-Lib	1	4L2' T8 17w/EL	box acrylic	13	13	62	0.8	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	13	35	0.5	0.4	967	3,200	2,240
1563	Bristol Eastern HS	Hall Gym-Lib	1	8L4' T8 32w/EL	box acr 4x4	2	2	224	0.4	8L4' T8 28w/ELEE LO	rlrb LF	2	174	0.3	0.1	270	3,200	2,240
1564	Bristol Eastern HS	Storage 151G	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	5	350	350
1565	Bristol Eastern HS	Bath M/F	1	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	13	2,240	2,240
1566	Bristol Eastern HS	Bath M/F	1	1L3' T8 25w/EL	trof acr 1' wide	1	1	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	1	22	0.0	0.0	4	2,240	2,240
1567	Bristol Eastern HS	Office Open Nurse	1	4L2' T8 17w/EL	trof acr	10	10	62	0.6	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	10	35	0.3	0.3	448	1,925	1,925
1568	Bristol Eastern HS	Office Open Nurse	1	2x26W CF HARDWIRED/EL	can rec 8"	4	4	54	0.2	15 WATT LED/KIT	can kit LED Spectrum	4	16	0.1	0.2	250	1,925	1,925
1569	Bristol Eastern HS	Bath Nurse (2)	1	1L4' T8 32w/EL	trof acr 1' wide	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	26	2,240	2,240
1570	Bristol Eastern HS	Office Nurse	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	156	1,680	1,680
1571	Bristol Eastern HS	Office Open Front	1	4L2' T8 17w/EL	trof parabolic	12	12	62	0.7	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	12	35	0.4	0.3	537	1,925	1,925
1572	Bristol Eastern HS	Office Open Front	1	2x26W CF HARDWIRED/EL	can rec 8"	10	10	54	0.5	15 WATT LED/KIT	can kit LED Spectrum	10	16	0.2	0.4	626	1,925	1,925
1573	Bristol Eastern HS	Storage Supply	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	33	700	700
1574	Bristol Eastern HS	Conference Front Office	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	156	1,680	1,680
1575	Bristol Eastern HS	Conference Front Office	1	2x26W CF HARDWIRED/EL	can rec 8"	3	3	54	0.2	15 WATT LED/KIT	can kit LED Spectrum	3	16	0.0	0.1	164	1,680	1,680
1576	Bristol Eastern HS	Storage Records	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	33	700	700
1577	Bristol Eastern HS	Foyer Front Office Entrance	1	2x26W CF HARDWIRED/EL	can rec 8"	4	4	54	0.2	15 WATT LED/KIT	can kit LED Spectrum	4	16	0.1	0.2	416	3,200	3,200
1578	Bristol Eastern HS	Library Main	1	2L2' F40 BIAX/EL	indirect/direct	26	26	72	1.9	36 WATT LED/KIT	trof kit LED	26	38	1.0	0.9	1,663	2,200	1,540
1579	Bristol Eastern HS	Library Main	1	28W CF HARDWIRED	decorative	8		30	0.2	NO RETRO	no change -specialized fixture		32	0.2			2,200	1,540
1580	Bristol Eastern HS	Library Main	1	4L4' T8 32w/EL-8'	indirect/direct	21	21	112	2.4	4L4' T8 28w/ELEE LO-8'	rlrb LF	21	87	1.8	0.5	976	2,200	1,540
1581	Bristol Eastern HS	Library Main	1	2x18W CF HARDWIRED/EL	square recessed	40	40	38	1.5	16 WATT LED/NEW	new LED drum	40	17	0.7	0.8	1,586	2,200	1,540
1582	Bristol Eastern HS	Conference Library	1	2L2' F40 BIAX/EL	indirect/direct	6	6	72	0.4	36 WATT LED/KIT	trof kit LED	6	38	0.2	0.2	293	1,680	1,680
1583	Bristol Eastern HS	Office Library	1	2L2' F40 BIAX/EL	indirect/direct	4	4	72	0.3	36 WATT LED/KIT	trof kit LED	4	38	0.2	0.1	195	1,680	1,680
1584	Bristol Eastern HS	Storage Mdf	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	33	700	700
1585	Bristol Eastern HS	Storage Mech	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	5	350	350
1586	Bristol Eastern HS	Classroom Library	1	2L2' F40 BIAX/EL	indirect/direct	12	12	72	0.9	36 WATT LED/KIT	trof kit LED	12	38	0.5	0.4	684	1,960	1,960
1587	Bristol Eastern HS	Hall Aud-Lib	1	4L2' T8 17w/EL	box acrylic	8	8	62	0.5	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	8	35	0.3	0.2	595	3,200	3,200
1588	Bristol Eastern HS	Hall Aud-Lib	1	2x26W CF HARDWIRED/EL	can rec 8"	8	8	54	0.4	15 WATT LED/KIT	can kit LED Spectrum	8	16	0.1	0.3	832	3,200	3,200
1589	Bristol Eastern HS	Hall Between Caf Courtyard	1	4L2' T8 17w/EL	trof parabolic	8	8	62	0.5	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	8	35	0.3	0.2	595	3,200	3,200
1590	Bristol Eastern HS	Hall Between Caf Courtyard	1	8L4' T8 32w/EL	box acr 4x4	1	1	224	0.2	8L4' T8 28w/ELEE LO	rlrb LF	1	174	0.2	0.0	135	3,200	3,200
1591	Bristol Eastern HS	Hall Caf To Aud	1	4L2' T8 17w/EL	box acrylic	13	13	62	0.8	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	13	35	0.5	0.4	967	3,200	2,240
1592	Bristol Eastern HS	Hall Caf To Aud	1	8L4' T8 32w/EL	box acr 4x4	1	1	224	0.2	8L4' T8 28w/ELEE LO	rlrb LF	1	174	0.2	0.0	135	3,200	2,240
1593	Bristol Eastern HS	Hall Caf To Aud	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	119	3,200	2,240
1594	Bristol Eastern HS	Classroom 11	1	3L4' T8 32w/EL	indirect/direct	40	40	88	3.5	3L4' T8 28w/ELEE LO	rlrb LF	40	66	2.6	0.9	1,456	1,960	1,960
1595	Bristol Eastern HS	Classroom 11	1	4L2' T8 17w/EL	box acrylic	1	1	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	46	1,960	1,960
1596	Bristol Eastern HS	Storage 11A	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	33	700	700
1597	Bristol Eastern HS	Storage 11B	1	4L2' T8 17w/EL	box acrylic	3	3	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	0.1	70	1,000	700
1598	Bristol Eastern HS	Storage 11C	1	4L2' T8 17w/EL	box acrylic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	46	1,000	700
1599	Bristol Eastern HS	Office 11D	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	156	1,680	1,680
1600	Bristol Eastern HS	Classroom 12	1	3L4' T8 32w/EL	indirect/direct	40	40	88	3.5	3L4' T8 28w/ELEE LO	rlrb LF	40	66	2.6	0.9	1,456	1,960	1,960
1601	Bristol Eastern HS	Classroom 12	1	4L2' T8 17w/EL	box acrylic	1	1	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	46	1,960	1,960
1602	Bristol Eastern HS	Office 10A	1	4L2' T8 17w/EL	trof parabolic	5	5	62	0.3	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	5	35	0.2	0.1	195	1,680	1,680
1603	Bristol Eastern HS	Storage 10B	1	4L2' T8 17w/EL	trof acr	6	6	62	0.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	6	35	0.2	0.2	98	700	700
1604	Bristol Eastern HS	Storage 10C	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	8	350	350
1605	Bristol Eastern HS	Hall To Stage	1	4L2' T8 17w/EL	box acrylic	3	3	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	0.1	156	2,240	2,240
1606	Bristol Eastern HS	Hall To Stage	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	104	2,240	2,240
1607	Bristol Eastern HS	Hall Mez	mezz	4L2' T8 17w/EL	box acrylic	1	1	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	52	2,240	2,240
1608	Bristol Eastern HS	Storage Mez	mezz	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	5	350	350
1609	Bristol Eastern HS	Storage Mez	mezz	2L4' T8 32w/EL	wrap wide	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	14	500	350
1610	Bristol Eastern HS	Storage Drama	mezz	4L2' T8 17w/EL	trof acr	8	8	62	0.5	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	8	35	0.3	0.2	130	700	700
1611	Bristol Eastern HS	Stage Main	mezz	2L4' T8 32w/EL	industrial cage	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	0.1	173	1,600	1,600
1612	Bristol Eastern HS	Stage Main	mezz	4L4' T8 32w/EL-8'	strip cage	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	101	1,600	1,600
1613	Bristol Eastern HS	Auditorium Main	mezz	60W INCANDESCENT	can rec 8"	44	44	60	2.6	8 WATT LED SI	screw in LED par20	44	8	0.4	2.3	3,088	1,600	1,600
1614	Bristol Eastern HS	Auditorium Main	mezz	30W INCANDESCENT	can rec 6"	6	6	30	0.2	8 WATT LED SI	screw in LED par20	6	8	0.1	0.1	176	1,600	1,600
1615	Bristol Eastern HS	Auditorium Main	mezz	30W INCANDESCENT	track can	7	7	30	0.2	8 WATT LED SI	screw in LED par20	7	8	0.1	0.2	206	1,600	1,600
1616	Bristol Eastern HS	Hall By K6	mezz	4L2' T8 17w/EL	trof acr	3	3	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	0.1	156	2,240	2,240
1617	Bristol Eastern HS	Storage Washer	mezz	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	14	1,000	700
1618	Bristol Eastern HS	Office K6	mezz	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	112	2,400	1,680
1619	Bristol Eastern HS	Storage Across Aud	mezz	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	33	700	700
1620	Bristol Eastern HS	Hall Stair 2-D&E	mezz	4L2' T8 17w/EL	box acrylic	5	5	62	0.3	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	5	35	0.2	0.1	372	3,200	2,240
1621	Bristol Eastern HS	Hall To C1	mezz	4L2' T8 17w/EL	box acrylic	5	5	62	0.3	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	5	35	0.2	0.1	372	3,200	2,240
1622	Bristol Eastern HS	Classroom 1	mezz	6L4' T8 32w/EL-12'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-12'	rlrb LF	6	132	0.8	0.3	477	1,960	1,960
1623	Bristol Eastern HS	Classroom 1	mezz	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	124	1,960	1,960
1624	Bristol Eastern HS	Hall C2-3	mezz	4L2' T8 17w/EL	box acrylic	3	3	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	0.1	223	3,200	2,240
1625	Bristol Eastern HS	Classroom 2	mezz	4L4' T8 32w/EL-8'	vapor tight	12	12	112	1.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	12	87	1.0	0.3	497	1,960	1,960
1626	Bristol Eastern HS	Storage 2	mezz	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	9	700	700
1627	Bristol Eastern HS	Storage It	mezz	2L4' T8 32w/EL	strip cage	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	5	350	350
1628	Bristol Eastern HS	Classroom 3	mezz	4L4' T8 32w/EL-8'	vapor tight	16	16	112	1.8	4L4' T8 28w/ELEE LO-8'	rlrb LF	16	87	1.4	0.4	662	1,960	1,960
1629	Bristol Eastern HS	Lab 4	mezz	6L4' T8 32w/EL-12'	indirect/direct	8	8	180	1.4	6L4' T8 28w/ELEE LO-12'	rlrb LF	8	132	1.1	0.4	613	1,890	1,890
1630	Bristol Eastern HS	Lab 4	mezz	4L4' T8 32w/EL-8'	indirect/direct	8	8	112	0.9	4L4' T8 28w/ELEE LO-8'	rlrb LF	8	87	0.7	0.2	319	1,890	1,890
1631	Bristol Eastern HS	Office 4A	mezz	4L2' T8 17w/EL	trof parabolic	6	6	62	0.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	6	35	0.2	0.2	234	1,680	1,680
1632	Bristol Eastern HS	Hall C5-C7	mezz	4L2' T8 17w/EL	box acrylic	13	13	62	0.8	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	13	35	0.5	0.4	967	3,200	2,240

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
1633	Bristol Eastern HS	Classroom 7	mezz	4L4' T8 32w/EL	trof acr	12	12	112	1.3	4L4' T8 28w/ELEE LO	rlrb LF	12	87	1.0	0.3	710	2,800	1,960
1634	Bristol Eastern HS	Classroom 7 Small	mezz	4L4' T8 32w/EL	trof acr	6	6	112	0.7	4L4' T8 28w/ELEE LO	rlrb LF	6	87	0.5	0.1	355	2,800	1,960
1635	Bristol Eastern HS	Classroom 7 Small	mezz	4L4' T8 32w/EL	trof acr	5	5	112	0.6	4L4' T8 28w/ELEE LO	rlrb LF	5	87	0.4	0.1	296	2,800	1,960
1636	Bristol Eastern HS	Office C7	mezz	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	101	2,400	1,680
1637	Bristol Eastern HS	Storage C7	mezz	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	0.0	21	1,000	700
1638	Bristol Eastern HS	Bath C7 (2)	mezz	1L4' T8 32w/EL	trof acr 1' wide	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	26	2,240	2,240
1639	Bristol Eastern HS	Bath C7 (2)	mezz	1L2' T8 17w/EL	trof acr 1' wide	2	2	17	0.0	1L2' T8 15w/ELEE LO	rlrb LF	2	15	0.0	0.0	9	2,240	2,240
1640	Bristol Eastern HS	Bath Near C6	mezz	1L3' T8 25w/EL	trof acr 1' wide	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	0.0	7	2,240	2,240
1641	Bristol Eastern HS	Shop 6	mezz	4L4' T8 32w/EL-8'	vapor tight	28	28	112	3.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	28	87	2.4	0.7	1,597	2,700	1,890
1642	Bristol Eastern HS	Storage 6B	mezz	4L4' T8 32w/EL-8'	vapor tight	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	30	700	700
1643	Bristol Eastern HS	Storage 6C	mezz	2L4' T8 32w/EL	strip cage	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	14	500	350
1644	Bristol Eastern HS	Storage 6A	mezz	4L4' T8 32w/EL-8'	vapor tight	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	63	1,000	700
1645	Bristol Eastern HS	Lounge 8	mezz	4L4' T8 32w/EL	trof acr	7	7	112	0.8	4L4' T8 28w/ELEE LO	rlrb LF	7	87	0.6	0.2	340	2,300	2,300
1646	Bristol Eastern HS	Lounge 8	mezz	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	50	2,300	1,610
1647	Bristol Eastern HS	Storage Timeout	mezz	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	11	500	500
1648	Bristol Eastern HS	Classroom 8	mezz	4L4' T8 32w/EL	trof acr	6	6	112	0.7	4L4' T8 28w/ELEE LO	rlrb LF	6	87	0.5	0.1	355	2,800	1,960
1649	Bristol Eastern HS	Classroom 8	mezz	4L4' T8 32w/EL	trof acr	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	0.1	237	2,800	2,800
1650	Bristol Eastern HS	Bath 8	mezz	1L3' T8 25w/EL	trof acr 1' wide	1	1	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	1	22	0.0	0.0	4	2,240	2,240
1651	Bristol Eastern HS	Bath 8	mezz	1L2' T8 17w/EL	trof acr 1' wide	1	1	17	0.0	1L2' T8 15w/ELEE LO	rlrb LF	1	15	0.0	0.0	4	2,240	2,240
1652	Bristol Eastern HS	Office 8	mezz	4L4' T8 32w/EL	trof acr	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	0.1	203	2,400	1,680
1653	Bristol Eastern HS	Classroom 9 Asep2	mezz	4L4' T8 32w/EL-8'	industrial	12	12	112	1.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	12	87	1.0	0.3	710	2,800	1,960
1654	Bristol Eastern HS	Office 9 Asep2	mezz	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	62	1,680	1,680
1655	Bristol Eastern HS	Classroom 5	mezz	4L2' T8 17w/EL	trof acr	6	6	62	0.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	6	35	0.2	0.2	391	2,800	1,960
1666	West Bristol K8 School	Hall 2Nd	2	2x26W CF HARDWIRED/EL	can rec	26	26	54	1.4	10 WATT LED/KIT	can kit LED Spectrum	26	11	0.3	1.1	2,375	2,100	2,100
1667	West Bristol K8 School	Hall 2Nd	2	2L2' T8 17w/EL	troffer indirect	56	56	33	1.8	2L2' T8 15w/ELEE LO	rlrb LF	56	28	1.6	0.3	547	2,100	2,100
1668	West Bristol K8 School	Hall 2Nd	2	26W CF HARDWIRED	decorative	6		28	0.2	NO RETRO	no change -specialized fixture		29	0.2			2,100	2,100
1669	West Bristol K8 School	Hall 2Nd	2	2L4' T8 32w/EL	decorative	12		60	0.7	NO RETRO	no change -specialized fixture		63	0.7			2,100	2,100
1670	West Bristol K8 School	Hall 2Nd	2	100W METAL HALIDE	indirect	6	6	120	0.7	17 WATT LED SI	screw in LED par38	6	18	0.1	0.6	1,287	2,100	2,100
1671	West Bristol K8 School	Office A203	2	2L4' T8 32w/EL	troffer indirect bi-level	4	4	60	0.2	2L4' T8 28w/EL/RELAMP ONLY	relamp LF	4	55	0.2	0.0	36	1,680	1,680
1672	West Bristol K8 School	Stair 2	S	2L4' T8 32w/EL-8'	valance	3	3	60	0.2	2L4' T8 28w/ELEE LO-8'	rlrb LF	3	44	0.1	0.0	143	3,000	3,000
1673	West Bristol K8 School	Stair 2	S	1L4' T8 32w/EL	valance	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	41	3,000	3,000
1674	West Bristol K8 School	Stair 2	S	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	261	3,000	3,000
1675	West Bristol K8 School	Stair 2	S	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	48	3,000	3,000
1676	West Bristol K8 School	Stair 2	S	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	56	3,000	3,000
1677	West Bristol K8 School	Storage A206	2	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
1678	West Bristol K8 School	Classroom A208	2	2L4' T8 32w/EL	troffer indirect bi-level	4	4	60	0.2	2L4' T8 28w/EL/RELAMP ONLY	relamp LF	4	55	0.2	0.0	42	1,960	1,960
1679	West Bristol K8 School	Storage A207	2	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
1680	West Bristol K8 School	Classroom A204	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1681	West Bristol K8 School	Bath Boys	2	4L4' T8 32w/EL-8'	valance	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	111	2,240	2,240
1682	West Bristol K8 School	Bath Boys	2	2x26W CF HARDWIRED/EL	can rec	3	3	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	0.1	292	2,240	2,240
1683	West Bristol K8 School	Storage Idf	2	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
1684	West Bristol K8 School	Bath Men	2	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
1685	West Bristol K8 School	Bath Women	2	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
1686	West Bristol K8 School	Storage Clean	2	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
1687	West Bristol K8 School	Bath Girls	2	4L4' T8 32w/EL-8'	valance	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	111	2,240	2,240
1688	West Bristol K8 School	Bath Girls	2	2x26W CF HARDWIRED/EL	can rec	3	3	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	0.1	292	2,240	2,240
1689	West Bristol K8 School	Classroom A215	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1690	West Bristol K8 School	Classroom A217	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1691	West Bristol K8 School	Storage A216	2	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
1692	West Bristol K8 School	Classroom A219	2	6L4' T8 32w/EL-8'	indirect/direct	9	9	180	1.6	6L4' T8 28w/ELEE LO-8'	rlrb LF	9	132	1.2	0.4	841	1,960	1,960
1693	West Bristol K8 School	Storage A220	2	2L4' T8 32w/EL	trof acr	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	33	700	700
1694	West Bristol K8 School	Classroom A218	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1695	West Bristol K8 School	Classroom A221	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1696	West Bristol K8 School	Classroom A221	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1697	West Bristol K8 School	Stair 1	S	1L4' T8 32w/EL	valance	4	4	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	4	23	0.1	0.0	83	3,000	3,000
1698	West Bristol K8 School	Stair 1	S	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	48	3,000	3,000
1699	West Bristol K8 School	Hall 3Rd	3	2x26W CF HARDWIRED/EL	can rec	11	11	54	0.6	10 WATT LED/KIT	can kit LED Spectrum	11	11	0.1	0.5	1,005	2,100	2,100
1700	West Bristol K8 School	Hall 3Rd	3	2L2' T8 17w/EL	troffer indirect	17	17	33	0.6	2L2' T8 15w/ELEE LO	rlrb LF	17	28	0.5	0.1	166	2,100	2,100
1701	West Bristol K8 School	Hall 3Rd	3	26W CF HARDWIRED	decorative	2		28	0.1	NO RETRO	no change -specialized fixture		29	0.1			2,100	2,100
1702	West Bristol K8 School	Classroom A321	3	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1703	West Bristol K8 School	Classroom A318	3	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1704	West Bristol K8 School	Classroom A319	3	6L4' T8 32w/EL-8'	indirect/direct	9	9	180	1.6	6L4' T8 28w/ELEE LO-8'	rlrb LF	9	132	1.2	0.4	841	1,960	1,960
1705	West Bristol K8 School	Storage A320	3	2L4' T8 32w/EL	trof acr	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	33	700	700
1706	West Bristol K8 School	Storage A316	3	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
1707	West Bristol K8 School	Classroom A317	3	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1708	West Bristol K8 School	Classroom A315	3	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1709	West Bristol K8 School	Bath Boys	3	4L4' T8 32w/EL-8'	valance	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	111	2,240	2,240
1710	West Bristol K8 School	Bath Boys	3	2x26W CF HARDWIRED/EL	can rec	3	3	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	0.1	292	2,240	2,240
1711	West Bristol K8 School	Storage Idf	3	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
1712	West Bristol K8 School	Bath Men	3	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
1713	West Bristol K8 School	Bath Women	3	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
1714	West Bristol K8 School	Storage Clean	3	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
1715	West Bristol K8 School	Bath Girls	3	4L4' T8 32w/EL-8'	valance	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	111	2,240	2,240

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
1716	West Bristol K8 School	Bath Girls	3	2x26W CF HARDWIRED/EL	can rec	3	3	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	0.1	292	2,240	2,240
1717	West Bristol K8 School	Classroom A304	3	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1718	West Bristol K8 School	Classroom A308	3	2L4' T8 32w/EL	troffer indirect bi-level	4	4	60	0.2	2L4' T8 28w/EL/RELAMP ONLY	relamp LF	4	55	0.2	0.0	42	1,960	1,960
1719	West Bristol K8 School	Storage A307	3	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
1720	West Bristol K8 School	Storage A306	3	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
1721	West Bristol K8 School	Classroom A323	3	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1722	West Bristol K8 School	Storage A201	2	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	45	700	700
1723	West Bristol K8 School	Library B230	2	2x26W CF HARDWIRED/EL	can rec	20	20	54	1.1	10 WATT LED/KIT	can kit LED Spectrum	20	11	0.2	0.9	1,914	2,200	2,200
1724	West Bristol K8 School	Library B230	2	4L4' T8 32w/EL-8'	trof acr 6" wide	11	11	112	1.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	11	87	1.0	0.3	601	2,200	2,200
1725	West Bristol K8 School	Library B230	2	4L3' T8 25w/EL-6'	trof acr 6" wide	1	1	88	0.1	4L3' T8 21w/ELEE LO-6'	rlrb LF	1	84	0.1	0.0	9	2,200	2,200
1726	West Bristol K8 School	Library B230	2	2L4' T8 32w/EL	trof acr 6" wide	22	22	60	1.3	2L4' T8 28w/ELEE LO	rlrb LF	22	44	1.0	0.3	770	2,200	2,200
1727	West Bristol K8 School	Library B230	2	2L3' T8 25w/EL	trof acr 6" wide	4	4	47	0.2	2L3' T8 21w/ELEE LO	rlrb LF	4	42	0.2	0.0	44	2,200	2,200
1728	West Bristol K8 School	Library B230	2	100W METAL HALIDE	indirect	8	8	120	1.0	20 WATT LED/NEW	new LED indirect	8	21	0.2	0.8	1,742	2,200	2,200
1729	West Bristol K8 School	Library B230	2	2L2' F40 BIAX/EL	indirect	16		72	1.2	NO RETRO	no change		76	1.2			2,200	2,200
1730	West Bristol K8 School	Library B230	2	26W CF HARDWIRED	decorative	5		28	0.1	NO RETRO	no change -specialized fixture		29	0.1			2,200	2,200
1731	West Bristol K8 School	Library B230	2	4L4' T8 32w/EL-8'	direct/indirect	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	492	2,200	2,200
1732	West Bristol K8 School	Library B230	2	1L4' T8 32w/EL	direct/indirect	8	8	30	0.2	1L4' T8 28w/ELEE LO	rlrb LF	8	23	0.2	0.1	121	2,200	2,200
1733	West Bristol K8 School	Storage B230C	2	2L4' T8 32w/EL	wrap	6	6	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	6	44	0.3	0.1	95	1,000	1,000
1734	West Bristol K8 School	Storage B230C	2	2L4' T8 32w/EL	wrap	6	6	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	6	44	0.3	0.1	95	1,000	1,000
1735	West Bristol K8 School	Office B230B	2	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	45	2,400	1,680
1736	West Bristol K8 School	Classroom B231	2	2L4' T8 32w/EL	troffer indirect bi-level	12	12	60	0.7	2L4' T8 28w/EL/RELAMP ONLY	relamp LF	12	55	0.7	0.1	127	1,960	1,960
1737	West Bristol K8 School	Office B230A	2	2L4' T8 32w/EL	troffer indirect bi-level	3	3	60	0.2	2L4' T8 28w/EL/RELAMP ONLY	relamp LF	3	55	0.2	0.0	27	1,680	1,680
1738	West Bristol K8 School	Office B230A	2	2L2' T8 17w/EL	troffer indirect	1	1	33	0.0	2L2' T8 15w/ELEE LO	rlrb LF	1	28	0.0	0.0	8	1,680	1,680
1739	West Bristol K8 School	Classroom C249	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1740	West Bristol K8 School	Classroom C248	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1741	West Bristol K8 School	Classroom C252	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1742	West Bristol K8 School	Classroom C253	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1743	West Bristol K8 School	Classroom C254	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1744	West Bristol K8 School	Classroom C255	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1745	West Bristol K8 School	Stair 5	S	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	95	3,000	3,000
1746	West Bristol K8 School	Stair 5	S	1L4' T8 32w/EL	valance	4	4	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	4	23	0.1	0.0	83	3,000	3,000
1747	West Bristol K8 School	Bath Boys	2	4L4' T8 32w/EL-8'	valance	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	111	2,240	2,240
1748	West Bristol K8 School	Bath Boys	2	2x26W CF HARDWIRED/EL	can rec	3	3	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	0.1	292	2,240	2,240
1749	West Bristol K8 School	Storage Idf	2	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
1750	West Bristol K8 School	Bath Men	2	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
1751	West Bristol K8 School	Bath Women	2	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
1752	West Bristol K8 School	Storage Clean	2	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
1753	West Bristol K8 School	Bath Girls	2	4L4' T8 32w/EL-8'	valance	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	111	2,240	2,240
1754	West Bristol K8 School	Bath Girls	2	2x26W CF HARDWIRED/EL	can rec	3	3	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	0.1	292	2,240	2,240
1755	West Bristol K8 School	Classroom C264	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1756	West Bristol K8 School	Classroom C265	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1757	West Bristol K8 School	Storage C268	2	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
1758	West Bristol K8 School	Classroom C266	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1759	West Bristol K8 School	Classroom C267	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1760	West Bristol K8 School	Classroom C269	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1761	West Bristol K8 School	Classroom C269	2	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	171	1,960	1,960
1762	West Bristol K8 School	Classroom C270	2	2L4' T8 32w/EL	troffer indirect bi-level	4	4	60	0.2	2L4' T8 28w/EL/RELAMP ONLY	relamp LF	4	55	0.2	0.0	42	1,960	1,960
1763	West Bristol K8 School	Classroom C272	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1764	West Bristol K8 School	Classroom C272	2	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	85	1,960	1,960
1765	West Bristol K8 School	Classroom C273	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1766	West Bristol K8 School	Classroom C273	2	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	85	1,960	1,960
1767	West Bristol K8 School	Classroom C274	2	2L4' T8 32w/EL	troffer indirect bi-level	4	4	60	0.2	2L4' T8 28w/EL/RELAMP ONLY	relamp LF	4	55	0.2	0.0	42	1,960	1,960
1768	West Bristol K8 School	Classroom C275	2	2L4' T8 32w/EL	troffer indirect bi-level	5	5	60	0.3	2L4' T8 28w/EL/RELAMP ONLY	relamp LF	5	55	0.3	0.0	53	1,960	1,960
1769	West Bristol K8 School	Classroom C276	2	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	31	1,960	1,960
1770	West Bristol K8 School	Classroom C279	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1771	West Bristol K8 School	Classroom C279	2	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	85	1,960	1,960
1772	West Bristol K8 School	Classroom C281	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1773	West Bristol K8 School	Classroom C281	2	2x18W CF HARDWIRED/EL	can rec	1	1	38	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	54	1,960	1,960
1774	West Bristol K8 School	Classroom C280	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1775	West Bristol K8 School	Classroom C280	2	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	85	1,960	1,960
1776	West Bristol K8 School	Classroom C284	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1777	West Bristol K8 School	Classroom C284	2	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	85	1,960	1,960
1778	West Bristol K8 School	Storage C282	2	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
1779	West Bristol K8 School	Classroom C283	2	2L4' T8 32w/EL	troffer indirect bi-level	4	4	60	0.2	2L4' T8 28w/EL/RELAMP ONLY	relamp LF	4	55	0.2	0.0	42	1,960	1,960
1780	West Bristol K8 School	Storage C285	2	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
1781	West Bristol K8 School	Classroom C286	2	2L4' T8 32w/EL	troffer indirect bi-level	4	4	60	0.2	2L4' T8 28w/EL/RELAMP ONLY	relamp LF	4	55	0.2	0.0	42	1,960	1,960
1782	West Bristol K8 School	Stair 4	S	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	95	3,000	3,000
1783	West Bristol K8 School	Stair 4	S	1L4' T8 32w/EL	valance	4	4	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	4	23	0.1	0.0	83	3,000	3,000
1784	West Bristol K8 School	Hall 1St	1	2x26W CF HARDWIRED/EL	can rec	33	33	54	1.8	10 WATT LED/KIT	can kit LED Spectrum	33	11	0.3	1.4	4,307	3,000	3,000
1785	West Bristol K8 School	Hall 1St	1	2L2' T8 17w/EL	troffer indirect	116	116	33	3.8	2L2' T8 15w/ELEE LO	rlrb LF	116	28	3.3	0.5	1,618	3,000	3,000
1786	West Bristol K8 School	Hall 1St	1	26W CF HARDWIRED	decorative	6		28	0.2	NO RETRO	no change -specialized fixture		29	0.2			3,000	3,000
1787	West Bristol K8 School	Classroom C184	1	6L4' T8 32w/EL-8'	indirect/direct	11	11	180	2.0	6L4' T8 28w/ELEE LO-8'	rlrb LF	11	132	1.5	0.5	1,028	1,960	1,960
1788	West Bristol K8 School	Bath C184	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	36	2,240	2,240

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
1789	West Bristol K8 School	Classroom C180	1	6L4' T8 32w/EL-8'	indirect/direct	11	11	180	2.0	6L4' T8 28w/ELEE LO-8'	rlrb LF	11	132	1.5	0.5	1,028	1,960	1,960
1790	West Bristol K8 School	Bath C180	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
1791	West Bristol K8 School	Classroom C181	1	6L4' T8 32w/EL-8'	indirect/direct	11	11	180	2.0	6L4' T8 28w/ELEE LO-8'	rlrb LF	11	132	1.5	0.5	1,028	1,960	1,960
1792	West Bristol K8 School	Bath C181	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
1793	West Bristol K8 School	Classroom C179	1	6L4' T8 32w/EL-8'	indirect/direct	11	11	180	2.0	6L4' T8 28w/ELEE LO-8'	rlrb LF	11	132	1.5	0.5	1,028	1,960	1,960
1794	West Bristol K8 School	Bath C179	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
1795	West Bristol K8 School	Classroom C174	1	2L4' T8 32w/EL	troffer indirect bi-level	4	4	60	0.2	2L4' T8 28w/EL/RELAMP ONLY	relamp LF	4	55	0.2	0.0	42	1,960	1,960
1796	West Bristol K8 School	Classroom C173A	1	6L4' T8 32w/EL-8'	indirect/direct	8	8	180	1.4	6L4' T8 28w/ELEE LO-8'	rlrb LF	8	132	1.1	0.4	748	1,960	1,960
1797	West Bristol K8 School	Storage C173A	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	11	700	700
1798	West Bristol K8 School	Storage C173A	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	11	700	700
1799	West Bristol K8 School	Classroom C172	1	6L4' T8 32w/EL-8'	indirect/direct	11	11	180	2.0	6L4' T8 28w/ELEE LO-8'	rlrb LF	11	132	1.5	0.5	1,028	1,960	1,960
1800	West Bristol K8 School	Bath C172	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
1801	West Bristol K8 School	Storage C171	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
1802	West Bristol K8 School	Classroom C170	1	2L4' T8 32w/EL	troffer indirect bi-level	4	4	60	0.2	2L4' T8 28w/EL/RELAMP ONLY	relamp LF	4	55	0.2	0.0	42	1,960	1,960
1803	West Bristol K8 School	Classroom C169	1	2L4' T8 32w/EL	troffer indirect bi-level	4	4	60	0.2	2L4' T8 28w/EL/RELAMP ONLY	relamp LF	4	55	0.2	0.0	42	1,960	1,960
1804	West Bristol K8 School	Storage C168	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
1805	West Bristol K8 School	Classroom C167	1	6L4' T8 32w/EL-8'	indirect/direct	8	8	180	1.4	6L4' T8 28w/ELEE LO-8'	rlrb LF	8	132	1.1	0.4	748	1,960	1,960
1806	West Bristol K8 School	Bath C167	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
1807	West Bristol K8 School	Classroom C166	1	6L4' T8 32w/EL-8'	indirect/direct	8	8	180	1.4	6L4' T8 28w/ELEE LO-8'	rlrb LF	8	132	1.1	0.4	748	1,960	1,960
1808	West Bristol K8 School	Bath C166	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
1809	West Bristol K8 School	Bath Boys	1	4L4' T8 32w/EL-8'	valance	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	111	2,240	2,240
1810	West Bristol K8 School	Bath Boys	1	2x26W CF HARDWIRED/EL	can rec	3	3	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	0.1	292	2,240	2,240
1811	West Bristol K8 School	Storage Idf	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
1812	West Bristol K8 School	Bath Men	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
1813	West Bristol K8 School	Bath Women	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
1814	West Bristol K8 School	Storage Clean	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
1815	West Bristol K8 School	Bath Girls	1	4L4' T8 32w/EL-8'	valance	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	111	2,240	2,240
1816	West Bristol K8 School	Bath Girls	1	2x26W CF HARDWIRED/EL	can rec	3	3	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	0.1	292	2,240	2,240
1817	West Bristol K8 School	Classroom C165	1	6L4' T8 32w/EL-8'	indirect/direct	8	8	180	1.4	6L4' T8 28w/ELEE LO-8'	rlrb LF	8	132	1.1	0.4	748	1,960	1,960
1818	West Bristol K8 School	Bath C165	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
1819	West Bristol K8 School	Classroom C164	1	6L4' T8 32w/EL-8'	indirect/direct	8	8	180	1.4	6L4' T8 28w/ELEE LO-8'	rlrb LF	8	132	1.1	0.4	748	1,960	1,960
1820	West Bristol K8 School	Bath C164	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
1821	West Bristol K8 School	Conference C165	1	2L4' T8 32w/EL	troffer indirect bi-level	4	4	60	0.2	2L4' T8 28w/EL/RELAMP ONLY	relamp LF	4	55	0.2	0.0	36	1,680	1,680
1822	West Bristol K8 School	Office Open C155	1	2L4' T8 32w/EL	trof acr	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	0.1	245	1,925	1,925
1823	West Bristol K8 School	Office Open C155A	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	61	1,925	1,925
1824	West Bristol K8 School	Office Open C155B	1	2L4' T8 32w/EL	troffer indirect bi-level	2	2	60	0.1	2L4' T8 28w/EL/RELAMP ONLY	relamp LF	2	55	0.1	0.0	21	1,925	1,925
1825	West Bristol K8 School	Office Open C155C	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	61	1,925	1,925
1826	West Bristol K8 School	Bath C155	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
1827	West Bristol K8 School	Bath C155	1	2x18W CF HARDWIRED/EL	can rec	1	1	38	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	62	2,240	2,240
1828	West Bristol K8 School	Classroom C154	1	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1829	West Bristol K8 School	Classroom C152	1	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1830	West Bristol K8 School	Storage C151	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	22	350	350
1831	West Bristol K8 School	Office C150	1	2L4' T8 32w/EL	troffer indirect bi-level	2	2	60	0.1	2L4' T8 28w/EL/RELAMP ONLY	relamp LF	2	55	0.1	0.0	18	1,680	1,680
1832	West Bristol K8 School	Office C149	1	2L4' T8 32w/EL	troffer indirect bi-level	2	2	60	0.1	2L4' T8 28w/EL/RELAMP ONLY	relamp LF	2	55	0.1	0.0	18	1,680	1,680
1833	West Bristol K8 School	Office Open C148	1	2L2' T8 17w/EL	troffer indirect	6	6	33	0.2	2L2' T8 15w/ELEE LO	rlrb LF	6	28	0.2	0.0	54	1,925	1,925
1834	West Bristol K8 School	Office C148A	1	2L4' T8 32w/EL	troffer indirect bi-level	2	2	60	0.1	2L4' T8 28w/EL/RELAMP ONLY	relamp LF	2	55	0.1	0.0	18	1,680	1,680
1835	West Bristol K8 School	Office C148B	1	2L4' T8 32w/EL	troffer indirect bi-level	2	2	60	0.1	2L4' T8 28w/EL/RELAMP ONLY	relamp LF	2	55	0.1	0.0	18	1,680	1,680
1836	West Bristol K8 School	Office C148C	1	2L4' T8 32w/EL	troffer indirect bi-level	2	2	60	0.1	2L4' T8 28w/EL/RELAMP ONLY	relamp LF	2	55	0.1	0.0	18	1,680	1,680
1837	West Bristol K8 School	Conference Guidance	1	2L2' T8 17w/EL	troffer indirect	6	6	33	0.2	2L2' T8 15w/ELEE LO	rlrb LF	6	28	0.2	0.0	47	1,680	1,680
1838	West Bristol K8 School	Storage A101	1	2L4' T8 32w/EL	troffer indirect bi-level	3	3	60	0.2	2L4' T8 28w/EL/RELAMP ONLY	relamp LF	3	55	0.2	0.0	11	700	700
1839	West Bristol K8 School	Mechanical A102	1	2L2' T8 17w/EL	troffer indirect	1	1	33	0.0	2L2' T8 15w/ELEE LO	rlrb LF	1	28	0.0	0.0	2	350	350
1840	West Bristol K8 School	Office Open C146	1	2L2' T8 17w/EL	troffer indirect	23	23	33	0.8	2L2' T8 15w/ELEE LO	rlrb LF	23	28	0.7	0.1	206	1,925	1,925
1841	West Bristol K8 School	Bath C146	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
1842	West Bristol K8 School	Bath C146	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
1843	West Bristol K8 School	Storage C146B	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	11	700	700
1844	West Bristol K8 School	Conference C146D	1	2L4' T8 32w/EL	troffer indirect bi-level	3	3	60	0.2	2L4' T8 28w/EL/RELAMP ONLY	relamp LF	3	55	0.2	0.0	27	1,680	1,680
1845	West Bristol K8 School	Office C146C	1	2L4' T8 32w/EL	troffer indirect bi-level	4	4	60	0.2	2L4' T8 28w/EL/RELAMP ONLY	relamp LF	4	55	0.2	0.0	36	1,680	1,680
1846	West Bristol K8 School	Office C146B	1	2L4' T8 32w/EL	troffer indirect bi-level	2	2	60	0.1	2L4' T8 28w/EL/RELAMP ONLY	relamp LF	2	55	0.1	0.0	18	1,680	1,680
1847	West Bristol K8 School	Office C146A	1	2L4' T8 32w/EL	troffer indirect bi-level	2	2	60	0.1	2L4' T8 28w/EL/RELAMP ONLY	relamp LF	2	55	0.1	0.0	18	1,680	1,680
1848	West Bristol K8 School	Classroom A104	1	2L4' T8 32w/EL	trof acr	11	11	60	0.7	2L4' T8 28w/ELEE LO	rlrb LF	11	44	0.5	0.2	343	1,960	1,960
1849	West Bristol K8 School	Storage A104	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	11	350	350
1850	West Bristol K8 School	Storage A106	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
1851	West Bristol K8 School	Storage A107	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
1852	West Bristol K8 School	Classroom A108	1	2L4' T8 32w/EL	troffer indirect bi-level	4	4	60	0.2	2L4' T8 28w/EL/RELAMP ONLY	relamp LF	4	55	0.2	0.0	42	1,960	1,960
1853	West Bristol K8 School	Bath Boys	1	4L4' T8 32w/EL-8'	valance	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	111	2,240	2,240
1854	West Bristol K8 School	Bath Boys	1	2x26W CF HARDWIRED/EL	can rec	3	3	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	0.1	292	2,240	2,240
1855	West Bristol K8 School	Storage Idf	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
1856	West Bristol K8 School	Bath Men	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
1857	West Bristol K8 School	Bath Women	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
1858	West Bristol K8 School	Storage Clean	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
1859	West Bristol K8 School	Bath Girls	1	4L4' T8 32w/EL-8'	valance	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	111	2,240	2,240
1860	West Bristol K8 School	Bath Girls	1	2x26W CF HARDWIRED/EL	can rec	3	3	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	0.1	292	2,240	2,240
1861	West Bristol K8 School	Classroom A115	1	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
1862	West Bristol K8 School	Storage A116	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
1863	West Bristol K8 School	Classroom A117	1	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1864	West Bristol K8 School	Classroom A119	1	6L4' T8 32w/EL-8'	indirect/direct	9	9	180	1.6	6L4' T8 28w/ELEE LO-8'	rlrb LF	9	132	1.2	0.4	841	1,960	1,960
1865	West Bristol K8 School	Classroom A119	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	85	1,960	1,960
1866	West Bristol K8 School	Storage A120	1	2L4' T8 32w/EL	trof acr	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	17	350	350
1867	West Bristol K8 School	Classroom A118	1	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1868	West Bristol K8 School	Classroom A121	1	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1869	West Bristol K8 School	Classroom B143	1	6L4' T8 32w/EL-8'	indirect/direct	9	9	180	1.6	6L4' T8 28w/ELEE LO-8'	rlrb LF	9	132	1.2	0.4	841	1,960	1,960
1870	West Bristol K8 School	Classroom B143	1	2x26W CF HARDWIRED/EL	can rec	3	3	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	0.1	256	1,960	1,960
1871	West Bristol K8 School	Classroom B142	1	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	561	1,960	1,960
1872	West Bristol K8 School	Classroom B142	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	85	1,960	1,960
1873	West Bristol K8 School	Storage B141	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	45	700	700
1874	West Bristol K8 School	Gym B137 (30)	1	70W CF HARDWIRED/EL	high bay dim	240		70	16.8	NO RETRO	no change -specialized fixture		74	16.8			1,400	1,400
1875	West Bristol K8 School	Gym B137	1	2x26W CF HARDWIRED/EL	can rec	4	4	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	4	11	0.0	0.2	348	2,000	2,000
1876	West Bristol K8 School	Gym B137	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	64	2,000	2,000
1877	West Bristol K8 School	Bath Gym	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
1878	West Bristol K8 School	Storage B140	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	45	700	700
1879	West Bristol K8 School	Locker B137F	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	142	2,240	2,240
1880	West Bristol K8 School	Locker B137F	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	139	3,200	3,200
1881	West Bristol K8 School	Office B137E	1	2L4' T8 32w/EL	troffer indirect bi-level	4	4	60	0.2	2L4' T8 28w/EL/RELAMP ONLY	relamp LF	4	55	0.2	0.0	36	1,680	1,680
1882	West Bristol K8 School	Locker B137B	1	2L4' T8 32w/EL	trof acr	6	6	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	6	44	0.3	0.1	214	2,240	2,240
1883	West Bristol K8 School	Locker B137B	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	139	3,200	3,200
1884	West Bristol K8 School	Storage Gym	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	45	700	700
1885	West Bristol K8 School	Stage B144	1	4L4' T8 32w/EL-8'	strip reflector	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	447	2,000	2,000
1886	West Bristol K8 School	Office B144A	1	2L4' T8 32w/EL	troffer indirect bi-level	2	2	60	0.1	2L4' T8 28w/EL/RELAMP ONLY	relamp LF	2	55	0.1	0.0	18	1,680	1,680
1887	West Bristol K8 School	Gym B139	1	2L4' T8 32w/EL	troffer indirect bi-level	9	9	60	0.5	2L4' T8 28w/EL/RELAMP ONLY	relamp LF	9	55	0.5	0.0	68	1,400	1,400
1888	West Bristol K8 School	Gym B139	1	2x26W CF HARDWIRED/EL	can rec	6	6	54	0.3	10 WATT LED/KIT	can kit LED Spectrum	6	11	0.1	0.3	365	1,400	1,400
1889	West Bristol K8 School	Gym B139	1	40W INCANDESCENT	track head	4	4	40	0.2	8 WATT LED SI	screw in LED par20	4	8	0.0	0.1	177	1,400	1,400
1890	West Bristol K8 School	Gym B138	1	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	401	1,400	1,400
1891	West Bristol K8 School	Gym B138	1	2x26W CF HARDWIRED/EL	can rec	3	3	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	0.1	183	1,400	1,400
1892	West Bristol K8 School	Classroom B124	1	6L4' T8 32w/EL-8'	indirect/direct	9	9	180	1.6	6L4' T8 28w/ELEE LO-8'	rlrb LF	9	132	1.2	0.4	841	1,960	1,960
1893	West Bristol K8 School	Office B124A	1	2L4' T8 32w/EL	troffer indirect bi-level	3	3	60	0.2	2L4' T8 28w/EL/RELAMP ONLY	relamp LF	3	55	0.2	0.0	27	1,680	1,680
1894	West Bristol K8 School	Storage B125	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	22	350	350
1895	West Bristol K8 School	Bath B125	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
1896	West Bristol K8 School	Bath Girls	1	2L4' T8 32w/EL	trof acr	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	107	2,240	2,240
1897	West Bristol K8 School	Bath Boys	1	2L4' T8 32w/EL	trof acr	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	107	2,240	2,240
1898	West Bristol K8 School	Storage B129	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
1899	West Bristol K8 School	Storage B133	1	2L4' T8 32w/EL	trof acr	12	12	60	0.7	2L4' T8 28w/ELEE LO	rlrb LF	12	44	0.5	0.2	134	700	700
1900	West Bristol K8 School	Lounge B130	1	2L4' T8 32w/EL	troffer indirect bi-level	6	6	60	0.4	2L4' T8 28w/EL/RELAMP ONLY	relamp LF	6	55	0.3	0.0	50	1,540	1,540
1901	West Bristol K8 School	Storage B131	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	3	350	350
1902	West Bristol K8 School	Cafeteria Z	1	2L2' F40 BIAX/EL	decorative	21		72	1.5	NO RETRO	no change -specialized fixture		76	1.5			2,000	2,000
1903	West Bristol K8 School	Mechanical B135	1	4L4' T8 32w/EL-8'	strip reflector	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	112	500	350
1904	West Bristol K8 School	Kitchen Z	1	2L4' T8 32w/EL	trof acr	28	28	60	1.7	2L4' T8 28w/ELEE LO	rlrb LF	28	44	1.2	0.4	748	1,680	1,680
1905	West Bristol K8 School	Kitchen Z	1	26W CF HARDWIRED	range hood	10		28	0.3	NO RETRO	no change		29	0.3			2,400	2,400
1906	West Bristol K8 School	Storage B134E	1	2L4' T8 32w/EL	trof acr	6	6	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	6	44	0.3	0.1	67	700	700
1907	West Bristol K8 School	Bath Kit	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	36	2,240	2,240
1908	West Bristol K8 School	Office B134C	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	53	1,680	1,680
1909	West Bristol K8 School	Storage B134F	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
1912	Northeast MS	Bath Boys	2	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	71	2,800	1,960
1913	Northeast MS	Bath Men	2	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	63	2,800	1,960
1914	Northeast MS	Storage Janitor	2	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	8	350	350
1915	Northeast MS	Storage S-5	2	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	11	500	500
1916	Northeast MS	Storage Books	2	4L4' T8 32w/EL-8'	wrap	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	14	350	350
1917	Northeast MS	Bath Girls	2	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	71	2,800	1,960
1918	Northeast MS	Bath Woman	2	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	63	2,800	1,960
1919	Northeast MS	Classroom 207	2	4L4' T8 32w/EL-8'	old wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	338	1,890	1,890
1920	Northeast MS	Classroom 206	2	4L4' T8 32w/EL-8'	old wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	338	1,890	1,890
1921	Northeast MS	Classroom 205	2	4L4' T8 32w/EL-8'	old wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	338	1,890	1,890
1922	Northeast MS	Classroom 204	2	4L4' T8 32w/EL-8'	old wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	338	1,890	1,890
1923	Northeast MS	Classroom 203	2	4L4' T8 32w/EL-8'	old wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	338	1,890	1,890
1924	Northeast MS	Classroom 202	2	4L4' T8 32w/EL-8'	old wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	338	1,890	1,890
1925	Northeast MS	Classroom 201	2	4L4' T8 32w/EL-8'	old wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	338	1,890	1,890
1926	Northeast MS	Hall C201-C207	2	4L2' T8 17w/EL	box acrylic	20	20	62	1.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	20	35	0.7	0.5	1,400	3,200	2,240
1927	Northeast MS	Hall C201-C207	2	1L4' T8 32w/EL	wrap narrow	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	35	3,200	2,240
1928	Northeast MS	Classroom 101	1	4L4' T8 32w/EL-8'	old wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	338	1,890	1,890
1929	Northeast MS	Classroom 102	1	4L4' T8 32w/EL-8'	old wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	338	1,890	1,890
1930	Northeast MS	Classroom 103	1	4L4' T8 32w/EL-8'	old wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	338	1,890	1,890
1931	Northeast MS	Classroom 104	1	4L4' T8 32w/EL-8'	old wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	338	1,890	1,890
1932	Northeast MS	Classroom 105	1	4L4' T8 32w/EL-8'	old wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	338	1,890	1,890
1933	Northeast MS	Classroom 106	1	4L4' T8 32w/EL-8'	old wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	338	1,890	1,890
1934	Northeast MS	Classroom 107	1	4L4' T8 32w/EL-8'	old wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	338	1,890	1,890
1935	Northeast MS	Classroom 108	1	4L4' T8 32w/EL-8'	old wrap	4	4	112	0.4	4L4' T8 28w/ELEE LO-8'	rlrb LF	4	87	0.3	0.1	150	1,890	1,890
1936	Northeast MS	Storage Janitor	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	8	350	350

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
1937	Northeast MS	Bath Boys	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	71	2,800	1,960
1938	Northeast MS	Bath Men	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	63	2,800	1,960
1939	Northeast MS	Bath Girls	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	71	2,800	1,960
1940	Northeast MS	Bath Woman	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	63	2,800	1,960
1941	Northeast MS	Hall C101-C108	1	4L2' T8 17w/EL	box acrylic	23	23	62	1.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	23	35	0.8	0.6	1,610	3,200	2,240
1942	Northeast MS	Hall C101-C108	1	1L4' T8 32w/EL	wrap narrow	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	35	3,200	2,240
1943	Northeast MS	Stair Near 101	stair	4L2' T8 17w/EL	box acrylic	6	6	62	0.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	6	35	0.2	0.2	420	3,200	3,200
1944	Northeast MS	Hall Music Room	1	4L2' T8 17w/EL	box acrylic	3	3	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	0.1	210	3,200	2,240
1945	Northeast MS	Storage Greenhouse	1	2L4' T8 32w/EL	wrap	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	25	500	500
1946	Northeast MS	Classroom 99	1	4L4' T8 32w/EL-8'	old wrap	11	11	112	1.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	11	87	1.0	0.3	413	1,890	1,890
1947	Northeast MS	Hall Near Caf	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	163	3,200	2,240
1948	Northeast MS	Cafeteria Main	1	4L4' T8 32w/EL-8'	trof acr 1' wide	19	19	112	2.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	19	87	1.7	0.5	718	1,900	1,330
1949	Northeast MS	Cafeteria Main	1	3x13W CF HARDWIRED	square surface mt.	20	20	45	0.9	16 WATT LED/NEW	new LED drum	20	17	0.3	0.6	857	1,900	1,900
1950	Northeast MS	Kitchen Main	1	4L4' T8 32w/EL-8'	vapor tight	10	10	112	1.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	10	87	0.9	0.2	338	1,700	1,700
1951	Northeast MS	Kitchen Main	1	2L4' T8 32w/EL	vapor tight	5	5	60	0.3	2L4' T8 28w/ELEE LO	rlrb LF	5	44	0.2	0.1	108	1,700	1,700
1952	Northeast MS	Kitchen Main	1	4L4' T8 32w/EL-8'	wrap	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	68	1,700	1,700
1953	Northeast MS	Storage Supplies	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	13	1,000	1,000
1954	Northeast MS	Storage Supplies	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	23	1,000	1,000
1955	Northeast MS	Bath Supplies	1	3x13W CF HARDWIRED	drum	2	2	45	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.1	126	2,800	2,800
1956	Northeast MS	Storage Food	1	2L4' T8 32w/EL	wrap wide	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	25	1,000	700
1957	Northeast MS	Foyer K	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,200	2,240
1958	Northeast MS	Office Fish	1	3x13W CF HARDWIRED	drum	2	2	45	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.1	108	2,400	1,680
1959	Northeast MS	Shop Engineering	1	4L4' T8 32w/EL-8'	industrial	17	17	112	1.9	4L4' T8 28w/ELEE LO-8'	rlrb LF	17	87	1.5	0.4	912	2,700	2,700
1960	Northeast MS	Shop Engineering	1	2L4' T8 32w/EL	industrial	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	69	2,700	2,700
1961	Northeast MS	Storage Engineering	1	100W INCANDESCENT	keyless	2	2	100	0.2	11 WATT LED SI	screw in LED Alamp	2	12	0.0	0.2	142	1,000	1,000
1962	Northeast MS	Storage Wood	1	3x13W CF HARDWIRED	drum	4	4	45	0.2	16 WATT LED/NEW	new LED drum	4	17	0.1	0.1	90	1,000	700
1963	Northeast MS	Classroom Tech	1	2L8' T8/EL	industrial	18	18	109	2.0	2L4' T8 28w/ELEE HI/NEW-8'	new LF strip	18	67	1.2	0.8	1,625	2,700	2,700
1964	Northeast MS	Storage Tech	1	100W INCANDESCENT	keyless	3	3	100	0.3	11 WATT LED SI	screw in LED Alamp	3	12	0.0	0.3	212	1,000	1,000
1965	Northeast MS	Hall K-S1	1	2L4' T8 32w/EL	trof acr	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	0.1	326	3,200	2,240
1966	Northeast MS	Foyer Locker Room	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,200	2,240
1967	Northeast MS	Gym Main	1	4L4' T5 HO/EL	high bay	28	28	234	6.6	98 WATT LED/NEW	new LED hibay wg	28	103	2.9	3.7	8,751	2,980	2,086
1968	Northeast MS	Office Boys Locker	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	43	1,680	1,680
1969	Northeast MS	Locker Boys	1	2x13W CF HARDWIRED	drum	7	7	30	0.2	16 WATT LED/NEW	new LED drum	7	17	0.1	0.1	207	2,800	1,960
1970	Northeast MS	Locker Boys	1	60W INCANDESCENT	can rec 6"	3	3	60	0.2	8 WATT LED SI	screw in LED par20	3	8	0.0	0.2	347	2,800	1,960
1971	Northeast MS	Storage Balls	1	3x13W CF HARDWIRED	drum	2	2	45	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.1	45	1,000	700
1972	Northeast MS	Mechanical Boiler	1	2L4' T8 32w/EL	strip	11	11	60	0.7	2L4' T8 28w/ELEE LO	rlrb LF	11	44	0.5	0.2	70	500	500
1973	Northeast MS	Foyer Near Girls Locker	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	81	3,200	2,240
1974	Northeast MS	Stage Near Girls Locker	1	3x13W CF HARDWIRED	drum	2	2	45	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.1	34	750	750
1975	Northeast MS	Stage Near Girls Locker	1	100W INCANDESCENT	keyless	6	6	100	0.6	11 WATT LED SI	screw in LED Alamp	6	12	0.1	0.5	679	1,600	1,600
1976	Northeast MS	Locker Girls	1	2x13W CF HARDWIRED	drum	4	4	30	0.1	16 WATT LED/NEW	new LED drum	4	17	0.1	0.1	118	2,800	1,960
1977	Northeast MS	Locker Girls	1	60W INCANDESCENT	can rec 6"	9	9	60	0.5	8 WATT LED SI	screw in LED par20	9	8	0.1	0.5	1,040	2,800	1,960
1978	Northeast MS	Office Open Main	1	4L4' T8 32w/EL	trof acr	7	7	112	0.8	4L4' T8 28w/ELEE LO	rlrb LF	7	87	0.6	0.2	383	2,750	2,750
1979	Northeast MS	Conference Main	1	4L4' T8 32w/EL-8'	wrap	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	67	1,680	1,680
1980	Northeast MS	Bath Main	1	2x60W INCANDESCENTS	square surface mt.	1	1	120	0.1	16 WATT LED/NEW	new LED drum	1	17	0.0	0.1	231	2,800	1,960
1981	Northeast MS	Office Principal (2)	1	4L4' T8 32w/EL-8'	wrap	4	4	112	0.4	4L4' T8 28w/ELEE LO-8'	rlrb LF	4	87	0.3	0.1	134	1,680	1,680
1982	Northeast MS	Office Copier	1	4L4' T8 32w/EL	wrap wide	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	0.0	33	1,680	1,680
1983	Northeast MS	Lobby Main	1	2L4' T8 32w/EL	trof acr	9	9	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	9	44	0.4	0.1	366	3,200	2,240
1984	Northeast MS	Foyer Main	1	70W METAL HALIDE	flood	1	1	95	0.1	21 WATT LED/NEW	new LED flood	1	22	0.0	0.1	131	2,240	2,240
1985	Northeast MS	Hall S1-Gym	1	2L4' T8 32w/EL	trof acr	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	0.1	326	3,200	2,240
1986	Northeast MS	Bath Woman	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	71	2,800	1,960
1987	Northeast MS	Bath Men	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	71	2,800	1,960
1988	Northeast MS	Office Open Guidance	1	4L4' T8 32w/EL	trof acr	3	3	112	0.3	4L4' T8 28w/ELEE LO	rlrb LF	3	87	0.3	0.1	115	1,925	1,925
1989	Northeast MS	Office Guidance (2)	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	67	1,680	1,680
1990	Northeast MS	Storage Guidance	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	0.0	14	700	700
1991	Northeast MS	Office Nurse	1	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	34	1,680	1,680
1992	Northeast MS	Office Nurse	1	4L4' T8 32w/EL	trof acr	5	5	112	0.6	4L4' T8 28w/ELEE LO	rlrb LF	5	87	0.4	0.1	167	1,680	1,680
1993	Northeast MS	Bath Nurse	1	2L4' T8 32w/EL	trof acr 1' wide	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	36	2,800	1,960
1994	Northeast MS	Classroom 30	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	338	1,890	1,890
1995	Northeast MS	Hall To Room 31	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	57	2,240	2,240
1996	Northeast MS	Office 31 (2)	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	67	1,680	1,680
1997	Northeast MS	Office 31 (3)	1	4L4' T8 32w/EL-8'	trof acr	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	100	1,680	1,680
1998	Northeast MS	Storage 104	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	125	700	700
1999	Northeast MS	Classroom 28	1	4L4' T8 32w/EL-8'	wrap	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	225	1,890	1,890
2000	Northeast MS	Classroom 28	1	2L4' T8 32w/EL	wrap	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	72	1,890	1,890
2001	Northeast MS	Classroom 26	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	338	1,890	1,890
2002	Northeast MS	Classroom 27	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	338	1,890	1,890
2003	Northeast MS	Classroom 25	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	338	1,890	1,890
2004	Northeast MS	Classroom 24	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	338	1,890	1,890
2005	Northeast MS	Hall C30-C24	1	2L4' T8 32w/EL	trof acr	9	9	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	9	44	0.4	0.1	366	3,200	2,240
2006	Northeast MS	Classroom Band	1	4L4' T8 32w/EL-8'	wrap	16	16	112	1.8	4L4' T8 28w/ELEE LO-8'	rlrb LF	16	87	1.4	0.4	601	1,890	1,890
2007	Northeast MS	Storage Band	1	3x13W CF HARDWIRED	drum	2	2	45	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.1	23	500	500
2008	Northeast MS	Storage 18	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	500	500
2009	Northeast MS	Classroom 19	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	483	2,700	2,700

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
2010	Northeast MS	Classroom 17	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	483	2,700	2,700
2011	Northeast MS	Storage 16	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	500	500
2012	Northeast MS	Storage 15	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	500	500
2013	Northeast MS	Hall Lib-C21	1	2L4' T8 32w/EL	trof acr	13	13	60	0.8	2L4' T8 28w/ELEE LO	rlrb LF	13	44	0.6	0.2	529	3,200	2,240
2014	Northeast MS	Hall C21-Exit	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	81	3,200	2,240
2015	Northeast MS	Library Main	1	4L4' T8 32w/EL-8'	wrap	14	14	112	1.6	4L4' T8 28w/ELEE LO-8'	rlrb LF	14	87	1.2	0.3	429	1,540	1,540
2016	Northeast MS	Library Main	1	2L4' T8 32w/EL	wrap	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	78	1,540	1,540
2017	Northeast MS	Kitchen Library	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	48	1,190	1,190
2018	Northeast MS	Storage Library	1	2L4' T8 32w/EL-8'	wrap narrow	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	9	700	700
2019	Northeast MS	Foyer Near Lib	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	41	3,200	2,240
2020	Northeast MS	Foyer To New Section	1	4L2' T8 17w/EL	box acrylic	3	3	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	0.1	210	3,200	2,240
2023	Northeast MS	Stair C207-C107	stair	4L2' T8 17w/EL	box acrylic	5	5	62	0.3	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	5	35	0.2	0.1	350	3,200	3,200
2024	Northeast MS	Classroom 8	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	338	1,890	1,890
2025	Northeast MS	Classroom 11	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	338	1,890	1,890
2026	Northeast MS	Classroom 6	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	338	1,890	1,890
2027	Northeast MS	Classroom 9	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	338	1,890	1,890
2028	Northeast MS	Classroom 7	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	338	1,890	1,890
2029	Northeast MS	Classroom 4	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	338	1,890	1,890
2030	Northeast MS	Classroom 2	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	338	1,890	1,890
2031	Northeast MS	Classroom 2	1	2L4' T8 32w/EL	wrap	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	72	1,890	1,890
2032	Northeast MS	Lounge 5	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	276	1,540	1,540
2033	Northeast MS	Storage 5	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	11	500	350
2034	Northeast MS	Bath Men (2)	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	142	2,800	1,960
2035	Northeast MS	Classroom 3	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	338	1,890	1,890
2036	Northeast MS	Classroom 1	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	338	1,890	1,890
2037	Northeast MS	Storage Custodian	1	3x13W CF HARDWIRED	drum	2	2	45	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.1	23	500	350
2038	Northeast MS	Hall C1-C8	1	2L4' T8 32w/EL	trof acr	14	14	60	0.8	2L4' T8 28w/ELEE LO	rlrb LF	14	44	0.6	0.2	570	3,200	2,240
2039	Northeast MS	Storage J-2	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	4	350	350
2040	Northeast MS	Bath Hc	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	36	2,800	1,960
2041	Northeast MS	Storage Textbook	1	3x13W CF HARDWIRED	drum	3	3	45	0.1	16 WATT LED/NEW	new LED drum	3	17	0.1	0.1	34	500	350
2042	Northeast MS	Storage Janitor	1	3x13W CF HARDWIRED	drum	2	2	45	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.1	16	350	350
2043	Northeast MS	Storage Sport Eq	1	4L4' T8 32w/EL-8'	wrap	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	28	700	700
2044	Northeast MS	Storage Sport Eq	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	9	700	700
2045	Northeast MS	Storage Sport Eq	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	16	700	700
2046	Northeast MS	Lounge Faculty	1	4L4' T8 32w/EL-8'	wrap	4	4	112	0.4	4L4' T8 28w/ELEE LO-8'	rlrb LF	4	87	0.3	0.1	122	1,540	1,540
2047	Northeast MS	Office Copy	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	21	1,680	1,680
2048	Northeast MS	Storage Copy	1	4x60W INCANDESCENTS	square surface mt.	1	1	240	0.2	16 WATT LED/NEW	new LED drum	1	17	0.0	0.2	89	500	350
2049	Northeast MS	Classroom 90	1	4L4' T8 32w/EL-8'	wrap	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	113	1,890	1,890
2050	Northeast MS	Classroom 90	1	2L4' T8 32w/EL	wrap	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	72	1,890	1,890
2051	Northeast MS	Storage 90	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	13	1,000	700
2052	Northeast MS	Bath Women	1	3x13W CF HARDWIRED	drum	2	2	45	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.1	126	2,800	1,960
2053	Northeast MS	Bath Women	1	15W CF SCREWIN	globe	2	2	17	0.0	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.0	39	2,800	1,960
2060	Mountain View ES	Stair 2	S	2x26W CF HARDWIRED/EL	sconce	8		54	0.4	NO RETRO	no change		57	0.4			3,000	3,000
2061	Mountain View ES	Hall 2Nd	2	2x26W CF HARDWIRED/EL	can rec	6	6	54	0.3	10 WATT LED/KIT	can kit LED Spectrum	6	11	0.1	0.3	783	3,000	3,000
2062	Mountain View ES	Hall 2Nd	2	26W CF HARDWIRED	can rec	11		28	0.3	NO RETRO	no change		29	0.3			3,000	3,000
2063	Mountain View ES	Hall 2Nd	2	2L4' T8 32w/EL-8'	cove	15	15	60	0.9	2L4' T8 28w/ELEE LO-8'	rlrb LF	15	44	0.7	0.2	716	3,000	3,000
2064	Mountain View ES	Hall 2Nd	2	1L4' T8 32w/EL	cove	7	7	30	0.2	1L4' T8 28w/ELEE LO	rlrb LF	7	23	0.2	0.0	145	3,000	3,000
2065	Mountain View ES	Classroom 213	2	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
2066	Mountain View ES	Classroom 213	2	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
2067	Mountain View ES	Classroom 214	2	4L4' T8 32w/EL-8'	wrap narrow	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	77	1,540	1,540
2068	Mountain View ES	Classroom 201	2	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
2069	Mountain View ES	Classroom 201	2	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
2070	Mountain View ES	Stair 1	S	2x26W CF HARDWIRED/EL	sconce	8		54	0.4	NO RETRO	no change		57	0.4			3,000	3,000
2071	Mountain View ES	Classroom 202	2	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
2072	Mountain View ES	Classroom 202	2	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
2073	Mountain View ES	Classroom 212	2	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
2074	Mountain View ES	Classroom 212	2	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
2075	Mountain View ES	Bath 212	2	4L2' T8 17w/EL	trof acr	1	1	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	1	57	0.1	0.0	11	2,100	2,100
2076	Mountain View ES	Classroom 211	2	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
2077	Mountain View ES	Classroom 211	2	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
2078	Mountain View ES	Bath 211	2	4L2' T8 17w/EL	trof acr	1	1	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	1	57	0.1	0.0	11	2,100	2,100
2079	Mountain View ES	Classroom 203	2	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
2080	Mountain View ES	Classroom 203	2	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
2081	Mountain View ES	Classroom 204	2	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
2082	Mountain View ES	Classroom 204	2	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
2083	Mountain View ES	Classroom 210	2	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
2084	Mountain View ES	Classroom 210	2	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
2085	Mountain View ES	Bath 210	2	4L2' T8 17w/EL	trof acr	1	1	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	1	57	0.1	0.0	11	2,100	2,100
2086	Mountain View ES	Classroom 209	2	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
2087	Mountain View ES	Classroom 209	2	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
2088	Mountain View ES	Bath 209	2	4L2' T8 17w/EL	trof acr	1	1	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	1	57	0.1	0.0	11	2,100	2,100
2089	Mountain View ES	Storage Electric	2	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	12	500	500
2090	Mountain View ES	Storage Clean	2	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	8	500	500

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
2091	Mountain View ES	Classroom 205	2	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
2092	Mountain View ES	Classroom 205	2	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
2093	Mountain View ES	Bath Boys	2	4L2' T8 17w/EL	trof acr	2	2	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	2	57	0.1	0.0	22	2,100	2,100
2094	Mountain View ES	Bath Boys	2	4L4' T8 32w/EL-8'	soffit	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	104	2,100	2,100
2095	Mountain View ES	Bath Boys	2	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	91	2,100	2,100
2096	Mountain View ES	Bath Men	2	4L2' T8 17w/EL	trof acr	1	1	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	1	57	0.1	0.0	11	2,100	2,100
2097	Mountain View ES	Bath Women	2	4L2' T8 17w/EL	trof acr	1	1	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	1	57	0.1	0.0	11	2,100	2,100
2098	Mountain View ES	Bath Girls	2	4L2' T8 17w/EL	trof acr	2	2	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	2	57	0.1	0.0	22	2,100	2,100
2099	Mountain View ES	Bath Girls	2	4L4' T8 32w/EL-8'	soffit	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	104	2,100	2,100
2100	Mountain View ES	Bath Girls	2	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	91	2,100	2,100
2101	Mountain View ES	Classroom 208	2	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
2102	Mountain View ES	Classroom 208	2	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
2103	Mountain View ES	Classroom 207	2	4L4' T8 32w/EL-8'	wrap narrow	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	77	1,540	1,540
2104	Mountain View ES	Classroom 206	2	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
2105	Mountain View ES	Classroom 206	2	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
2106	Mountain View ES	Hall 1St	1	2x26W CF HARDWIRED/EL	can rec	12	12	54	0.6	10 WATT LED/KIT	can kit LED Spectrum	12	11	0.1	0.5	1,566	3,000	3,000
2107	Mountain View ES	Hall 1St	1	26W CF HARDWIRED	can rec	3		28	0.1	NO RETRO	no change		29	0.1			3,000	3,000
2108	Mountain View ES	Hall 1St	1	2L4' T8 32w/EL-8'	cove	6	6	60	0.4	2L4' T8 28w/ELEE LO-8'	rlrb LF	6	44	0.3	0.1	286	3,000	3,000
2109	Mountain View ES	Hall 1St	1	1L4' T8 32w/EL	cove	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	21	3,000	3,000
2110	Mountain View ES	Hall 1St	1	2L2' 24W T5HO/EL	troffer indirect	48		52	2.5	NO RETRO	no change -specialized fixture		55	2.5			3,000	3,000
2111	Mountain View ES	Hall 1St	1	2L4' T8 32w/EL	cove	5	5	60	0.3	2L4' T8 28w/ELEE LO	rlrb LF	5	44	0.2	0.1	239	3,000	3,000
2112	Mountain View ES	Hall 1St	1	2L3' T8 25w/EL	cove	5	5	47	0.2	2L3' T8 21w/ELEE LO	rlrb LF	5	42	0.2	0.0	75	3,000	3,000
2113	Mountain View ES	Hall 1St	1	2x26W CF HARDWIRED/EL	sconce	4		54	0.2	NO RETRO	no change		57	0.2			2,100	2,100
2114	Mountain View ES	Hall 1St	1	3 WATT LED	cove	1		3	0.0	NO RETRO	no change		3	0.0			2,100	2,100
2115	Mountain View ES	Classroom 108	1	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	441	1,540	1,540
2116	Mountain View ES	Classroom 108	1	2x26W CF HARDWIRED/EL	can rec	4	4	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	4	11	0.0	0.2	268	1,540	1,540
2117	Mountain View ES	Classroom 108	1	4L4' T8 32w/EL-8'	trof acr 1' wide	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	55	2,200	2,200
2118	Mountain View ES	Classroom 108	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	2	57	0.1	0.0	16	1,540	1,540
2119	Mountain View ES	Bath 108	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	1	57	0.1	0.0	16	3,000	3,000
2120	Mountain View ES	Storage 108	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	70	1,600	1,600
2121	Mountain View ES	Classroom 109	1	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	441	1,540	1,540
2122	Mountain View ES	Classroom 109	1	2x26W CF HARDWIRED/EL	can rec	4	4	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	4	11	0.0	0.2	268	1,540	1,540
2123	Mountain View ES	Classroom 109	1	4L4' T8 32w/EL-8'	trof acr 1' wide	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	55	2,200	2,200
2124	Mountain View ES	Classroom 109	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	2	57	0.1	0.0	16	1,540	1,540
2125	Mountain View ES	Bath 109	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	1	57	0.1	0.0	16	3,000	3,000
2126	Mountain View ES	Storage 109	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	70	1,600	1,600
2127	Mountain View ES	Classroom 107	1	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	441	1,540	1,540
2128	Mountain View ES	Classroom 107	1	2x26W CF HARDWIRED/EL	can rec	4	4	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	4	11	0.0	0.2	268	1,540	1,540
2129	Mountain View ES	Classroom 107	1	4L4' T8 32w/EL-8'	trof acr 1' wide	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	55	2,200	2,200
2130	Mountain View ES	Classroom 107	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	2	57	0.1	0.0	16	1,540	1,540
2131	Mountain View ES	Bath 107	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	1	57	0.1	0.0	16	3,000	3,000
2132	Mountain View ES	Storage 107	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	70	1,600	1,600
2133	Mountain View ES	Classroom 106	1	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	441	1,540	1,540
2134	Mountain View ES	Classroom 106	1	2x26W CF HARDWIRED/EL	can rec	4	4	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	4	11	0.0	0.2	268	1,540	1,540
2135	Mountain View ES	Classroom 106	1	4L4' T8 32w/EL-8'	trof acr 1' wide	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	55	2,200	2,200
2136	Mountain View ES	Classroom 106	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	2	57	0.1	0.0	16	1,540	1,540
2137	Mountain View ES	Bath 106	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	1	57	0.1	0.0	16	3,000	3,000
2138	Mountain View ES	Storage 106	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	70	1,600	1,600
2139	Mountain View ES	Classroom 110	1	2L2' 24W T5HO/EL	troffer indirect	6		52	0.3	NO RETRO	no change -specialized fixture		55	0.3			1,540	1,540
2140	Mountain View ES	Storage Electric	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	12	500	500
2141	Mountain View ES	Classroom 105	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
2142	Mountain View ES	Classroom 105	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
2143	Mountain View ES	Classroom 111	1	2L2' 24W T5HO/EL	troffer indirect	6		52	0.3	NO RETRO	no change -specialized fixture		55	0.3			1,540	1,540
2144	Mountain View ES	Storage 111	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	12	500	500
2145	Mountain View ES	Classroom 112	1	4L4' T8 32w/EL-8'	wrap narrow	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	344	1,540	1,540
2146	Mountain View ES	Classroom 112	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
2147	Mountain View ES	Classroom 113	1	4L4' T8 32w/EL-8'	wrap narrow	12	12	112	1.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	12	87	1.0	0.3	459	1,540	1,540
2148	Mountain View ES	Classroom 113	1	2x26W CF HARDWIRED/EL	can rec	3	3	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	0.1	201	1,540	1,540
2149	Mountain View ES	Storage 113	1	4L4' T8 32w/EL-8'	wrap	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	17	350	350
2150	Mountain View ES	Storage 113	1	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	8	350	350
2151	Mountain View ES	Classroom 104	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
2152	Mountain View ES	Classroom 104	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
2153	Mountain View ES	Classroom 104	1	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	134	1,540	1,540
2154	Mountain View ES	Bath 104	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	1	57	0.1	0.0	11	2,100	2,100
2155	Mountain View ES	Storage Clean	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
2156	Mountain View ES	Storage Equip	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	9	350	350
2157	Mountain View ES	Storage Z	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	9	350	350
2158	Mountain View ES	Classroom 103	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
2159	Mountain View ES	Classroom 103	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
2160	Mountain View ES	Classroom 103	1	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	134	1,540	1,540
2161	Mountain View ES	Bath 103	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	1	57	0.1	0.0	11	2,100	2,100
2162	Mountain View ES	Library Media	1	2x26W CF HARDWIRED/EL	can rec	12	12	54	0.6	10 WATT LED/KIT	can kit LED Spectrum	12	11	0.1	0.5	658	1,260	1,260
2163	Mountain View ES	Library Media	1	26W CF HARDWIRED	can rec	3		28	0.1	NO RETRO	no change		29	0.1			1,260	1,260

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
2164	Mountain View ES	Library Media	1	2L2' 24W T5HO/EL	troffer indirect	28		52	1.5	NO RETRO	no change -specialized fixture		55	1.5			1,260	1,260
2165	Mountain View ES	Office Workrm	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	4L2' T8 15w/ELEE LO	rlrb LF	4	57	0.2	0.0	30	1,400	1,400
2166	Mountain View ES	Storage Headend	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	28	1,120	1,120
2167	Mountain View ES	Storage Annex	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	25	1,600	1,600
2168	Mountain View ES	Storage Annex	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	4L2' T8 15w/ELEE LO	rlrb LF	4	57	0.2	0.0	24	1,120	1,120
2169	Mountain View ES	Classroom 102B	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
2170	Mountain View ES	Classroom 102B	1	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	134	1,540	1,540
2171	Mountain View ES	Classroom 102A	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
2172	Mountain View ES	Classroom 102A	1	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	134	1,540	1,540
2173	Mountain View ES	Classroom 101B	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
2174	Mountain View ES	Classroom 101B	1	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	134	1,540	1,540
2175	Mountain View ES	Classroom 101A	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
2176	Mountain View ES	Classroom 101A	1	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	134	1,540	1,540
2177	Mountain View ES	Storage Electric	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	12	500	500
2178	Mountain View ES	Office Open Staff	1	2L2' 24W T5HO/EL	troffer indirect	8		52	0.4	NO RETRO	no change -specialized fixture		55	0.4			1,680	1,680
2179	Mountain View ES	Lounge Staff	1	2L2' 24W T5HO/EL	troffer indirect	12		52	0.6	NO RETRO	no change -specialized fixture		55	0.6			1,260	1,260
2180	Mountain View ES	Storage Elevator	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	8	500	500
2181	Mountain View ES	Bath Men	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	1	57	0.1	0.0	11	2,100	2,100
2182	Mountain View ES	Bath Women	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	1	57	0.1	0.0	11	2,100	2,100
2183	Mountain View ES	Office Open Health	1	2L2' 24W T5HO/EL	troffer indirect	9		52	0.5	NO RETRO	no change -specialized fixture		55	0.5			1,680	1,680
2184	Mountain View ES	Office Open Health	1	1L4' T8 32w/EL	task strip	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	17	2,400	2,400
2185	Mountain View ES	Bath Health	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	1	57	0.1	0.0	11	2,100	2,100
2186	Mountain View ES	Office Health	1	2L2' 24W T5HO/EL	troffer indirect	9		52	0.5	NO RETRO	no change -specialized fixture		55	0.5			1,400	1,400
2187	Mountain View ES	Office Health	1	1L4' T8 32w/EL	task strip	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	14	2,000	2,000
2188	Mountain View ES	Conference Main	1	2L2' 24W T5HO/EL	troffer indirect	2		52	0.1	NO RETRO	no change -specialized fixture		55	0.1			1,400	1,400
2189	Mountain View ES	Conference Main	1	2x26W CF HARDWIRED/EL	can rec	7	7	54	0.4	10 WATT LED/KIT	can kit LED Spectrum	7	11	0.1	0.3	426	1,400	1,400
2190	Mountain View ES	Office Open Main	1	2L2' 24W T5HO/EL	troffer indirect	16		52	0.8	NO RETRO	no change -specialized fixture		55	0.8			1,680	1,680
2191	Mountain View ES	Office Principal	1	2L2' 24W T5HO/EL	troffer indirect	6		52	0.3	NO RETRO	no change -specialized fixture		55	0.3			1,400	1,400
2192	Mountain View ES	Gym Z	1	2L2' F55 BIAX/EL	trof acr dim	24		112	2.7	NO RETRO	no change -specialized fixture		118	2.7			2,000	2,000
2193	Mountain View ES	Office Pe	1	3L4' T8 32w/EL	trof acr	3	3	88	0.3	3L4' T8 28w/ELEE LO	rlrb LF	3	66	0.2	0.1	92	1,400	1,400
2194	Mountain View ES	Stage Z	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	70	1,600	1,600
2195	Mountain View ES	Stage Z	1	4L4' T8 32w/EL-8'	industrial	7	7	112	0.8	4L4' T8 28w/ELEE LO-8'	rlrb LF	7	87	0.6	0.2	278	1,600	1,600
2196	Mountain View ES	Stage Z	1	75W INCANDESCENT	dome	9		75	0.7	NO RETRO	no change -low hours		79	0.7			100	100
2197	Mountain View ES	Storage Stage	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	9	350	350
2198	Mountain View ES	Storage Electric	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	12	500	500
2199	Mountain View ES	Storage 2Nd Equip	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	12	500	500
2200	Mountain View ES	Mechanical Boiler	1	4L4' T8 32w/EL-8'	industrial	7	7	112	0.8	4L4' T8 28w/ELEE LO-8'	rlrb LF	7	87	0.6	0.2	87	500	350
2201	Mountain View ES	Mechanical Outside Electric	1	4L4' T8 32w/EL-8'	industrial	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	25	500	500
2202	Mountain View ES	Bath Boys	1	4L2' T8 17w/EL	trof acr	3	3	62	0.2	4L2' T8 15w/ELEE LO	rlrb LF	3	57	0.2	0.0	33	2,100	2,100
2203	Mountain View ES	Bath Boys	1	4L4' T8 32w/EL-8'	soffit	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	104	2,100	2,100
2204	Mountain View ES	Bath Girls	1	4L2' T8 17w/EL	trof acr	3	3	62	0.2	4L2' T8 15w/ELEE LO	rlrb LF	3	57	0.2	0.0	33	2,100	2,100
2205	Mountain View ES	Bath Girls	1	4L4' T8 32w/EL-8'	soffit	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	104	2,100	2,100
2206	Mountain View ES	Office Custodian	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	4L2' T8 15w/ELEE LO	rlrb LF	4	57	0.2	0.0	42	2,000	1,400
2207	Mountain View ES	Storage Slop Sink	1	4L2' T8 17w/EL	box acrylic	1	1	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	1	57	0.1	0.0	8	1,600	1,600
2208	Mountain View ES	Kitchen Z	1	3L4' T8 32w/EL	trof acr	13	13	88	1.1	3L4' T8 28w/ELEE LO	rlrb LF	13	66	0.9	0.3	540	1,900	1,900
2209	Mountain View ES	Kitchen Z	1	2L3' T8 25w/EL	range hood	4	4	47	0.2	2L3' T8 21w/ELEE LO	rlrb LF	4	42	0.2	0.0	38	1,900	1,900
2210	Mountain View ES	Storage Dry Good	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	28	1,120	1,120
2211	Mountain View ES	Office Kitchen	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	22	1,400	1,400
2212	Mountain View ES	Bath Kitchen	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	1	57	0.1	0.0	11	2,100	2,100
2213	Mountain View ES	Cafeteria Z	1	4L2' T8 17w/EL	trof acrylic dbl switch	44	44	62	2.7	4L2' T8 15w/ELEE (2Lx2 BAL)	rlrb LF dbl switched	44	50	2.2	0.5	868	1,700	1,700
2214	Mountain View ES	Cafeteria Z	1	2L2' T8 17w/EL	wrap	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	32	1,700	1,700
2219	Ellen P. Hubbell ES	Mechanical Boiler	1	2L4' T8 32w/ELEE	wrap	5	5	53	0.3	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	5	50	0.3	0.0	6	500	500
2220	Ellen P. Hubbell ES	Mechanical Boiler	1	1L4' T8 32w/EL	vanity	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	3	500	500
2221	Ellen P. Hubbell ES	Office Maint	1	2L4' T8 32w/ELEE	wrap	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	0.0	9	2,000	1,400
2222	Ellen P. Hubbell ES	Bath Maint	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	50	3,000	2,100
2223	Ellen P. Hubbell ES	Bath Boys	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	127	3,000	2,100
2224	Ellen P. Hubbell ES	Bath Staff	1	2L4' T8 32w/ELEE	trof acr	1	1	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	1	50	0.1	0.0	7	3,000	2,100
2225	Ellen P. Hubbell ES	Bath Girls	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	127	3,000	2,100
2226	Ellen P. Hubbell ES	Bath Staff	1	2L4' T8 32w/ELEE	trof acr	1	1	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	1	50	0.1	0.0	7	3,000	2,100
2227	Ellen P. Hubbell ES	Office 134	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	380	2,000	1,400
2228	Ellen P. Hubbell ES	Office 134	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	0.0	9	2,000	1,400
2229	Ellen P. Hubbell ES	Classroom 133	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
2230	Ellen P. Hubbell ES	Classroom 133	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	0.0	10	2,200	1,540
2231	Ellen P. Hubbell ES	Classroom 132	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
2232	Ellen P. Hubbell ES	Classroom 132	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	0.0	10	2,200	1,540
2233	Ellen P. Hubbell ES	Classroom 130	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
2234	Ellen P. Hubbell ES	Classroom 130	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	0.0	10	2,200	1,540
2235	Ellen P. Hubbell ES	Classroom 131	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
2236	Ellen P. Hubbell ES	Classroom 131	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	0.0	10	2,200	1,540
2237	Ellen P. Hubbell ES	Classroom 129	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
2238	Ellen P. Hubbell ES	Classroom 129	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	0.0	10	2,200	1,540
2239	Ellen P. Hubbell ES	Classroom 128	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
2240	Ellen P. Hubbell ES	Classroom 128	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	0.0	10	2,200	1,540

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
2241	Ellen P. Hubbell ES	Classroom 126	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
2242	Ellen P. Hubbell ES	Classroom 126	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	0.0	10	2,200	1,540
2243	Ellen P. Hubbell ES	Classroom 127	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
2244	Ellen P. Hubbell ES	Classroom 127	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	0.0	10	2,200	1,540
2245	Ellen P. Hubbell ES	Storage Janitor	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	0.0	11	500	350
2246	Ellen P. Hubbell ES	Office 125	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	84	2,000	1,400
2247	Ellen P. Hubbell ES	Storage 124 Books	1	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	6	1,000	700
2248	Ellen P. Hubbell ES	Office 123 Copy	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	84	2,000	1,400
2249	Ellen P. Hubbell ES	Office 123 Copy	1	3L4' T8 32w/EL	task strip	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	74	2,000	1,400
2250	Ellen P. Hubbell ES	Office 122	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	84	2,000	1,400
2251	Ellen P. Hubbell ES	Bath Men	1	1L4' T8 32w/EL	vanity	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	18	3,000	2,100
2252	Ellen P. Hubbell ES	Bath Boys	1	2L2' F36 BIAX/EL	trof acr	3	3	74	0.2	36 WATT LED/KIT	trof kit LED	3	38	0.1	0.1	277	3,000	2,100
2253	Ellen P. Hubbell ES	Bath Boys	1	1L4' T8 32w/EL	trof para 1' wide	4	4	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	4	23	0.1	0.0	70	3,000	2,100
2254	Ellen P. Hubbell ES	Bath Hc	1	2L2' F36 BIAX/EL	trof acr	1	1	74	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	0.0	92	3,000	2,100
2255	Ellen P. Hubbell ES	Bath Hc	1	1L4' T8 32w/EL	trof para 1' wide	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	35	3,000	2,100
2256	Ellen P. Hubbell ES	Bath Women	1	1L4' T8 32w/EL	vanity	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	18	3,000	2,100
2257	Ellen P. Hubbell ES	Bath Girls	1	2L2' F36 BIAX/EL	trof acr	3	3	74	0.2	36 WATT LED/KIT	trof kit LED	3	38	0.1	0.1	277	3,000	2,100
2258	Ellen P. Hubbell ES	Bath Girls	1	1L4' T8 32w/EL	trof para 1' wide	4	4	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	4	23	0.1	0.0	70	3,000	2,100
2259	Ellen P. Hubbell ES	Classroom 121	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
2260	Ellen P. Hubbell ES	Classroom 121	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	0.0	10	2,200	1,540
2261	Ellen P. Hubbell ES	Classroom 120	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
2262	Ellen P. Hubbell ES	Classroom 120	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	0.0	10	2,200	1,540
2263	Ellen P. Hubbell ES	Classroom 119	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
2264	Ellen P. Hubbell ES	Classroom 119	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	0.0	10	2,200	1,540
2265	Ellen P. Hubbell ES	Classroom 118	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
2266	Ellen P. Hubbell ES	Classroom 118	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	0.0	10	2,200	1,540
2267	Ellen P. Hubbell ES	Storage Book Room 6	1	2L4' T8 32w/ELEE	trof acr 1' wide	1	1	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	1	50	0.1	0.0	2	1,000	700
2268	Ellen P. Hubbell ES	Classroom 116	1	4L4' T8 32w/EL-8'	wrap	15	15	112	1.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	15	87	1.3	0.4	697	2,200	1,540
2269	Ellen P. Hubbell ES	Classroom 116	1	2L4' T8 32w/ELEE	trof acr	4	4	53	0.2	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	4	50	0.2	0.0	19	2,200	1,540
2270	Ellen P. Hubbell ES	Storage Janitor	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	0.0	11	500	350
2271	Ellen P. Hubbell ES	Classroom 117	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
2272	Ellen P. Hubbell ES	Classroom 117	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	0.0	10	2,200	1,540
2273	Ellen P. Hubbell ES	Classroom 115	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
2274	Ellen P. Hubbell ES	Classroom 115	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	0.0	10	2,200	1,540
2275	Ellen P. Hubbell ES	Storage Book Room 1	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	0.0	21	1,000	700
2276	Ellen P. Hubbell ES	Classroom 114	1	4L4' T8 32w/EL-8'	wrap	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	279	2,200	1,540
2277	Ellen P. Hubbell ES	Classroom 114	1	2L4' T8 32w/ELEE	wrap	3	3	53	0.2	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	3	50	0.2	0.0	15	2,200	1,540
2278	Ellen P. Hubbell ES	Classroom 114	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	0.0	46	2,200	1,540
2279	Ellen P. Hubbell ES	Classroom 114	1	2L2' F36 BIAX/EL	trof acr	3	3	74	0.2	36 WATT LED/KIT	trof kit LED	3	38	0.1	0.1	203	2,200	1,540
2280	Ellen P. Hubbell ES	Classroom 114	1	2x13W CF HARDWIRED	can rec 6"	2	2	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.0	73	2,200	1,540
2281	Ellen P. Hubbell ES	Storage 114	1	2L2' F36 BIAX/EL	trof acr	1	1	74	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	0.0	31	1,000	700
2282	Ellen P. Hubbell ES	Classroom 114	1	2L3' T8 25w/EL-6'	valance	5	5	47	0.2	2L3' T8 21w/ELEE LO-6'	rlrb LF	5	42	0.2	0.0	47	2,200	1,540
2283	Ellen P. Hubbell ES	Classroom 114	1	1L3' T8 25w/EL	valance	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	0.0	7	2,200	1,540
2284	Ellen P. Hubbell ES	Bath 114	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	50	3,000	2,100
2285	Ellen P. Hubbell ES	Classroom 113	1	4L4' T8 32w/EL-8'	wrap	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	279	2,200	1,540
2286	Ellen P. Hubbell ES	Classroom 113	1	2L4' T8 32w/ELEE	wrap	3	3	53	0.2	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	3	50	0.2	0.0	15	2,200	1,540
2287	Ellen P. Hubbell ES	Classroom 113	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	0.0	46	2,200	1,540
2288	Ellen P. Hubbell ES	Classroom 113	1	2L2' F36 BIAX/EL	trof acr	3	3	74	0.2	36 WATT LED/KIT	trof kit LED	3	38	0.1	0.1	203	2,200	1,540
2289	Ellen P. Hubbell ES	Classroom 113	1	2x13W CF HARDWIRED	can rec 6"	2	2	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.0	73	2,200	1,540
2290	Ellen P. Hubbell ES	Classroom 113	1	2L3' T8 25w/EL-6'	valance	5	5	47	0.2	2L3' T8 21w/ELEE LO-6'	rlrb LF	5	42	0.2	0.0	47	2,200	1,540
2291	Ellen P. Hubbell ES	Classroom 113	1	1L3' T8 25w/EL	valance	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	0.0	7	2,200	1,540
2292	Ellen P. Hubbell ES	Bath 113	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	50	3,000	2,100
2293	Ellen P. Hubbell ES	Classroom 112	1	4L4' T8 32w/EL	trof acr	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	0.1	186	2,200	1,540
2294	Ellen P. Hubbell ES	Storage Bookroom 2	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	42	1,000	700
2295	Ellen P. Hubbell ES	Classroom 111	1	4L4' T8 32w/EL	trof acr	9	9	112	1.0	4L4' T8 28w/ELEE LO	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
2296	Ellen P. Hubbell ES	Storage 111 (2)	1	2x13W CF HARDWIRED	can rec 6"	2	2	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.0	17	500	500
2297	Ellen P. Hubbell ES	Storage 111	1	4L4' T8 32w/EL	trof acr	3	3	112	0.3	4L4' T8 28w/ELEE LO	rlrb LF	3	87	0.3	0.1	63	1,000	700
2298	Ellen P. Hubbell ES	Bath Near C111	1	1L4' T8 32w/EL	vanity	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	18	3,000	2,100
2299	Ellen P. Hubbell ES	Storage Janitor	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	0.0	11	500	350
2300	Ellen P. Hubbell ES	Classroom 110	1	4L4' T8 32w/EL-8'	wrap	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	279	2,200	1,540
2301	Ellen P. Hubbell ES	Classroom 110	1	2L4' T8 32w/ELEE	wrap	3	3	53	0.2	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	3	50	0.2	0.0	15	2,200	1,540
2302	Ellen P. Hubbell ES	Classroom 110	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	0.0	46	2,200	1,540
2303	Ellen P. Hubbell ES	Classroom 110	1	2L2' F36 BIAX/EL	trof acr	3	3	74	0.2	36 WATT LED/KIT	trof kit LED	3	38	0.1	0.1	203	2,200	1,540
2304	Ellen P. Hubbell ES	Classroom 110	1	2x13W CF HARDWIRED	can rec 6"	2	2	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.0	73	2,200	1,540
2305	Ellen P. Hubbell ES	Storage 110	1	2L2' F36 BIAX/EL	trof acr	1	1	74	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	0.0	31	1,000	700
2306	Ellen P. Hubbell ES	Classroom 110	1	2L3' T8 25w/EL-6'	valance	5	5	47	0.2	2L3' T8 21w/ELEE LO-6'	rlrb LF	5	42	0.2	0.0	47	2,200	1,540
2307	Ellen P. Hubbell ES	Classroom 110	1	1L3' T8 25w/EL	valance	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	0.0	7	2,200	1,540
2308	Ellen P. Hubbell ES	Bath 110	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	50	3,000	2,100
2309	Ellen P. Hubbell ES	Classroom 109	1	4L4' T8 32w/EL-8'	wrap	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	279	2,200	1,540
2310	Ellen P. Hubbell ES	Classroom 109	1	2L4' T8 32w/ELEE	wrap	3	3	53	0.2	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	3	50	0.2	0.0	15	2,200	1,540
2311	Ellen P. Hubbell ES	Classroom 109	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	0.0	46	2,200	1,540
2312	Ellen P. Hubbell ES	Classroom 109	1	2L2' F36 BIAX/EL	trof acr	3	3	74	0.2	36 WATT LED/KIT	trof kit LED	3	38	0.1	0.1	203	2,200	1,540
2313	Ellen P. Hubbell ES	Classroom 109	1	2x13W CF HARDWIRED	can rec 6"	2	2	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.0	73	2,200	1,540

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
2314	Ellen P. Hubbell ES	Classroom 109	1	2L3' T8 25w/EL-6'	valance	5	5	47	0.2	2L3' T8 21w/ELEE LO-6'	rlrb LF	5	42	0.2	0.0	47	2,200	1,540
2315	Ellen P. Hubbell ES	Classroom 109	1	1L3' T8 25w/EL	valance	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	0.0	7	2,200	1,540
2316	Ellen P. Hubbell ES	Bath 109	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	50	3,000	2,100
2317	Ellen P. Hubbell ES	Classroom 107	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
2318	Ellen P. Hubbell ES	Classroom 107	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	0.0	10	2,200	1,540
2319	Ellen P. Hubbell ES	Bath 107	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	50	3,000	2,100
2320	Ellen P. Hubbell ES	Classroom 108	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
2321	Ellen P. Hubbell ES	Classroom 108	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	0.0	10	2,200	1,540
2322	Ellen P. Hubbell ES	Bath 108	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	50	3,000	2,100
2323	Ellen P. Hubbell ES	Classroom 106	1	4L4' T8 32w/EL-8'	wrap	12	12	112	1.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	12	87	1.0	0.3	558	2,200	1,540
2324	Ellen P. Hubbell ES	Classroom 106	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	0.0	10	2,200	1,540
2325	Ellen P. Hubbell ES	Bath 106	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	50	3,000	2,100
2326	Ellen P. Hubbell ES	Classroom 105	1	4L4' T8 32w/EL-8'	wrap	12	12	112	1.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	12	87	1.0	0.3	558	2,200	1,540
2327	Ellen P. Hubbell ES	Classroom 105	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	0.0	10	2,200	1,540
2328	Ellen P. Hubbell ES	Bath 105	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	50	3,000	2,100
2329	Ellen P. Hubbell ES	Classroom 104	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
2330	Ellen P. Hubbell ES	Classroom 104	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	0.0	10	2,200	1,540
2331	Ellen P. Hubbell ES	Bath 104	1	1L2' T12 20w STD/STD	old vanity	1	1	32	0.0	1L2' T8 15w/ELEE LO/NEW	new LF vanity	1	15	0.0	0.0	44	3,000	3,000
2332	Ellen P. Hubbell ES	Classroom 103	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
2333	Ellen P. Hubbell ES	Classroom 103	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	0.0	10	2,200	1,540
2334	Ellen P. Hubbell ES	Bath 103	1	1L2' T12 20w STD/STD	old vanity	1	1	32	0.0	1L2' T8 15w/ELEE LO/NEW	new LF vanity	1	15	0.0	0.0	44	3,000	3,000
2335	Ellen P. Hubbell ES	Classroom 101	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
2336	Ellen P. Hubbell ES	Classroom 101	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	0.0	10	2,200	1,540
2337	Ellen P. Hubbell ES	Bath 101	1	1L2' T12 20w STD/STD	old vanity	1	1	32	0.0	1L2' T8 15w/ELEE LO/NEW	new LF vanity	1	15	0.0	0.0	44	3,000	3,000
2338	Ellen P. Hubbell ES	Classroom 102	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
2339	Ellen P. Hubbell ES	Classroom 102	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	0.0	10	2,200	1,540
2340	Ellen P. Hubbell ES	Bath 102	1	1L2' T12 20w STD/STD	old vanity	1	1	32	0.0	1L2' T8 15w/ELEE LO/NEW	new LF vanity	1	15	0.0	0.0	44	3,000	3,000
2341	Ellen P. Hubbell ES	Office Health Room	1	2L2' F36 BIAX/EL	trof acr	7	7	74	0.5	36 WATT LED/KIT	trof kit LED	7	38	0.3	0.3	431	2,000	1,400
2342	Ellen P. Hubbell ES	Bath Health Room	1	1L4' T8 32w/EL	vanity	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	18	3,000	2,100
2343	Ellen P. Hubbell ES	Bath Staff	1	1L4' T8 32w/EL	vanity	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	18	3,000	2,100
2344	Ellen P. Hubbell ES	Storage Paper	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	0.0	21	1,000	700
2345	Ellen P. Hubbell ES	Mechanical Paper	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	0.0	11	500	350
2346	Ellen P. Hubbell ES	Library Media Center	1	2L2' F36 BIAX/EL	trof parabolic	9	9	74	0.7	36 WATT LED/KIT	trof kit LED	9	38	0.3	0.3	498	1,800	1,260
2347	Ellen P. Hubbell ES	Library Media Center	1	2L2' F36 BIAX/EL	trof parabolic	12	12	74	0.9	36 WATT LED/KIT	trof kit LED	12	38	0.5	0.4	665	1,800	1,260
2348	Ellen P. Hubbell ES	Library Media Center (2)	1	4L4' T8 32w/EL-8'	indirect/direct	4	4	112	0.4	4L4' T8 28w/ELEE LO-8'	rlrb LF	4	87	0.3	0.1	152	1,800	1,260
2349	Ellen P. Hubbell ES	Library Media Center (2)	1	2L4' T8 32w/ELEE	indirect/direct	4	4	53	0.2	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	4	50	0.2	0.0	16	1,800	1,260
2350	Ellen P. Hubbell ES	Library Media Center (2)	1	2L3' T8 25w/EL	indirect/direct	8	8	47	0.4	2L3' T8 21w/ELEE LO	rlrb LF	8	42	0.3	0.0	61	1,800	1,260
2351	Ellen P. Hubbell ES	Storage Media Center	1	2L4' T8 32w/ELEE	strip	1	1	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	1	50	0.1	0.0	1	500	350
2352	Ellen P. Hubbell ES	Storage Bookroom 5	1	2L4' T8 32w/ELEE	trof acr 1' wide	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	0.0	2	500	350
2353	Ellen P. Hubbell ES	Office Library	1	2L2' F36 BIAX/EL	trof parabolic	2	2	74	0.1	36 WATT LED/KIT	trof kit LED	2	38	0.1	0.1	123	2,000	1,400
2354	Ellen P. Hubbell ES	Office 141 Psych	1	4L4' T8 32w/EL	trof acr	3	3	112	0.3	4L4' T8 28w/ELEE LO	rlrb LF	3	87	0.3	0.1	127	2,000	1,400
2355	Ellen P. Hubbell ES	Office 142	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	84	2,000	1,400
2356	Ellen P. Hubbell ES	Office 142	1	1L3' T12 25w EE/EEMAG	task strip	3	3	38	0.1	1L3' T8 21w/ELEE LO	rlrb LF	3	22	0.1	0.0	81	2,000	1,400
2357	Ellen P. Hubbell ES	Lounge 143 Staff	1	4L4' T8 32w/EL	trof acr	3	3	112	0.3	4L4' T8 28w/ELEE LO	rlrb LF	3	87	0.3	0.1	114	1,800	1,260
2358	Ellen P. Hubbell ES	Bath 143 Staff (2)	1	1L4' T8 32w/EL	vanity	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	35	3,000	2,100
2359	Ellen P. Hubbell ES	Kitchen Main	1	4L4' T8 32w/EL	trof acr	12	12	112	1.3	4L4' T8 28w/ELEE LO	rlrb LF	12	87	1.0	0.3	482	1,900	1,900
2360	Ellen P. Hubbell ES	Kitchen Main	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	82	1,900	1,900
2361	Ellen P. Hubbell ES	Storage Main	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	42	1,000	700
2362	Ellen P. Hubbell ES	Locker Kitchen	1	2L2' F36 BIAX/EL	trof acr	1	1	74	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	0.0	92	3,000	2,100
2363	Ellen P. Hubbell ES	Bath Kitchen	1	2L2' F36 BIAX/EL	trof acr	1	1	74	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	0.0	92	3,000	2,100
2364	Ellen P. Hubbell ES	Hall Kitch-Caf	1	2L2' F36 BIAX/EL	trof acr	4	4	74	0.3	36 WATT LED/KIT	trof kit LED	4	38	0.2	0.1	369	3,000	2,100
2365	Ellen P. Hubbell ES	Hall Kitch-Caf	1	2L2' F36 BIAX/EL	trof acr	6	6	74	0.4	36 WATT LED/KIT	trof kit LED	6	38	0.2	0.2	554	3,000	2,100
2366	Ellen P. Hubbell ES	Cafeteria Main (4)	1	4L4' T8 32w/EL-8'	indirect/direct	8	8	112	0.9	4L4' T8 28w/ELEE LO-8'	rlrb LF	8	87	0.7	0.2	287	1,700	1,190
2367	Ellen P. Hubbell ES	Cafeteria Main (4)	1	2L4' T8 32w/ELEE	indirect/direct	16	16	53	0.8	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	16	50	0.8	0.0	60	1,700	1,700
2368	Ellen P. Hubbell ES	Cafeteria Main (4)	1	1L3' T8 25w/EL	indirect/direct	16	16	24	0.4	1L3' T8 21w/ELEE LO	rlrb LF	16	22	0.4	0.0	45	1,700	1,700
2369	Ellen P. Hubbell ES	Cafeteria Main	1	4L3' T8 25w/EL-6'	indirect/direct	2	2	88	0.2	4L3' T8 21w/ELEE LO-6'	rlrb LF	2	84	0.2	0.0	12	1,700	1,700
2370	Ellen P. Hubbell ES	Cafeteria Main	1	2L4' T8 32w/ELEE	indirect/direct	3	3	53	0.2	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	3	50	0.2	0.0	11	1,700	1,700
2371	Ellen P. Hubbell ES	Cafeteria Main	1	1L3' T8 25w/EL	indirect/direct	3	3	24	0.1	1L3' T8 21w/ELEE LO	rlrb LF	3	22	0.1	0.0	8	1,700	1,700
2372	Ellen P. Hubbell ES	Cafeteria Main	1	4L4' T8 32w/EL-8'	indirect/direct	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	72	1,700	1,700
2373	Ellen P. Hubbell ES	Cafeteria Main	1	1L3' T8 25w/EL	indirect/direct	4	4	24	0.1	1L3' T8 21w/ELEE LO	rlrb LF	4	22	0.1	0.0	11	1,700	1,700
2374	Ellen P. Hubbell ES	Cafeteria Main	1	2L4' T8 32w/ELEE	indirect/direct	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	0.0	8	1,700	1,700
2375	Ellen P. Hubbell ES	Cafeteria Main	1	2L2' F36 BIAX/EL	trof acr	1	1	74	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	0.0	52	1,700	1,700
2376	Ellen P. Hubbell ES	Gym Main	1	4L4' T5 HO/EL	high bay	22	22	234	5.1	98 WATT LED/NEW	new LED hibay wg	22	103	2.3	2.9	4,903	2,000	1,400
2377	Ellen P. Hubbell ES	Gym Main	1	2x13W CF HARDWIRED	square recessed	4	4	30	0.1	16 WATT LED/NEW	new LED drum	4	17	0.1	0.1	90	2,000	2,000
2378	Ellen P. Hubbell ES	Office Phys Ed	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	0.0	42	2,000	1,400
2379	Ellen P. Hubbell ES	Storage Gymnasium	1	2L4' T8 32w/ELEE	trof acr 1' wide	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	0.0	4	1,000	700
2380	Ellen P. Hubbell ES	Stage Main	1	2L4' T8 32w/ELEE	wrap	9	9	53	0.5	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	9	50	0.5	0.0	32	1,600	1,120
2381	Ellen P. Hubbell ES	Stage Main	1	2x13W CF HARDWIRED	square recessed	2	2	30	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.0	36	1,600	1,120
2382	Ellen P. Hubbell ES	Office Open Main Waiting	1	2L2' F36 BIAX/EL	trof parabolic	5	5	74	0.4	36 WATT LED/KIT	trof kit LED	5	38	0.2	0.2	369	2,400	1,680
2383	Ellen P. Hubbell ES	Office Open Main Files	1	2L2' F36 BIAX/EL	trof parabolic	6	6	74	0.4	36 WATT LED/KIT	trof kit LED	6	38	0.2	0.2	443	2,400	1,680
2384	Ellen P. Hubbell ES	Office Staff	1	2L2' F36 BIAX/EL	trof parabolic	3	3	74	0.2	36 WATT LED/KIT	trof kit LED	3	38	0.1	0.1	185	2,000	1,400
2385	Ellen P. Hubbell ES	Office Principal	1	2L2' F36 BIAX/EL	trof parabolic	6	6	74	0.4	36 WATT LED/KIT	trof kit LED	6	38	0.2	0.2	369	2,000	1,400
2386	Ellen P. Hubbell ES	Lobby Main	1	2L2' F36 BIAX/EL	trof opaque	8	8	74	0.6	36 WATT LED/KIT	trof kit LED	8	38	0.3	0.3	738	3,000	2,100

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
2387	Ellen P. Hubbell ES	Lobby Main (4)	1	1L4' T8 32w/EL	trof acr 6" wide	16	16	30	0.5	1L4' T8 28w/ELEE LO	rlrb LF	16	23	0.4	0.1	282	3,000	2,100
2388	Ellen P. Hubbell ES	Hall Near Main Lobby	1	2L2' F36 BIAX/EL	trof opaque	6	6	74	0.4	36 WATT LED/KIT	trof kit LED	6	38	0.2	0.2	554	3,000	2,100
2389	Ellen P. Hubbell ES	Hall Near Main Lobby	1	1L4' T8 32w/EL	trof acr 6" wide	4	4	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	4	23	0.1	0.0	70	3,000	2,100
2390	Ellen P. Hubbell ES	Hall Gym-Maint Office	1	2L2' F36 BIAX/EL	trof opaque	7	7	74	0.5	36 WATT LED/KIT	trof kit LED	7	38	0.3	0.3	646	3,000	3,000
2391	Ellen P. Hubbell ES	Hall Gym-Maint Office	1	2L3' T8 25w/EL-6'	trof acr 6" wide	1	1	47	0.0	2L3' T8 21w/ELEE LO-6'	rlrb LF	1	42	0.0	0.0	13	3,000	3,000
2392	Ellen P. Hubbell ES	Hall Gym-Maint Office	1	2L3' T8 25w/EL-6'	trof acr 6" wide	2	2	47	0.1	2L3' T8 21w/ELEE LO-6'	rlrb LF	2	42	0.1	0.0	26	3,000	3,000
2393	Ellen P. Hubbell ES	Hall Honesty Rd	1	1L4' T8 32w/EL	trof acr 6" wide	4	4	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	4	23	0.1	0.0	70	3,000	3,000
2394	Ellen P. Hubbell ES	Hall Honesty Rd	1	2L2' F36 BIAX/EL	trof opaque	9	9	74	0.7	36 WATT LED/KIT	trof kit LED	9	38	0.3	0.3	831	3,000	3,000
2395	Ellen P. Hubbell ES	Hall Honesty Rd	1	2L3' T8 25w/EL-6'	trof acr 6" wide	2	2	47	0.1	2L3' T8 21w/ELEE LO-6'	rlrb LF	2	42	0.1	0.0	26	3,000	3,000
2396	Ellen P. Hubbell ES	Hall Honesty Rd	1	2x13W CF HARDWIRED	can rec 6"	2	2	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.0	99	3,000	3,000
2397	Ellen P. Hubbell ES	Hall Respect Way	1	2L2' F36 BIAX/EL	trof opaque	10	10	74	0.7	36 WATT LED/KIT	trof kit LED	10	38	0.4	0.4	923	3,000	3,000
2398	Ellen P. Hubbell ES	Hall Respect Way	1	2L3' T8 25w/EL-6'	trof acr 6" wide	6	6	47	0.3	2L3' T8 21w/ELEE LO-6'	rlrb LF	6	42	0.3	0.0	76	3,000	3,000
2399	Ellen P. Hubbell ES	Hall Respect Way	1	1L4' T8 32w/EL	trof acr 6" wide	4	4	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	4	23	0.1	0.0	70	3,000	3,000
2400	Ellen P. Hubbell ES	Hall C123-127	1	2L2' F36 BIAX/EL	trof opaque	10	10	74	0.7	36 WATT LED/KIT	trof kit LED	10	38	0.4	0.4	923	3,000	3,000
2401	Ellen P. Hubbell ES	Hall C123-127 (2)	1	1L4' T8 32w/EL	trof acr 6" wide	8	8	30	0.2	1L4' T8 28w/ELEE LO	rlrb LF	8	23	0.2	0.1	141	3,000	3,000
2402	Ellen P. Hubbell ES	Hall C123-127	1	1L2' T8 17w/EL	trof acr 6" wide	2	2	17	0.0	1L2' T8 15w/ELEE LO	rlrb LF	2	15	0.0	0.0	12	3,000	3,000
2403	Ellen P. Hubbell ES	Hall C123-127	1	1L3' T8 25w/EL	trof acr 6" wide	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	0.0	10	3,000	3,000
2404	Ellen P. Hubbell ES	Hall C120-C114	1	2L2' F36 BIAX/EL	trof opaque	9	9	74	0.7	36 WATT LED/KIT	trof kit LED	9	38	0.3	0.3	831	3,000	3,000
2405	Ellen P. Hubbell ES	Hall C120-C114	1	1L2' T8 17w/EL	trof acr 6" wide	8	8	17	0.1	1L2' T8 15w/ELEE LO	rlrb LF	8	15	0.1	0.0	47	3,000	3,000
2406	Ellen P. Hubbell ES	Hall C120-C114	1	1L3' T8 25w/EL	trof acr 6" wide	8	8	24	0.2	1L3' T8 21w/ELEE LO	rlrb LF	8	22	0.2	0.0	40	3,000	3,000
2407	Ellen P. Hubbell ES	Hall C120-C114	1	6L4' T8 32w/EL	trof opaque	2	2	180	0.4	6L4' T8 28w/ELEE LO	rlrb LF	2	132	0.3	0.1	243	3,000	3,000
2408	Ellen P. Hubbell ES	Hall Kindness Ave	1	2L2' F36 BIAX/EL	trof opaque	16	16	74	1.2	36 WATT LED/KIT	trof kit LED	16	38	0.6	0.6	1,477	3,000	3,000
2409	Ellen P. Hubbell ES	Hall Kindness Ave	1	1L2' T8 17w/EL	trof acr 6" wide	2	2	17	0.0	1L2' T8 15w/ELEE LO	rlrb LF	2	15	0.0	0.0	12	3,000	3,000
2410	Ellen P. Hubbell ES	Hall Kindness Ave	1	1L3' T8 25w/EL	trof acr 6" wide	5	5	24	0.1	1L3' T8 21w/ELEE LO	rlrb LF	5	22	0.1	0.0	25	3,000	3,000
2411	Ellen P. Hubbell ES	Hall Kindness Ave	1	1L4' T8 32w/EL	trof acr 6" wide	3	3	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	3	23	0.1	0.0	53	3,000	3,000
2412	Ellen P. Hubbell ES	Hall Kindness Ave	1	2L4' T8 32w/EL-8'	trof acr 6" wide	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	41	3,000	3,000
2413	Ellen P. Hubbell ES	Hall Kindness Ave	1	2L3' T8 25w/EL-6'	trof acr 6" wide	3	3	47	0.1	2L3' T8 21w/ELEE LO-6'	rlrb LF	3	42	0.1	0.0	38	3,000	3,000
2414	Ellen P. Hubbell ES	Hall C110-C107	1	1L4' T8 32w/EL	trof acr 6" wide	4	4	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	4	23	0.1	0.0	70	3,000	3,000
2415	Ellen P. Hubbell ES	Hall C110-C107	1	2L2' F36 BIAX/EL	trof opaque	2	2	74	0.1	36 WATT LED/KIT	trof kit LED	2	38	0.1	0.1	185	3,000	3,000
2416	Ellen P. Hubbell ES	Hall C110-C107	1	1L2' T8 17w/EL	trof acr 6" wide	2	2	17	0.0	1L2' T8 15w/ELEE LO	rlrb LF	2	15	0.0	0.0	12	3,000	3,000
2417	Ellen P. Hubbell ES	Hall C110-C107	1	1L3' T8 25w/EL	trof acr 6" wide	3	3	24	0.1	1L3' T8 21w/ELEE LO	rlrb LF	3	22	0.1	0.0	15	3,000	3,000
2418	Ellen P. Hubbell ES	Hall C110-C107	1	2L4' T8 32w/EL-8'	trof acr 6" wide	2	2	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	2	44	0.1	0.0	81	3,000	3,000
2419	Ellen P. Hubbell ES	Hall C110-C107	1	2L3' T8 25w/EL-6'	trof acr 6" wide	2	2	47	0.1	2L3' T8 21w/ELEE LO-6'	rlrb LF	2	42	0.1	0.0	26	3,000	3,000
2420	Ellen P. Hubbell ES	Hall C107-Health Room	1	2L2' F36 BIAX/EL	trof opaque	11	11	74	0.8	36 WATT LED/KIT	trof kit LED	11	38	0.4	0.4	1,015	3,000	3,000
2421	Ellen P. Hubbell ES	Hall C107-Health Room	1	6L4' T8 32w/EL	trof opaque	2	2	180	0.4	6L4' T8 28w/ELEE LO	rlrb LF	2	132	0.3	0.1	243	3,000	3,000
2422	Ellen P. Hubbell ES	Hall C107-Health Room	1	2x13W CF HARDWIRED	can rec 6"	9	9	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	9	11	0.1	0.2	448	3,000	3,000
2423	Ellen P. Hubbell ES	Hall C107-Health Room	1	1L3' T8 25w/EL	can rec 6"	1	1	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	1	22	0.0	0.0	5	3,000	3,000
2424	Ellen P. Hubbell ES	Hall C107-Health Room	1	2L3' T8 25w/EL-6'	can rec 6"	6	6	47	0.3	2L3' T8 21w/ELEE LO-6'	rlrb LF	6	42	0.3	0.0	76	3,000	3,000
2425	Ellen P. Hubbell ES	Hall By Library	1	2L2' F36 BIAX/EL	trof opaque	8	8	74	0.6	36 WATT LED/KIT	trof kit LED	8	38	0.3	0.3	738	3,000	3,000
2426	Ellen P. Hubbell ES	Hall By Library	1	2x13W CF HARDWIRED	can rec 6"	8	8	30	0.2	10 WATT LED/KIT	can kit LED Spectrum	8	11	0.1	0.2	398	3,000	3,000
2431	Main Library	Library Stacks Parking Lot Side	2	4L4' T8 32w/EL	indirect/direct	36	36	112	4.0	4L4' T8 28w/ELEE LO	rlrb LF	36	87	3.1	0.9	4,419	4,940	4,940
2432	Main Library	Library Stacks Parking Lot Side	2	2x26W CF HARDWIRED/EL	can rec 8"	29	29	54	1.6	15 WATT LED/KIT	can kit LED Spectrum	29	16	0.5	1.1	5,480	4,940	4,940
2433	Main Library	Lobby Elevator	2	2x26W CF HARDWIRED/EL	can rec 8"	2	2	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	2	16	0.0	0.1	378	4,940	4,940
2434	Main Library	Library Open Main Area	2	4L4' T8 32w/EL	indirect/direct	52	52	112	5.8	4L4' T8 28w/ELEE LO	rlrb LF	52	87	4.5	1.3	6,383	4,940	4,940
2435	Main Library	Library Open Main Area	2	2x26W CF HARDWIRED/EL	can rec 8"	51	51	54	2.8	15 WATT LED/KIT	can kit LED Spectrum	51	16	0.8	2.0	9,637	4,940	4,940
2436	Main Library	Office Ref Staff (2)	2	2L2' F40 BIAX/EL	indirect/direct	2	2	72	0.1	36 WATT LED/KIT	trof kit LED	2	38	0.1	0.1	86	1,260	1,260
2437	Main Library	Office Study Room 2 (2)	2	2L2' F40 BIAX/EL	indirect/direct	2	2	72	0.1	36 WATT LED/KIT	trof kit LED	2	38	0.1	0.1	86	1,260	1,260
2438	Main Library	Storage To Roof	2	1L4' T8 32w/EL	strip	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	3	500	350
2439	Main Library	Storage History Room	2	2L2' F40 BIAX/EL	indirect/direct	17	17	72	1.2	36 WATT LED/KIT	trof kit LED	17	38	0.6	0.6	407	700	700
2440	Main Library	Storage Printer	2	2L2' F40 BIAX/EL	indirect/direct	1	1	72	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	0.0	24	700	700
2441	Main Library	Storage Av	2	2L2' F40 BIAX/EL	indirect/direct	1	1	72	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	0.0	24	700	700
2442	Main Library	Storage Books	2	2L2' F40 BIAX/EL	indirect/direct	12	12	72	0.9	36 WATT LED/KIT	trof kit LED	12	38	0.5	0.4	287	700	700
2443	Main Library	Office Supervisor	2	2L2' F40 BIAX/EL	indirect/direct	6	6	72	0.4	36 WATT LED/KIT	trof kit LED	6	38	0.2	0.2	259	1,260	1,260
2444	Main Library	Storage Supervisor	2	2L2' F40 BIAX/EL	trof acr	1	1	72	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	0.0	12	350	350
2445	Main Library	Lab Computer	2	2L2' F40 BIAX/EL	indirect/direct	16	16	72	1.2	36 WATT LED/KIT	trof kit LED	16	38	0.6	0.5	1,892	3,458	3,458
2446	Main Library	Storage Electric	2	2L2' F40 BIAX/EL	indirect/direct	1	1	72	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	0.0	12	350	350
2447	Main Library	Library Fiction	2	2L2' F40 BIAX/EL	indirect/direct	40	40	72	2.9	36 WATT LED/KIT	trof kit LED	40	38	1.5	1.4	6,758	4,940	4,940
2448	Main Library	Library Fiction	2	2x26W CF HARDWIRED/EL	can rec 8"	9	9	54	0.5	15 WATT LED/KIT	can kit LED Spectrum	9	16	0.1	0.3	1,701	4,940	4,940
2449	Main Library	Lobby Bathroom	2	2L2' F40 BIAX/EL	indirect/direct	2	2	72	0.1	36 WATT LED/KIT	trof kit LED	2	38	0.1	0.1	237	3,458	3,458
2450	Main Library	Bath Men (2)	2	2L2' F40 BIAX/EL	indirect/direct	4	4	72	0.3	36 WATT LED/KIT	trof kit LED	4	38	0.2	0.1	239	1,750	1,750
2451	Main Library	Library Fiction Area 6-7	2	2L2' F40 BIAX/EL	indirect/direct	3	3	72	0.2	36 WATT LED/KIT	trof kit LED	3	38	0.1	0.1	507	4,940	4,940
2452	Main Library	Library Fiction Area 6-7	2	2L4' T8 32w/EL	wrap	18	18	60	1.1	2L4' T8 28w/ELEE LO	rlrb LF	18	44	0.8	0.3	1,414	4,940	4,940
2453	Main Library	Library Fiction Area 4	2	2L2' F40 BIAX/EL	indirect/direct	8	8	72	0.6	36 WATT LED/KIT	trof kit LED	8	38	0.3	0.3	1,352	4,940	4,940
2454	Main Library	Library Fiction Area 4	2	2x26W CF HARDWIRED/EL	can rec 8"	2	2	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	2	16	0.0	0.1	378	4,940	4,940
2455	Main Library	Storage City Records	2	2L4' T8 32w/EL	wrap wide	5	5	60	0.3	2L4' T8 28w/ELEE LO	rlrb LF	5	44	0.2	0.1	28	350	350
2456	Main Library	Stair Main	stair	2L4' T8 32w/EL	wrap	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	220	3,458	3,458
2457	Main Library	Stair Main	stair	2x42W CF HARDWIRED/EL	decorative	4		86	0.3	NO RETRO	no change -specialized fixture		90	0.3			3,458	3,458
2458	Main Library	Stair Main	stair	4L4' T8 32w/EL	indirect/direct	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	0.1	344	3,458	3,458
2459	Main Library	Stair Main	stair	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	55	3,458	3,458
2460	Main Library	Storage Janitor Parking Lot Side	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
2461	Main Library	Bath Children	1	2L2' F40 BIAX/EL	trof acr	1	1	72	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	0.0	60	1,750	1,750
2462	Main Library	Storage Story Time Room	1	2L2' F40 BIAX/EL	indirect/direct	9	9	72	0.6	36 WATT LED/KIT	trof kit LED	9	38	0.3	0.3	308	1,000	700
2463	Main Library	Storage Story Time Room	1	2L2' F40 BIAX/EL	indirect/direct	19	19	72	1.4	36 WATT LED/KIT	trof kit LED	19	38	0.7	0.6	650	1,000	700

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
2464	Main Library	Library Pre-School	1	2L2' F40 BIAX/EL	indirect/direct	43	43	72	3.1	36 WATT LED/KIT	trof kit LED	43	38	1.6	1.5	7,265	4,940	4,940
2465	Main Library	Library Pre-School	1	2x26W CF HARDWIRED/EL	can rec 8"	12	12	54	0.6	15 WATT LED/KIT	can kit LED Spectrum	12	16	0.2	0.5	2,267	4,940	4,940
2466	Main Library	Library Children	1	2L2' F40 BIAX/EL	indirect/direct	80	80	72	5.8	36 WATT LED/KIT	trof kit LED	80	38	3.0	2.7	13,516	4,940	4,940
2467	Main Library	Library Non-Print	1	2L2' F40 BIAX/EL	indirect/direct	26	26	72	1.9	36 WATT LED/KIT	trof kit LED	26	38	1.0	0.9	4,393	4,940	4,940
2468	Main Library	Bath Non-Print	1	2L2' F40 BIAX/EL	trof acr	1	1	72	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	0.0	60	1,750	1,750
2469	Main Library	Library Fiction	1	2L2' F40 BIAX/EL	indirect/direct	27	27	72	1.9	36 WATT LED/KIT	trof kit LED	27	38	1.0	0.9	4,562	4,940	4,940
2470	Main Library	Library Fiction	1	2x26W CF HARDWIRED/EL	decorative	3		54	0.2	NO RETRO	no change -specialized fixture		57	0.2			4,940	4,940
2471	Main Library	Library Information	1	2L2' F40 BIAX/EL	indirect/direct	4	4	72	0.3	36 WATT LED/KIT	trof kit LED	4	38	0.2	0.1	676	4,940	4,940
2472	Main Library	Library Young Adult	1	2L2' F40 BIAX/EL	indirect/direct	15	15	72	1.1	36 WATT LED/KIT	trof kit LED	15	38	0.6	0.5	2,534	4,940	4,940
2473	Main Library	Library Young Adult	1	2x26W CF HARDWIRED/EL	decorative	2		54	0.1	NO RETRO	no change -specialized fixture		57	0.1			4,940	4,940
2474	Main Library	Library Young Adult	1	2x26W CF HARDWIRED/EL	can rec 8"	3	3	54	0.2	15 WATT LED/KIT	can kit LED Spectrum	3	16	0.0	0.1	567	4,940	4,940
2475	Main Library	Lobby Main Elevator	1	2x26W CF HARDWIRED/EL	can rec 8"	8	8	54	0.4	15 WATT LED/KIT	can kit LED Spectrum	8	16	0.1	0.3	1,512	4,940	4,940
2476	Main Library	Bath Men (2)	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	56	1,750	1,750
2477	Main Library	Lobby Fireplace	1	4L4' T8 32w/EL	indirect/direct	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	0.1	491	4,940	4,940
2478	Main Library	Lobby Fireplace	1	30W INCANDESCENT	cone	4		30	0.1	NO RETRO	no change		32	0.1			4,940	4,940
2479	Main Library	Library Newspapers	1	4L4' T8 32w/EL	indirect/direct	8	8	112	0.9	4L4' T8 28w/ELEE LO	rlrb LF	8	87	0.7	0.2	982	4,940	4,940
2480	Main Library	Library Circulation	1	4L4' T8 32w/EL	indirect/direct	14	14	112	1.6	4L4' T8 28w/ELEE LO	rlrb LF	14	87	1.2	0.3	1,719	4,940	4,940
2481	Main Library	Library Circulation	1	2L2' F40 BIAX/EL	indirect/direct	7	7	72	0.5	36 WATT LED/KIT	trof kit LED	7	38	0.3	0.2	1,183	4,940	4,940
2482	Main Library	Library Circulation	1	30W INCANDESCENT	cone	4		30	0.1	NO RETRO	no change		32	0.1			4,940	4,940
2483	Main Library	Library New Fiction	1	4L4' T8 32w/EL	indirect/direct	8	8	112	0.9	4L4' T8 28w/ELEE LO	rlrb LF	8	87	0.7	0.2	982	4,940	4,940
2484	Main Library	Library Reading Room	1	4L4' T8 32w/EL	indirect/direct	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	0.1	491	4,940	4,940
2485	Main Library	Office Near Circ	1	2L2' F40 BIAX/EL	indirect/direct	4	4	72	0.3	36 WATT LED/KIT	trof kit LED	4	38	0.2	0.1	172	1,260	1,260
2486	Main Library	Office Open Near Circ	1	2L2' F40 BIAX/EL	indirect/direct	13	13	72	0.9	36 WATT LED/KIT	trof kit LED	13	38	0.5	0.4	777	1,748	1,748
2487	Main Library	Office Open Near Information	1	2L2' F40 BIAX/EL	indirect/direct	14	14	72	1.0	36 WATT LED/KIT	trof kit LED	14	38	0.5	0.5	837	1,748	1,748
2488	Main Library	Office Supervisor	1	2L2' F40 BIAX/EL	indirect/direct	5	5	72	0.4	36 WATT LED/KIT	trof kit LED	5	38	0.2	0.2	215	1,260	1,260
2489	Main Library	Stair Near Circ Desk	stair	2L4' T8 32w/EL	vanity	9	9	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	9	44	0.4	0.1	495	3,458	3,458
2490	Main Library	Stair Near Circ Desk	stair	2x26W CF HARDWIRED/EL	can rec 8"	6	6	54	0.3	15 WATT LED/KIT	can kit LED Spectrum	6	16	0.1	0.2	794	3,458	3,458
2491	Main Library	Mechanical Boiler	b	4L4' T8 32w/EL-8'	industrial cage	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	52	350	350
2492	Main Library	Storage Sprinkler	b	4L4' T8 32w/EL-8'	industrial cage	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	26	350	350
2493	Main Library	Storage Mail	b	4L4' T8 32w/EL-8'	industrial cage	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	35	700	700
2494	Main Library	Storage Elect	b	4L4' T8 32w/EL-8'	industrial cage	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	17	350	350
2495	Main Library	Office Open Tech Services	b	2L2' F40 BIAX/EL	indirect/direct	20	20	72	1.4	36 WATT LED/KIT	trof kit LED	20	38	0.8	0.7	1,196	1,748	1,748
2496	Main Library	Storage Tech Services	b	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	45	700	700
2497	Main Library	Office Supervisor	b	2L2' F40 BIAX/EL	indirect/direct	4	4	72	0.3	36 WATT LED/KIT	trof kit LED	4	38	0.2	0.1	172	1,260	1,260
2498	Main Library	Storage Supplies	b	2L2' F40 BIAX/EL	indirect/direct	1	1	72	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	0.0	12	350	350
2499	Main Library	Bath Staff	b	2L2' F40 BIAX/EL	indirect/direct	1	1	72	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	0.0	60	1,750	1,750
2500	Main Library	Storage Server	b	2L2' F40 BIAX/EL	indirect/direct	2	2	72	0.1	36 WATT LED/KIT	trof kit LED	2	38	0.1	0.1	48	700	700
2501	Main Library	Hall Meeting Rm 1-Mail	b	2L4' T8 32w/EL	trof acr	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	0.1	440	3,458	3,458
2502	Main Library	Office Meeting Rm 1	b	2L2' F40 BIAX/EL	indirect/direct	20	20	72	1.4	36 WATT LED/KIT	trof kit LED	20	38	0.8	0.7	1,231	1,800	1,800
2503	Main Library	Office Meeting Rm 1	b	2x26W CF HARDWIRED/EL	can rec 8"	25	25	54	1.4	15 WATT LED/KIT	can kit LED Spectrum	25	16	0.4	1.0	1,721	1,800	1,800
2504	Main Library	Storage Meeting Rm 1	b	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	22	350	350
2505	Main Library	Storage Handicapped Ref Area	b	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	16	500	500
2506	Main Library	Office Meeting Room 2	b	2L2' F40 BIAX/EL	indirect/direct	20	20	72	1.4	36 WATT LED/KIT	trof kit LED	20	38	0.8	0.7	1,231	1,800	1,800
2507	Main Library	Office Meeting Room 2	b	2x26W CF HARDWIRED/EL	can rec 8"	9	9	54	0.5	15 WATT LED/KIT	can kit LED Spectrum	9	16	0.1	0.3	620	1,800	1,800
2508	Main Library	Kitchen Meeting Room 2	b	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	46	1,050	1,050
2509	Main Library	Office Meeting Room 3	b	2L2' F40 BIAX/EL	indirect/direct	15	15	72	1.1	36 WATT LED/KIT	trof kit LED	15	38	0.6	0.5	923	1,800	1,800
2510	Main Library	Office Meeting Room 3	b	2x26W CF HARDWIRED/EL	can rec 8"	13	13	54	0.7	15 WATT LED/KIT	can kit LED Spectrum	13	16	0.2	0.5	895	1,800	1,800
2511	Main Library	Storage Meeting Room 3	b	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	22	350	350
2512	Main Library	Storage Handicapped Ref Area	b	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	16	500	500
2513	Main Library	Lounge Staff	b	3L4' T8 32w/EL	trof acr	8	8	88	0.7	3L4' T8 28w/ELEE LO	rlrb LF	8	66	0.5	0.2	232	1,330	1,330
2514	Main Library	Lounge Lockers	b	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	58	1,330	1,330
2515	Main Library	Bath Men (2)	b	2L4' T8 32w/EL	trof acr	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	0.1	223	1,750	1,750
2516	Main Library	Bath Men (2)	b	2L4' T8 32w/EL	vanity	6	6	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	6	44	0.3	0.1	167	1,750	1,750
2517	Main Library	Bath Men (2)	b	2L2' F40 BIAX/EL	trof acr	2	2	72	0.1	36 WATT LED/KIT	trof kit LED	2	38	0.1	0.1	120	1,750	1,750
2518	Main Library	Storage Elev (2)	b	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	11	350	350
2519	Main Library	Lobby Elevator-Meeting Rooms	b	2L2' F40 BIAX/EL	indirect/direct	20	20	72	1.4	36 WATT LED/KIT	trof kit LED	20	38	0.8	0.7	2,365	3,458	3,458
2520	Main Library	Lobby Elevator-Meeting Rooms	b	2x26W CF HARDWIRED/EL	can rec 8"	21	21	54	1.1	15 WATT LED/KIT	can kit LED Spectrum	21	16	0.3	0.8	2,778	3,458	3,458
2521	Main Library	Office Maintenance	b	2L4' T8 32w/EL	wrap	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	80	1,260	1,260
2522	Main Library	Office Maintenance	b	2L2' F40 BIAX/EL	indirect/direct	1	1	72	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	0.0	43	1,260	1,260
2523	Main Library	Bath Staff	b	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	28	1,750	1,750
2524	Main Library	Hall By Model Ship	b	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	55	3,458	3,458
2525	Main Library	Office Director	b	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	145	1,657	1,657
2526	Main Library	Office Public Relations Mgr	b	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	110	1,260	1,260
2527	Main Library	Storage Boxes	b	2L4' T8 32w/EL	industrial cage	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	11	350	350
2528	Main Library	Mechanical Air Handler	b	4L4' T8 32w/EL-8'	industrial cage	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	26	350	350
2529	Main Library	Storage Friends Of Lib	b	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	15	700	700
2530	Main Library	Office Admin Asst	b	3L4' T8 32w/EL	trof acr	6	6	88	0.5	3L4' T8 28w/ELEE LO	rlrb LF	6	66	0.4	0.1	165	1,260	1,260
2531	Main Library	Hall Friends-Elevator	b	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	110	3,458	3,458
2532	Main Library	Hall Friends-Elevator	b	2L4' T8 32w/EL	trof acr	6	6	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	6	44	0.3	0.1	330	3,458	3,458
2533	Main Library	Hall Friends-Elevator	b	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	76	3,458	3,458
2534	Main Library	Hall Friends-Elevator	b	2L2' F40 BIAX/EL	indirect/direct	1	1	72	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	0.0	118	3,458	3,458
2535	Main Library	Storage Paper	b	2L4' T8 32w/EL	wrap	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	17	350	350
2536	Main Library	Stair Near Parling	stair	2L4' T8 32w/EL	vanity	9	9	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	9	44	0.4	0.1	495	3,458	3,458

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
2537	Main Library	Lobby Main Entry	b	2x42W CF HARDWIRED/EL	decorative	1		86	0.1	NO RETRO	no change -specialized fixture		90	0.1			4,940	4,940
2538	Main Library	Storage Garage	b	4L4' T8 32w/EL-8'	industrial	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	52	700	700
2545	Manross Library	Mechanical Boiler	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	16	500	350
2546	Manross Library	Storage Elect	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	16	500	350
2547	Manross Library	Storage Elect	1	26W CF SCREWIN	keyless	1	1	28	0.0	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.0	10	500	350
2548	Manross Library	Hall Near Mech	1	2L4' T8 32w/EL	trof acr 1' wide	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	83	2,600	1,820
2549	Manross Library	Bath Staff And Hc	1	2x18W CF HARDWIRED/EL	drum	1	1	38	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	53	2,500	2,500
2550	Manross Library	Office Near Mech	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	89	1,800	1,260
2551	Manross Library	Kitchen Near Mech	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	75	1,500	1,050
2552	Manross Library	Office Near Librarian	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	89	1,800	1,260
2553	Manross Library	Office Librarian	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	89	1,800	1,260
2554	Manross Library	Storage To Stained Glass	1	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	13	500	350
2555	Manross Library	Storage To Stained Glass	1	2L4' T8 32w/EL	strip	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
2556	Manross Library	Storage To Stained Glass	1	13W CF HARDWIRED	jar	1		15	0.0	NO RETRO	no change		16	0.0			500	350
2557	Manross Library	Library Home School Collection	1	4L4' T8 32w/EL-8'	trof para 1' wide	8	8	112	0.9	4L4' T8 28w/ELEE LO-8'	rlrb LF	8	87	0.7	0.2	817	4,108	4,108
2558	Manross Library	Library Home School Collection	1	4L3' T8 25w/EL-6'	trof para 1' wide	2	2	88	0.2	4L3' T8 21w/ELEE LO-6'	rlrb LF	2	84	0.2	0.0	33	4,108	4,108
2559	Manross Library	Library Home School Collection	1	2L4' T8 32w/EL	trof para 1' wide	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	65	4,108	4,108
2560	Manross Library	Library Childrens Desks	1	4L4' T8 32w/EL-8'	trof para 1' wide	12	12	112	1.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	12	87	1.0	0.3	1,225	4,108	4,108
2561	Manross Library	Library Videos	1	4L4' T8 32w/EL-8'	trof para 1' wide	8	8	112	0.9	4L4' T8 28w/ELEE LO-8'	rlrb LF	8	87	0.7	0.2	817	4,108	4,108
2562	Manross Library	Library Videos	1	4L3' T8 25w/EL-6'	trof para 1' wide	2	2	88	0.2	4L3' T8 21w/ELEE LO-6'	rlrb LF	2	84	0.2	0.0	33	4,108	4,108
2563	Manross Library	Library Videos	1	2L4' T8 32w/EL	trof para 1' wide	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	65	4,108	4,108
2564	Manross Library	Library Main Lobby And Computers	1	4L3' T8 25w/EL-6'	trof para 1' wide	4	4	88	0.4	4L3' T8 21w/ELEE LO-6'	rlrb LF	4	84	0.3	0.0	66	4,108	4,108
2565	Manross Library	Library Main Lobby And Computers	1	4L4' T8 32w/EL-8'	trof para 1' wide	12	12	112	1.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	12	87	1.0	0.3	1,225	4,108	4,108
2566	Manross Library	Library Main Lobby And Computers	1	4L4' T8 32w/EL-8'	trof acr 6" wide	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	204	4,108	4,108
2567	Manross Library	Library Main Lobby And Computers	1	4L4' T8 32w/EL-8'	trof minicube	8	8	112	0.9	4L4' T8 28w/ELEE LO-8'	rlrb LF	8	87	0.7	0.2	817	4,108	4,108
2568	Manross Library	Bath Men (2)	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	89	1,750	1,750
2569	Manross Library	Lobby Entry	1	28W CF HARDWIRED	can rec 6"	7	7	30	0.2	10 WATT LED/KIT	can kit LED Spectrum	7	11	0.1	0.1	355	2,600	1,820
2570	Manross Library	Lobby Stacks	1	4L4' T8 32w/EL-8'	specialty application	26	26	112	2.9	4L4' T8 28w/ELEE LO-8'	rlrb LF	26	87	2.3	0.6	1,680	2,600	2,600
2571	Manross Library	Lobby Magazines	1	4L3' T8 25w/EL-6'	trof minicube	12	12	88	1.1	4L3' T8 21w/ELEE LO-6'	rlrb LF	12	84	1.0	0.0	125	2,600	2,600
2572	Manross Library	Lobby Magazines	1	4L4' T8 32w/EL-8'	trof para 1' wide	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	194	2,600	2,600
2573	Manross Library	Stair Rear	stair	18W CF HARDWIRED	sconce	1		20	0.0	NO RETRO	no change		21	0.0			2,600	2,600
2574	Manross Library	Stair Rear	stair	26W CF HARDWIRED	keyless	3		28	0.1	NO RETRO	no change		29	0.1			2,600	2,600
2575	Manross Library	Lobby Basement	b	2L2' T8 17w/EL	trof acr	7	7	33	0.2	2L2' T8 15w/ELEE LO	rlrb LF	7	28	0.2	0.0	85	2,600	1,820
2576	Manross Library	Lobby Basement	b	26W CF HARDWIRED	can rec 6"	3	3	28	0.1	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	0.1	137	2,600	1,820
2577	Manross Library	Lobby Basement	b	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	66	2,600	1,820
2578	Manross Library	Mechanical Basement	b	26W CF SCREWIN	keyless	1	1	28	0.0	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.0	10	500	350
2579	Manross Library	Bath Womans	b	2L4' T8 32w/EL	wrap wide	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	40	2,500	1,750
2580	Manross Library	Bath Mens	b	2L4' T8 32w/EL	wrap wide	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	40	2,500	1,750
2581	Manross Library	Storage Meeting Room	b	2L4' T8 32w U/EL	trof acr	10	10	60	0.6	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	10	35	0.3	0.3	254	1,000	700
2582	Manross Library	Storage Meeting Room	b	2x18W CF HARDWIRED/EL	can eyeball rec	22		38	0.8	NO RETRO	no change		40	0.8			1,000	700
2583	Manross Library	Storage Meeting Room	b	2x26W CF HARDWIRED/EL	can rec 8"	4	4	54	0.2	15 WATT LED/KIT	can kit LED Spectrum	4	16	0.1	0.2	153	1,000	700
2584	Manross Library	Storage Meeting Room	b	2L4' T8 32w/EL	trof opaque	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	16	1,000	700
2592	Water Main Office & Garage	Storage Garage	1	2L4' T8 32w/EL	industrial	12	12	60	0.7	2L4' T8 28w/ELEE LO	rlrb LF	12	44	0.5	0.2	191	1,000	700
2593	Water Main Office & Garage	Storage Garage	1	2L4' T8 32w/EL	industrial	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	48	1,000	700
2595	Water Main Office & Garage	Office Open Main Office	1	3 WATT LED	decorative	10		3	0.0	NO RETRO	no change -specialized fixture		3	0.0			2,860	2,860
2596	Water Main Office & Garage	Office Low	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	0.0	58	2,340	2,340
2597	Water Main Office & Garage	Office Near Joyce	1	3x13W CF HARDWIRED	decorative	2		45	0.1	NO RETRO	no change -specialized fixture		47	0.1			2,340	2,340
2598	Water Main Office & Garage	Office Near Joyce	1	75W INCANDESCENT	sconce	2	2	75	0.2	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	312	2,340	2,340
2599	Water Main Office & Garage	Office Joe	1	3 WATT LED	box acrylic	2		3	0.0	NO RETRO	no change		3	0.0			2,340	1,638
2600	Water Main Office & Garage	Lounge Staff	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	30	1,900	1,900
2601	Water Main Office & Garage	Lounge Staff	1	4L4' T8 32w/EL	box opaque	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	0.0	47	1,900	1,900
2602	Water Main Office & Garage	Office Staff	1	4L4' T8 32w/EL	box opaque	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	116	2,340	1,638
2603	Water Main Office & Garage	Hall Lockers-Main Office	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	129	2,600	1,820
2604	Water Main Office & Garage	Hall Lockers-Main Office	1	4L4' T8 32w/EL	box opaque	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	0.0	65	2,600	1,820
2605	Water Main Office & Garage	Locker Staff	1	2L8' T12 60w EE/EEMAG	strip	3	3	123	0.4	2L4' T8 28w/ELEE HI/NEW-8'	new LF strip	3	67	0.2	0.2	435	2,600	1,820
2606	Water Main Office & Garage	Storage Fittings	1	2L8' T12 60w EE/EEMAG	strip	2	2	123	0.2	2L4' T8 28w/ELEE HI/NEW-8'	new LF strip	2	67	0.1	0.1	112	1,000	700
2607	Water Main Office & Garage	Office Open Meters	1	4L4' T8 32w/EL	trof acr	9	9	112	1.0	4L4' T8 28w/ELEE LO	rlrb LF	9	87	0.8	0.2	640	2,860	2,002
2608	Water Main Office & Garage	Bath Meters	1	2L4' T8 32w/EL	wrap	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	124	2,600	1,820
2609	Water Main Office & Garage	Office Open Plans	1	4L4' T8 32w/EL	trof acr	8	8	112	0.9	4L4' T8 28w/ELEE LO	rlrb LF	8	87	0.7	0.2	569	2,860	2,002
2610	Water Main Office & Garage	Foyer Plans	1	22W & 32W CIRCLELINE HARDWIRED	box opaque	1	1	58	0.1	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	107	2,600	1,820
2611	Water Main Office & Garage	Bath Women	1	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	57	2,600	1,820
2612	Water Main Office & Garage	Conference Main	1	75W INCANDESCENT	decorative	5		75	0.4	NO RETRO	no change -specialized fixture		79	0.4			2,340	2,340
2613	Water Main Office & Garage	Conference Main	1	2x75W INCANDESCENTS	decorative	2		150	0.3	NO RETRO	no change -specialized fixture		158	0.3			2,340	2,340
2614	Water Main Office & Garage	Conference Main	1	75W INCANDESCENT	track can	3	3	75	0.2	8 WATT LED SI	screw in LED par20	3	8	0.0	0.2	468	2,340	2,340
2615	Water Main Office & Garage	Storage Safe	1	4L4' T8 32w/EL	box opaque	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	25	500	350
2616	Water Main Office & Garage	Office Printers	1	4L4' T8 32w/EL	box opaque	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	116	2,340	1,638
2617	Water Main Office & Garage	Stair To Basement	stair	100W INCANDESCENT	keyless	1	1	100	0.1	11 WATT LED SI	screw in LED Alamp	1	12	0.0	0.1	230	2,600	2,600
2618	Water Main Office & Garage	Storage Files	b	2L4' T8 32w/EL-8'	industrial	8	8	60	0.5	2L4' T8 28w/ELEE LO-8'	rlrb LF	8	44	0.4	0.1	64	500	500
2619	Water Main Office & Garage	Storage Files	b	1L4' T8 32w/EL	industrial	3	3	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	3	23	0.1	0.0	10	500	500
2620	Water Main Office & Garage	Storage Files	b	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	16	500	500
2626	Water Pollution Control Park	Office Open Operations	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	149	2,340	1,638
2627	Water Pollution Control Park	Office Manager	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	70	2,200	1,540
2628	Water Pollution Control Park	Office Map	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	70	2,200	1,540

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
2629	Water Pollution Control Park	Storage Electric	1	2L4' T8 32w/EL	wrap	6	6	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	6	44	0.3	0.1	48	500	500
2630	Water Pollution Control Park	Lounge Staff	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	121	1,900	1,330
2631	Water Pollution Control Park	Foyer To Basement	1	75W INCANDESCENT	can rec 6"	1	1	75	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	173	2,600	1,820
2632	Water Pollution Control Park	Bath Men	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	83	2,600	1,820
2633	Water Pollution Control Park	Locker Men	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	83	2,600	1,820
2634	Water Pollution Control Park	Locker Men	1	2L4' T8 32w/EL	vapor tight	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	83	2,600	2,600
2635	Water Pollution Control Park	Storage Janitor	1	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	26	500	350
2636	Water Pollution Control Park	Bath Woman	1	2L4' T8 32w/EL	wrap	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	124	2,600	1,820
2637	Water Pollution Control Park	Bath Woman	1	2L4' T8 32w/EL	vapor tight	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	41	2,600	1,820
2638	Water Pollution Control Park	Lab Testing	1	2L4' T8 32w/EL	trof acr	7	7	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	7	44	0.3	0.1	232	2,080	1,456
2639	Water Pollution Control Park	Office Testing	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	35	2,200	1,540
2640	Water Pollution Control Park	Storage Testing	1	2L4' T8 32w/EL	vapor tight	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	8	500	350
2641	Water Pollution Control Park	Stair 4	stair	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	41	2,600	2,600
2642	Water Pollution Control Park	Storage Uv	b	2L4' T8 32w/EL	vapor tight	17	17	60	1.0	2L4' T8 28w/ELEE LO	rlrb LF	17	44	0.7	0.3	270	1,000	1,000
2643	Water Pollution Control Park	Storage Uv	b	2L4' T8 32w/EL	strip	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	16	1,000	1,000
2646	Water Pollution Control Park	Storage Generator Bldg	1	2L4' T8 32w/EL	vapor tight	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	64	1,000	1,000
2648	Water Pollution Control Park	Storage Pump House	1	2L4' T8 32w/EL	vapor tight	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	48	1,000	1,000
2649	Water Pollution Control Park	Storage Pump House Parts	1	2L4' T8 32w/EL	vapor tight	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	32	500	500
2650	Water Pollution Control Park	Storage Basement	b	2L4' T8 32w/EL	vapor tight	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	16	500	500
2652	Water Pollution Control Park	Storage Air Blowers	1	4L4' T8 32w/EL	wrap	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	0.1	99	1,000	1,000
2653	Water Pollution Control Park	Storage Air Blowers	1	2L4' T8 32w/EL	vapor tight	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	64	1,000	1,000
2657	Water Pollution Control Park	Storage Chemical Room	1	2L4' T8 32w/EL	vapor tight	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	64	1,000	1,000
2660	Water Pollution Control Park	Storage Secondary Pump Gallery	1	2L4' T8 32w/EL	vapor tight	9	9	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	9	44	0.4	0.1	143	1,000	1,000
2662	Water Pollution Control Park	Storage Sludge Trucks	1	4L4' T5 HO/EL	high bay	15	15	234	3.5	98 WATT LED/NEW	new LED hibay wg	15	103	1.5	2.0	1,967	1,000	1,000
2663	Water Pollution Control Park	Storage Lawn Mowers	1	2L4' T8 32w/EL	vanity	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	16	500	350
2664	Water Pollution Control Park	Storage Elect	1	2L4' T8 32w/EL	vapor tight	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	32	1,000	700
2665	Water Pollution Control Park	Bath Sludge	1	2L4' T8 32w/EL	vapor tight	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	41	2,600	2,600
2666	Water Pollution Control Park	Storage Sludge	1	2L4' T8 32w/EL	vapor tight	12	12	60	0.7	2L4' T8 28w/ELEE LO	rlrb LF	12	44	0.5	0.2	191	1,000	1,000
2667	Water Pollution Control Park	Storage Sludge Garage	1	4L4' T8 32w/EL	wrap wide	8	8	112	0.9	4L4' T8 28w/ELEE LO	rlrb LF	8	87	0.7	0.2	199	1,000	1,000
2668	Water Pollution Control Park	Storage Sludge Garage	1	2L4' T8 32w/EL	vapor tight	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	64	1,000	1,000
2669	Water Pollution Control Park	Office Maintenance Personnel	1	2L4' T8 32w/EL	wrap	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	140	2,200	2,200
2672	Water Pollution Control Park	Office Admin Bldg	1	4L4' T8 32w/EL-8'	trof parabolic	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	109	2,200	1,540
2673	Water Pollution Control Park	Office Brian	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	140	2,200	1,540
2674	Water Pollution Control Park	Bath Men (2)	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	83	2,600	1,820
2675	Water Pollution Control Park	Foyer Admin Bldg	1	18W CF HARDWIRED	can rec 6"	4	4	20	0.1	10 WATT LED/KIT	can kit LED Spectrum	4	11	0.0	0.0	99	2,600	1,820
2676	Water Pollution Control Park	Conference Admin Bldg	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	140	2,200	1,540
2677	Water Pollution Control Park	Conference Admin Bldg	1	75W INCANDESCENT	track can	4	4	75	0.3	8 WATT LED SI	screw in LED par20	4	8	0.0	0.3	586	2,200	2,200
2678	Water Pollution Control Park	Storage Files	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	32	1,000	700
2679	Water Pollution Control Park	Foyer Rear	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	41	2,600	1,820
2681	Water Pollution Control Park	Storage Storage Thickening	1	2L4' T8 32w/EL	vapor tight	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	0.1	127	1,000	1,000
2684	Water Pollution Control Park	Storage Headworks-Screening And Grit Removal	1	250W HI PRESSURE SODIUM	keyless	8	8	295	2.4	52 WATT LED/NEW	new LED canopy	8	55	0.4	1.9	1,923	1,000	1,000
2685	Water Pollution Control Park	Storage Grit And Septage Gallery	1	2L4' T8 32w/EL	vapor tight	6	6	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	6	44	0.3	0.1	95	1,000	1,000
2689	City Yard	Lobby Main Entry	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	45	2,600	1,820
2690	City Yard	Lobby Main Entry	1	1L4' T8 32w/EL	wrap narrow	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	13	2,600	1,820
2691	City Yard	Office Dispatch	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	49	2,200	1,540
2692	City Yard	Storage Supplies	1	1L4' T8 32w/EL	wrap narrow	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	5	1,000	700
2693	City Yard	Office Dispatch	1	2L4' T8 32w/EL	trof acr 1' wide	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	31	2,804	1,963
2694	City Yard	Bath Executive	1	1L4' T8 32w/EL	wrap narrow	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	13	2,600	1,820
2695	City Yard	Office Solid Waste	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	58	2,628	1,840
2696	City Yard	Office Streets	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	49	2,200	1,540
2697	City Yard	Lounge Staff	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	42	1,900	1,330
2698	City Yard	Lounge Lunch Room	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	85	1,900	1,330
2699	City Yard	Storage Chain Room	1	2L4' T8 32w/EL	industrial	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	22	500	350
2700	City Yard	Storage Main Garage	1	4L4' T5 HO/EL	high bay	18	18	234	4.2	98 WATT LED/NEW	new LED hibay wg	18	103	1.9	2.4	1,652	1,000	700
2701	City Yard	Storage Main Garage	1	400W INC HALOGEN	flood	42	42	400	16.8	93 WATT LED/NEW	new LED flood	42	98	4.1	12.7	8,889	1,000	1,000
2702	City Yard	Storage Main Garage	1	4L4' T12 34w EE/EEMAG-8'	industrial	1	1	140	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.1	37	1,000	1,000
2703	City Yard	Storage Main Garage	1	4L4' T8 32w/EL-8'	industrial	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	104	1,000	1,000
2704	City Yard	Locker Main	1	2L4' T8 32w/EL	trof acr 1' wide	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	116	2,600	1,820
2705	City Yard	Bath Men	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	58	2,600	1,820
2706	City Yard	Storage Tool Room	1	2L4' T8 32w/EL	industrial	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	33	1,000	700
2707	City Yard	Shop Signs	1	2L4' T8 32w/EL-8'	industrial	6	6	60	0.4	2L4' T8 28w/ELEE LO-8'	rlrb LF	6	44	0.3	0.1	156	2,340	1,638
2710	City Yard	Shop Oil Storage	1	2L4' T8 32w/EL-8'	industrial	4	4	60	0.2	2L4' T8 28w/ELEE LO-8'	rlrb LF	4	44	0.2	0.1	104	2,340	1,638
2711	City Yard	Hall Mechanics Garage	1	2L4' T8 32w/EL-8'	industrial	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	29	2,600	1,820
2712	City Yard	Office Mechanics Garage	1	2L4' T8 32w/EL-8'	industrial	2	2	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	2	44	0.1	0.0	49	2,200	1,540
2713	City Yard	Office Mechanics Garage	1	1L4' T8 32w/EL	industrial	3	3	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	3	23	0.1	0.0	32	2,200	1,540
2714	City Yard	Shop Mechanics Garage	1	4L4' T5 HO/EL	high bay	29	29	234	6.8	98 WATT LED/NEW	new LED hibay wg	29	103	3.0	3.8	6,228	2,340	1,638
2715	City Yard	Office Fleet Super	2	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	49	2,200	1,540
2716	City Yard	Storage Parts	2	2L4' T8 32w/EL	industrial	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	0.1	89	1,000	700
2717	City Yard	Storage Parts	2	2L4' T8 32w/EL-8'	industrial	2	2	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	2	44	0.1	0.0	22	1,000	700
2718	City Yard	Shop Fab	2	2L4' T8 32w/EL	industrial	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	0.1	208	2,340	1,638
2719	City Yard	Shop Fab	2	2L4' T8 32w/EL-8'	industrial	2	2	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	2	44	0.1	0.0	52	2,340	1,638
2720	City Yard	Office Johnny	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	77	2,200	1,540
2721	City Yard	Shop Fab	2	4L4' T8 32w/EL-8'	industrial	5	5	112	0.6	4L4' T8 28w/ELEE LO-8'	rlrb LF	5	87	0.4	0.1	204	2,340	1,638

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
2725	City Yard	Storage Quonsett Hut	1	2L4' T8 32w/EL	industrial	15	15	60	0.9	2L4' T8 28w/ELEE LO	rlrb LF	15	44	0.7	0.2	167	1,000	700
2734	City Yard	Storage Social Services Storage (Across Street)	1	1L4' T12 34w EE/EEMAG	strip	3	3	40	0.1	1L4' T8 28w/ELEE LO	rlrb LF	3	23	0.1	0.1	18	500	500
2735	City Yard	Storage Social Services Storage (Across Street)	1	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	18	500	500
2736	Transfer Stations - Lake Ave	Storage Quonset	1	400W HI PRESSURE SODIUM	lowbay	6	6	460	2.8	107 WATT LED/NEW	new LED canopy	6	112	0.7	2.1	2,086	1,000	700
2739	Transfer Stations - Lake Ave	Storage Attendant Shack Brown	1	2L4' T12 34w EE/EEMAG	wrap	1	1	70	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	13	500	350
2740	Transfer Stations - Lake Ave	Storage Attendant Shack Brown	1	2L4' T12 34w EE/EEMAG	wrap	1	1	70	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	13	500	350
2743	Transfer Stations - Lake Ave	Office Trailer	1	4L4' T8 32w/EL	trof acr	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	0.1	219	2,200	1,540
2744	Transfer Stations - Lake Ave	Bath Trailer	1	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	54	2,132	1,492
2745	Transfer Stations - Lake Ave	Office Main	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	109	2,200	1,540
2747	Transfer Stations - Lake Ave	Office Scale House	1	4L4' T8 32w/EL	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	0.0	55	2,200	1,540
2749	Animal Control	Office Main	1	2L4' T8 32w/EL	wrap	5	5	60	0.3	2L4' T8 28w/ELEE LO	rlrb LF	5	44	0.2	0.1	40	500	350
2750	Animal Control	Bath Main	1	2x60W INCANDESCENTS	vanity	1	1	120	0.1	1L2' T8 15w/ELEE LO/NEW	new LF vanity	1	15	0.0	0.1	53	500	350
2751	Animal Control	Hall To Kennel	1	2L4' T8 32w/EL	wrap	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	24	500	350
2752	Animal Control	Mechanical Furnace	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	4	250	175
2753	Animal Control	Storage Janitor	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	8	500	350
2754	Animal Control	Storage Quarantine	1	4L4' T8 32w/EL	wrap wide	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	0.1	50	500	500
2755	Animal Control	Kitchen Quarantine	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	16	500	350
2756	Animal Control	Storage Kennel Room 2	1	4L4' T8 32w/EL	wrap wide	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	0.1	50	500	500
2757	Animal Control	Storage Kennel Room 3	1	4L4' T8 32w/EL	wrap wide	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	0.1	50	500	500
2758	Animal Control	Hall By Kennel 2-3	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	8	500	350
2762	Memorial Boulevard School	Auditorium Theatre	1	3x100W INCANDESCENTS	decorative	12		300	3.6	NO RETRO	no change per customer		315	3.6				
2763	Memorial Boulevard School	Auditorium Theatre	1	2x75W INCANDESCENTS	cylinder indirect/direct wall mt.	16		150	2.4	NO RETRO	no change per customer		158	2.4				
2764	Memorial Boulevard School	Auditorium Theatre	1	300W INCANDESCENT	can rec 8"	14		300	4.2	NO RETRO	no change per customer		315	4.2				
2765	Memorial Boulevard School	Auditorium Theatre	1	3x100W INCANDESCENTS	decorative	4		300	1.2	NO RETRO	no change per customer		315	1.2				
2766	Memorial Boulevard School	Stage Theatre	1	4L4' T8 32w/EL-8'	industrial cage	4		112	0.4	NO RETRO	no change per customer		118	0.4				
2767	Memorial Boulevard School	Classroom Typical	1	4L4' T8 32w/EL-8'	eggcrate	2		112	0.2	NO RETRO	no change per customer		118	0.2				
2768	Memorial Boulevard School	Classroom Typical	1	2L4' T8 32w/EL	eggcrate	2		60	0.1	NO RETRO	no change per customer		63	0.1				
2769	Memorial Boulevard School	Hall Typical	1	2L2' T8 17w/EL	box acrylic	1		33	0.0	NO RETRO	no change per customer		35	0.0				
2770	Memorial Boulevard School	Gym Main	1	4L4' T5 HO/EL	high bay	1		234	0.2	NO RETRO	no change per customer		246	0.2				
2771	Fire Head Quarters	Storage Trucks	1	4L4' T5 HO/EL	lowbay	8	8	234	1.9	100 WATT LED/NEW	new LED lobay acr dome	8	105	0.8	1.0	1,135	1,000	1,000
2772	Fire Head Quarters	Storage Compressor Room	1	4L4' T8 32w/EL-8'	industrial	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	55	1,000	1,000
2773	Fire Head Quarters	Lobby Entry	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	0.0	68	2,500	2,500
2774	Fire Head Quarters	Hall By Front Offices	1	4L4' T8 32w/EL	trof acr	3	3	112	0.3	4L4' T8 28w/ELEE LO	rlrb LF	3	87	0.3	0.1	205	2,500	1,750
2775	Fire Head Quarters	Bath By Front Offices	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	137	2,500	1,750
2776	Fire Head Quarters	Office Admin	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	164	3,000	2,100
2777	Fire Head Quarters	Office Chief	1	4L4' T8 32w/EL	trof acr	6	6	112	0.7	4L4' T8 28w/ELEE LO	rlrb LF	6	87	0.5	0.1	492	3,000	2,100
2778	Fire Head Quarters	Office Fire Marshal	1	4L4' T8 32w/EL	trof acr	8	8	112	0.9	4L4' T8 28w/ELEE LO	rlrb LF	8	87	0.7	0.2	656	3,000	2,100
2779	Fire Head Quarters	Storage Files	1	4L4' T8 32w/EL	trof acr	3	3	112	0.3	4L4' T8 28w/ELEE LO	rlrb LF	3	87	0.3	0.1	82	1,000	700
2780	Fire Head Quarters	Office Fire Prevention	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	164	3,000	2,100
2781	Fire Head Quarters	Office Plans	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	0.0	82	3,000	2,100
2782	Fire Head Quarters	Shop Mechanics Bay	1	4L4' T5 HO/EL	lowbay	5	5	234	1.2	98 WATT LED/NEW	new LED hibay wg	5	103	0.5	0.7	1,687	2,340	1,638
2783	Fire Head Quarters	Office Mechanics Bay	1	4L4' T8 32w/EL-8'	industrial	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	164	3,000	2,100
2784	Fire Head Quarters	Storage Oil	1	300W INCANDESCENT	keyless	1	1	300	0.3	19 WATT LED SI	screw in LED Alamp	1	20	0.0	0.3	154	500	350
2785	Fire Head Quarters	Storage Parts	1	300W INCANDESCENT	keyless	1	1	300	0.3	19 WATT LED SI	screw in LED Alamp	1	20	0.0	0.3	154	500	350
2786	Fire Head Quarters	Stair Near Mechanic	stair	2L4' T8 32w/EL	wrap	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	175	2,500	2,500
2787	Fire Head Quarters	Lounge Staff	2	4L4' T8 32w/EL	trof acr	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	0.1	208	1,900	1,330
2788	Fire Head Quarters	Stair Pole (2)	stair	75W INCANDESCENT	flood	2	2	75	0.2	8 WATT LED SI	screw in LED par20	2	8	0.0	0.1	366	2,500	2,500
2789	Fire Head Quarters	Lounge Near K	2	4L4' T8 32w/EL	trof acr	6	6	112	0.7	4L4' T8 28w/ELEE LO	rlrb LF	6	87	0.5	0.1	312	1,900	1,900
2790	Fire Head Quarters	Kitchen Main	2	4L4' T8 32w/EL	trof acr	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	0.1	164	1,500	1,050
2791	Fire Head Quarters	Stair Near K	stair	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	0.0	68	2,500	2,500
2792	Fire Head Quarters	Stair Near K	stair	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	87	2,500	2,500
2793	Fire Head Quarters	Stair Near K	stair	2L4' T8 32w/EL	wrap narrow	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	44	2,500	2,500
2794	Fire Head Quarters	Bath Near Sleeping Quarters	2	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	0.0	68	2,500	1,750
2795	Fire Head Quarters	Bath Near Sleeping Quarters	2	1L2' T12 20w STD/STD	strip	1	1	32	0.0	1L2' T8 15w/ELEE LO	rlrb LF	1	15	0.0	0.0	48	2,500	1,750
2796	Fire Head Quarters	Bedroom Sleeping Quarters Private (3)	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	4L4' T8 28w/ELEE LO	rlrb LF	3	87	0.3	0.1	107	1,300	910
2797	Fire Head Quarters	Bedroom Open Quarters	2	4L4' T8 32w/EL	trof acr	10	10	112	1.1	4L4' T8 28w/ELEE LO	rlrb LF	10	87	0.9	0.2	355	1,300	910
2798	Fire Head Quarters	Hall Near Kitchen	2	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	0.0	68	2,500	1,750
2799	Fire Head Quarters	Locker All	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	4L4' T8 28w/ELEE LO	rlrb LF	3	87	0.3	0.1	205	2,500	1,750
2800	Fire Head Quarters	Hall Near Locker	2	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	0.0	68	2,500	1,750
2801	Fire Head Quarters	Bath Near Locker	2	2L4' T8 32w U/EL	trof acr	3	3	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	0.1	209	2,500	1,750
2802	Fire Head Quarters	Bath Near Locker	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	137	2,500	1,750
2803	Fire Head Quarters	Bath Near Locker	2	1L4' T8 32w/EL	vanity	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	19	2,500	1,750
2806	Fire Head Quarters	Mechanical Boiler	1	60W INCANDESCENT	keyless	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	57	500	350
2807	Engine 2	Office Main	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	94	2,804	1,963
2808	Engine 2	Lounge Main	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	63	1,900	1,330
2809	Engine 2	Kitchen Main	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	50	1,500	1,050
2810	Engine 2	Bath Main	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	42	2,500	2,500
2811	Engine 2	Bath Main	1	13W CF HARDWIRED	dome	1		15	0.0	NO RETRO	no change		16	0.0			2,500	2,500
2812	Engine 2	Bedroom Sleeping Quarters	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	43	1,300	910
2813	Engine 2	Storage Trucks	1	2L4' T8 32w/EL-8'	industrial	16	16	60	1.0	2L4' T8 28w/ELEE LO-8'	rlrb LF	16	44	0.7	0.3	267	1,000	1,000
2814	Engine 2	Storage Fire Alarm Bureau	1	2L4' T8 32w/EL-8'	industrial	3	3	60	0.2	2L4' T8 28w/ELEE LO-8'	rlrb LF	3	44	0.1	0.0	50	1,000	700
2815	Engine 2	Storage Miscel	1	60W INCANDESCENT	jar	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	27	500	500
2816	Engine 2	Storage Special Ops Truck	1	4L4' T8 32w/EL-8'	industrial	5	5	112	0.6	4L4' T8 28w/ELEE LO-8'	rlrb LF	5	87	0.4	0.1	130	1,000	700

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
2820	Engine 2	Mechanical Boiler	1	60W INCANDESCENT	keyless	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	54	500	350
2821	Engine 5	Office Main	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	100	3,000	2,100
2822	Engine 5	Lounge Staff	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	63	1,900	1,330
2823	Engine 5	Kitchen Main	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	50	1,500	1,050
2824	Engine 5	Storage Janitor	1	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	27	500	350
2825	Engine 5	Bath Staff	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	42	2,500	1,750
2826	Engine 5	Bath Staff	1	2x13W CF HARDWIRED	vanity	1		30	0.0	NO RETRO	no change		32	0.0			2,500	1,750
2827	Engine 5	Bedroom Sleeping Quarters	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	43	1,300	910
2828	Engine 5	Storage Trucks	1	2L4' T8 32w/EL-8'	industrial	16	16	60	1.0	2L4' T8 28w/ELEE LO-8'	rlrb LF	16	44	0.7	0.3	267	1,000	700
2831	Engine 5	Mechanical Boiler	1	60W INCANDESCENT	keyless	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	54	500	350
2832	Engine 3	Office Main	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	50	3,000	2,100
2833	Engine 3	Lounge Staff	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	63	1,900	1,330
2834	Engine 3	Hall Main	1	1L4' T8 32w/EL	vanity	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	36	2,500	1,750
2835	Engine 3	Kitchen Main	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	50	1,500	1,050
2836	Engine 3	Storage Janitor	1	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	27	500	500
2837	Engine 3	Bath Main	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	42	2,500	2,500
2838	Engine 3	Bath Main	1	1L2' 24W T5HO/EL	vanity	1		29	0.0	NO RETRO	no change -specialized fixture		30	0.0			2,500	1,750
2839	Engine 3	Bedroom Sleeping Quarters	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	43	1,300	910
2840	Engine 3	Storage Trucks	1	2L4' T8 32w/EL-8'	industrial	11	11	60	0.7	2L4' T8 28w/ELEE LO-8'	rlrb LF	11	44	0.5	0.2	184	1,000	1,000
2841	Engine 3	Storage Janitor	1	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	27	500	350
2842	Engine 3	Storage Supplies	1	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	27	500	500
2845	Engine 3	Mechanical Boiler	1	60W INCANDESCENT	keyless	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	54	500	350
2846	Youth Services Building	Lobby Main	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	105	2,600	1,820
2847	Youth Services Building	Hall Main	1	2L4' T8 32w U/EL	trof acr	6	6	60	0.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	6	35	0.2	0.2	316	2,600	1,820
2848	Youth Services Building	Office Reception	1	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	37	1,800	1,260
2849	Youth Services Building	Bath Near Recept	1	13W CF HARDWIRED	square surface mt.	1		15	0.0	NO RETRO	no change		16	0.0			2,340	1,638
2850	Youth Services Building	Office Cindy'S	1	2L4' T8 32w U/EL	trof acr	4	4	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	146	1,800	1,260
2851	Youth Services Building	Conference Staff	1	2L4' T8 32w U/EL	trof acr	10	10	60	0.6	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	10	35	0.3	0.3	365	1,800	1,260
2852	Youth Services Building	Office Director	1	2L4' T8 32w U/EL	trof acr	4	4	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	146	1,800	1,260
2853	Youth Services Building	Office Alison	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	73	1,800	1,260
2854	Youth Services Building	Office Front	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	73	1,800	1,260
2855	Youth Services Building	Hall Victorian Side	1	2L4' T8 32w U/EL	trof acr	15	15	60	0.9	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	15	35	0.5	0.4	791	2,600	1,820
2856	Youth Services Building	Lounge Front	1	2L4' T8 32w U/EL	trof acr	8	8	60	0.5	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	8	35	0.3	0.2	308	1,900	1,330
2857	Youth Services Building	Storage Tv Cart	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	20	500	350
2858	Youth Services Building	Storage Files	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	20	500	350
2859	Youth Services Building	Lounge Rear	1	2L4' T8 32w U/EL	trof acr	4	4	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	154	1,900	1,330
2860	Youth Services Building	Storage Day Care	1	2L4' T8 32w U/EL	trof acr	9	9	60	0.5	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	9	35	0.3	0.2	183	1,000	700
2861	Youth Services Building	Storage Janitor	1	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	10	500	350
2862	Youth Services Building	Bath Staff (2)	1	13W CF HARDWIRED	square surface mt.	2		15	0.0	NO RETRO	no change		16	0.0			2,340	1,638
2863	Youth Services Building	Bath Mf	1	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	47	2,340	1,638
2864	Youth Services Building	Storage Paper	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	20	500	350
2865	Youth Services Building	Office Near Kitchen	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	73	1,800	1,260
2866	Youth Services Building	Kitchen Near Kitchen	1	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	30	1,500	1,050
2867	Youth Services Building	Foyer To Dr. Office	1	13W CF HARDWIRED	square recessed	1		15	0.0	NO RETRO	no change		16	0.0			2,600	2,600
2868	Youth Services Building	Foyer To Dr. Office	1	2L4' T8 32w U/EL	trof parabolic	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	53	2,600	2,600
2869	Youth Services Building	Office Open Main	1	2L4' T8 32w U/EL	trof parabolic	3	3	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	0.1	142	2,340	1,638
2870	Youth Services Building	Office Open Waiting	1	2L4' T8 32w U/EL	trof parabolic	4	4	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	190	2,340	1,638
2871	Youth Services Building	Office Dr.	1	2L4' T8 32w U/EL	trof parabolic	4	4	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	146	1,800	1,260
2872	Youth Services Building	Storage Files	1	2L4' T8 32w U/EL	trof parabolic	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	20	1,000	700
2873	Youth Services Building	Bath Hc	1	2L4' T8 32w U/EL	trof parabolic	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	47	2,340	1,638
2874	Youth Services Building	Bath Hc	1	2L4' T12 34w U EE/EEMAG	trof parabolic	1	1	70	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	66	2,340	1,638
2875	Youth Services Building	Storage Janitor	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	21	500	350
2876	Youth Services Building	Storage Files	1	2L4' T8 32w U/EL	trof parabolic	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	20	500	350
2877	Youth Services Building	Office Exam Room	1	2L4' T8 32w U/EL	trof parabolic	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	73	1,800	1,260
2878	Youth Services Building	Office Exam Room	1	2L4' T8 32w U/EL	trof parabolic	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	73	1,800	1,260
2879	Youth Services Building	Hall Exam Rooms-Oo-Stair	1	2L4' T8 32w U/EL	trof parabolic	4	4	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	211	2,600	1,820
2880	Youth Services Building	Stair Front Building Entry	stair	2L4' T8 32w U/EL	box acrylic	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	53	2,600	2,600
2881	Youth Services Building	Stair Front Building Entry	stair	2L4' T8 32w U/EL	trof acr	3	3	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	0.1	158	2,600	1,820
2882	Youth Services Building	Lounge Sitting	2	2L4' T8 32w U/EL	trof acr	4	4	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	154	1,900	1,330
2883	Youth Services Building	Kitchen Sitting	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	61	1,500	1,050
2884	Youth Services Building	Office Caitlin	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	73	1,800	1,260
2885	Youth Services Building	Conference Quilt	2	2L4' T8 32w U/EL	trof acr	6	6	60	0.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	6	35	0.2	0.2	219	1,800	1,260
2886	Youth Services Building	Office Liz	2	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	37	1,800	1,260
2887	Youth Services Building	Conference Rear	2	2L4' T8 32w U/EL	trof acr	6	6	60	0.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	6	35	0.2	0.2	219	1,800	1,260
2888	Youth Services Building	Hall 2Nd Fl	2	2L4' T8 32w U/EL	trof acr	6	6	60	0.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	6	35	0.2	0.2	316	2,600	1,820
2889	Youth Services Building	Hall Back	2	2L4' T8 32w U/EL	trof acr	5	5	60	0.3	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	5	35	0.2	0.1	264	2,600	1,820
2890	Youth Services Building	Bath Back	2	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	97	2,340	1,638
2891	Youth Services Building	Office Back	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	73	1,800	1,260
2892	Youth Services Building	Conference Back	2	2L4' T8 32w U/EL	trof acr	6	6	60	0.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	6	35	0.2	0.2	219	1,800	1,260
2893	Youth Services Building	Storage Attic	3	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	21	500	500
2894	Youth Services Building	Storage Mech	3	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	21	500	500
2895	Youth Services Building	Stair Back	stair	2L4' T8 32w U/EL	box acrylic	4	4	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	211	2,600	2,600
2903	Beals Senior Center	Office Main Office Boe	1 boe	4L4' T8 32w/EL	trof acr	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	0.1	179	1,800	1,260

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
2904	Beals Senior Center	Storage Server	1 boe	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	11	500	350
2905	Beals Senior Center	Bath Staff	1 boe	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	37	2,340	1,638
2906	Beals Senior Center	Bath Staff (2)	1 boe	3L4' T8 32w/EL	trof parabolic	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	205	2,340	1,638
2907	Beals Senior Center	Bath Staff (2)	1 boe	2L2' T8 17w/EL	trof parabolic	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	22	2,340	1,638
2908	Beals Senior Center	Classroom 13	1 boe	4L4' T8 32w/EL	trof acr	12	12	112	1.3	4L4' T8 28w/ELEE LO	rlrb LF	12	87	1.0	0.3	488	1,638	1,638
2909	Beals Senior Center	Bath 13	1 boe	2x13W CF HARDWIRED	drum	1	1	30	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	31	2,340	1,638
2910	Beals Senior Center	Office Nurse	1 boe	4L4' T8 32w/EL	trof acr	6	6	112	0.7	4L4' T8 28w/ELEE LO	rlrb LF	6	87	0.5	0.1	188	1,260	1,260
2911	Beals Senior Center	Hall Nurse	1 boe	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	0.0	50	2,002	2,002
2912	Beals Senior Center	Conference Near Nurse	1 boe	4L4' T8 32w/EL	trof acr	5	5	112	0.6	4L4' T8 28w/ELEE LO	rlrb LF	5	87	0.4	0.1	157	1,260	1,260
2913	Beals Senior Center	Classroom 23	1 boe	4L4' T8 32w/EL	trof acr	12	12	112	1.3	4L4' T8 28w/ELEE LO	rlrb LF	12	87	1.0	0.3	488	1,638	1,638
2914	Beals Senior Center	Classroom 14	1 boe	4L4' T8 32w/EL	trof acr	12	12	112	1.3	4L4' T8 28w/ELEE LO	rlrb LF	12	87	1.0	0.3	488	1,638	1,638
2915	Beals Senior Center	Classroom 15	1 boe	4L4' T8 32w/EL	trof acr	12	12	112	1.3	4L4' T8 28w/ELEE LO	rlrb LF	12	87	1.0	0.3	488	1,638	1,638
2916	Beals Senior Center	Classroom 22	1 boe	4L4' T8 32w/EL	trof acr	13	13	112	1.5	4L4' T8 28w/ELEE LO	rlrb LF	13	87	1.1	0.3	529	1,638	1,638
2917	Beals Senior Center	Classroom 21	1 boe	4L4' T8 32w/EL	trof acr	11	11	112	1.2	4L4' T8 28w/ELEE LO	rlrb LF	11	87	1.0	0.3	448	1,638	1,638
2918	Beals Senior Center	Classroom 16A	1 boe	4L4' T8 32w/EL	trof acr	6	6	112	0.7	4L4' T8 28w/ELEE LO	rlrb LF	6	87	0.5	0.1	244	1,638	1,638
2919	Beals Senior Center	Classroom 16B	1 boe	4L4' T8 32w/EL	trof acr	6	6	112	0.7	4L4' T8 28w/ELEE LO	rlrb LF	6	87	0.5	0.1	244	1,638	1,638
2920	Beals Senior Center	Bath 16B	1 boe	2x13W CF HARDWIRED	old drum	1	1	30	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	31	2,340	1,638
2921	Beals Senior Center	Storage 17	1 boe	4L4' T8 32w/EL	trof acr	12	12	112	1.3	4L4' T8 28w/ELEE LO	rlrb LF	12	87	1.0	0.3	209	700	700
2922	Beals Senior Center	Storage 20	1 boe	4L4' T8 32w/EL	trof acr	11	11	112	1.2	4L4' T8 28w/ELEE LO	rlrb LF	11	87	1.0	0.3	96	350	350
2923	Beals Senior Center	Storage 19	1 boe	4L4' T8 32w/EL	trof acr	11	11	112	1.2	4L4' T8 28w/ELEE LO	rlrb LF	11	87	1.0	0.3	96	350	350
2924	Beals Senior Center	Storage 18	1 boe	4L4' T8 32w/EL	trof acr	8	8	112	0.9	4L4' T8 28w/ELEE LO	rlrb LF	8	87	0.7	0.2	70	350	350
2925	Beals Senior Center	Foyer North	1 boe	2L4' T8 32w U/EL	trof parabolic	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	73	2,860	2,860
2926	Beals Senior Center	Hall Main	1 boe	4L4' T8 32w/EL	trof acr	14	14	112	1.6	4L4' T8 28w/ELEE LO	rlrb LF	14	87	1.2	0.3	995	2,860	2,002
2927	Beals Senior Center	Office Exec Dir	1 senior center	3L4' T8 32w/EL	trof parabolic	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	110	1,260	1,260
2928	Beals Senior Center	Storage Chairs	1 senior center	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	13	500	350
2929	Beals Senior Center	Office Open Main	1 senior center	2L4' T8 32w/EL	trof parabolic	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	104	1,638	1,638
2930	Beals Senior Center	Office Open Main	1 senior center	3L4' T8 32w/EL	trof parabolic	7	7	88	0.6	3L4' T8 28w/ELEE LO	rlrb LF	7	66	0.5	0.2	251	1,638	1,638
2931	Beals Senior Center	Office Med Specialist	1 senior center	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	79	1,800	1,260
2932	Beals Senior Center	Bath Staff	1 senior center	2L2' T8 17w/EL	trof parabolic	1	1	33	0.0	2L2' T8 15w/ELEE LO	rlrb LF	1	28	0.0	0.0	11	2,340	1,638
2933	Beals Senior Center	Storage Elect	1 senior center	2L4' T8 32w/EL	trof parabolic	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	8	500	350
2934	Beals Senior Center	Lounge Staff	1 senior center	3L4' T8 32w/EL	trof parabolic	3	3	88	0.3	3L4' T8 28w/ELEE LO	rlrb LF	3	66	0.2	0.1	125	1,900	1,330
2935	Beals Senior Center	Office Assist Dir	1 senior center	3L4' T8 32w/EL	trof parabolic	3	3	88	0.3	3L4' T8 28w/ELEE LO	rlrb LF	3	66	0.2	0.1	83	1,260	1,260
2936	Beals Senior Center	Bath Women	1 senior center	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	51	2,340	1,638
2937	Beals Senior Center	Bath Men	1 senior center	2L4' T8 32w U/EL	trof parabolic	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	59	2,340	1,638
2938	Beals Senior Center	Lounge Ping Pong	1 senior center	3L4' T8 32w/EL	trof parabolic	11	11	88	1.0	3L4' T8 28w/ELEE LO	rlrb LF	11	66	0.7	0.2	320	1,330	1,330
2939	Beals Senior Center	Storage Ping Pong	1 senior center	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	11	500	350
2940	Beals Senior Center	Exercise Fitness	1 senior center	3L4' T8 32w/EL	trof parabolic	11	11	88	1.0	3L4' T8 28w/ELEE LO	rlrb LF	11	66	0.7	0.2	306	1,274	1,274
2941	Beals Senior Center	Storage Health Storage	1 senior center	2L4' T8 32w/EL	trof parabolic	9	9	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	9	44	0.4	0.1	50	350	350
2942	Beals Senior Center	Office Open Sanitarians	1 senior center	2L4' T8 32w/EL	trof parabolic	6	6	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	6	44	0.3	0.1	156	1,638	1,638
2943	Beals Senior Center	Storage Vault	1 senior center	2L4' T8 32w/EL	trof parabolic	6	6	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	6	44	0.3	0.1	67	700	700
2944	Beals Senior Center	Office Open Health District	1 senior center	2L4' T8 32w/EL	trof parabolic	13	13	60	0.8	2L4' T8 28w/ELEE LO	rlrb LF	13	44	0.6	0.2	339	1,638	1,638
2945	Beals Senior Center	Office Office Manager	1 senior center	2L4' T8 32w/EL	trof parabolic	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	40	1,260	1,260
2946	Beals Senior Center	Lounge Staff	1 senior center	2L4' T8 32w/EL	trof parabolic	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	63	1,330	1,330
2947	Beals Senior Center	Office Dir Nursing	1 senior center	2L4' T8 32w/EL	trof parabolic	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	57	1,800	1,260
2948	Beals Senior Center	Office Dir Health	1 senior center	2L4' T8 32w/EL	trof parabolic	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	40	1,260	1,260
2949	Beals Senior Center	Office Epidemiologist	1 senior center	2L4' T8 32w/EL	trof parabolic	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	40	1,260	1,260
2950	Beals Senior Center	Office Open Back Office	1 senior center	2L4' T8 32w/EL	trof parabolic	7	7	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	7	44	0.3	0.1	182	1,638	1,638
2951	Beals Senior Center	Bath Women	1 senior center	2L4' T8 32w/EL	trof parabolic	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	112	2,340	1,638
2952	Beals Senior Center	Bath Men	1 senior center	2L4' T8 32w/EL	trof parabolic	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	112	2,340	1,638
2953	Beals Senior Center	Storage Maint	1 senior center	2L4' T8 32w/EL	trof parabolic	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	8	500	350
2954	Beals Senior Center	Hall Health	1 senior center	4L4' T8 32w/EL-8'	trof parabolic	23	23	112	2.6	4L4' T8 28w/ELEE LO-8'	rlrb LF	23	87	2.0	0.6	1,635	2,860	2,002
2955	Beals Senior Center	Hall Health	1 senior center	4L3' T8 25w/EL-6'	trof parabolic	2	2	88	0.2	4L3' T8 21w/ELEE LO-6'	rlrb LF	2	84	0.2	0.0	23	2,860	2,002
2956	Beals Senior Center	Hall Health	1 senior center	2L3' T8 25w/EL	trof parabolic	2	2	47	0.1	2L3' T8 21w/ELEE LO	rlrb LF	2	42	0.1	0.0	29	2,860	2,002
2957	Beals Senior Center	Hall Health	1 senior center	2L4' T8 32w/EL	trof parabolic	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	45	2,860	2,860
2958	Beals Senior Center	Hall Ping Pong - Main Office	1 senior center	4L4' T8 32w/EL-8'	trof parabolic	4	4	112	0.4	4L4' T8 28w/ELEE LO-8'	rlrb LF	4	87	0.3	0.1	284	2,860	2,860
2959	Beals Senior Center	Hall Ping Pong - Main Office	1 senior center	4L3' T8 25w/EL-6'	trof parabolic	1	1	88	0.1	4L3' T8 21w/ELEE LO-6'	rlrb LF	1	84	0.1	0.0	11	2,860	2,860
2960	Beals Senior Center	Cafeteria Main	1 senior center	2L4' T8 32w/EL	trof parabolic	12	12	60	0.7	2L4' T8 28w/ELEE LO	rlrb LF	12	44	0.5	0.2	313	1,638	1,638
2961	Beals Senior Center	Cafeteria Main	1 senior center	28W CF HARDWIRED	can rec 8"	19	19	30	0.6	10 WATT LED/KIT	can kit LED Spectrum	19	11	0.2	0.4	607	1,638	1,638
2962	Beals Senior Center	Stage Main	1 senior center	2L4' T8 32w/EL	trof parabolic	12	12	60	0.7	2L4' T8 28w/ELEE LO	rlrb LF	12	44	0.5	0.2	446	2,340	1,638
2963	Beals Senior Center	Stage Main	1 senior center	75W INCANDESCENT	track can	5	5	75	0.4	8 WATT LED SI	screw in LED par20	5	8	0.0	0.3	779	2,340	1,638
2964	Beals Senior Center	Office Nutrition	1 senior center	2L4' T8 32w/EL	trof parabolic	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	57	1,800	1,260
2965	Beals Senior Center	Office Maint6	1 senior center	2L4' T8 32w/EL	trof parabolic	6	6	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	6	44	0.3	0.1	172	1,800	1,260
2966	Beals Senior Center	Kitchen Main	1 senior center	2L4' T8 32w U/EL	trof acr	12	12	60	0.7	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	12	35	0.4	0.3	712	2,340	2,340
2967	Beals Senior Center	Kitchen Ice	1 senior center	2L4' T8 32w/EL	trof parabolic	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	37	2,340	1,638
2968	Beals Senior Center	Storage Plates	1 senior center	2L4' T8 32w/EL	trof parabolic	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	16	1,000	700
2969	Beals Senior Center	Lounge Billiards	1 senior center	2L4' T8 32w/EL	trof parabolic	12	12	60	0.7	2L4' T8 28w/ELEE LO	rlrb LF	12	44	0.5	0.2	254	1,330	1,330
2970	Beals Senior Center	Lounge Billiards	1 senior center	13W CF HARDWIRED	keyless	12		15	0.2	NO RETRO	no change		16	0.2			1,330	1,330
2971	Beals Senior Center	Hall To Billiards	1 senior center	4L4' T8 32w/EL-8'	valance	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	213	2,860	2,002
2972	Beals Senior Center	Hall To Billiards	1 senior center	2L3' T8 25w/EL	valance	1	1	47	0.0	2L3' T8 21w/ELEE LO	rlrb LF	1	42	0.0	0.0	14	2,860	2,002
2973	Beals Senior Center	Hall To Billiards	1 senior center	2L4' T8 32w/EL	valance	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	91	2,860	2,002
2974	Beals Senior Center	Office Delivered Meals	1 senior center	2L4' T8 32w/EL	trof parabolic	6	6	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	6	44	0.3	0.1	120	1,260	1,260
2975	Beals Senior Center	Storage Delivered Meals	1 senior center	2L4' T8 32w/EL	trof parabolic	6	6	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	6	44	0.3	0.1	67	700	700
2976	Beals Senior Center	Gym Main	1 senior center	4L4' T5 HO/EL	high bay	24	24	234	5.6	98 WATT LED/NEW	new LED hibay wg	24	103	2.5	3.1	5,726	1,820	1,274

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
2977	Beals Senior Center	Storage Main	1 senior center	60W INCANDESCENT	keyless	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	52	500	500
2978	Beals Senior Center	Mechanical Boiler	1 senior center	4L4' T8 32w/EL-8'	industrial	4	4	112	0.4	4L4' T8 28w/ELEE LO-8'	rlrb LF	4	87	0.3	0.1	50	500	500
2979	Beals Senior Center	Bath Men (2)	1 senior center	2L4' T8 32w/EL	trof parabolic	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	74	2,340	1,638
2980	Beals Senior Center	Storage Shower	1 senior center	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	13	500	350
2981	Beals Senior Center	Storage Elect	1 senior center	2L4' T8 32w/EL	strip	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	16	500	500
2982	Beals Senior Center	Classroom Art	1 senior center	2L4' T8 32w/EL	trof parabolic	12	12	60	0.7	2L4' T8 28w/ELEE LO	rlrb LF	12	44	0.5	0.2	313	1,638	1,638
2983	Beals Senior Center	Bath Men	1 senior center	2L4' T8 32w/EL	trof parabolic	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	112	2,340	1,638
2984	Beals Senior Center	Bath Ladies	1 senior center	2L4' T8 32w/EL	trof parabolic	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	112	2,340	1,638
2985	Beals Senior Center	Conference 101	1 senior center	2L4' T8 32w/EL	trof parabolic	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	80	1,260	1,260
2986	Beals Senior Center	Storage Janitor	1 senior center	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	13	500	350
2987	Beals Senior Center	Classroom Computers	1 senior center	2L4' T8 32w/EL	trof parabolic	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	104	1,638	1,638
2988	Beals Senior Center	Shop Wood	1 senior center	2L4' T8 32w/EL	trof acr	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	0.1	208	1,638	1,638
2989	Beals Senior Center	Lobby Wood Shop	1 senior center	2L4' T8 32w U/EL	trof parabolic	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	73	2,860	2,002
2990	Beals Senior Center	Storage Drill Press	1 senior center	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	16	1,000	700
2991	Beals Senior Center	Lounge 105	1 senior center	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	58	1,330	1,330
2992	Beals Senior Center	Lounge 105	1 senior center	3L4' T8 32w/EL	trof parabolic	12	12	88	1.1	3L4' T8 28w/ELEE LO	rlrb LF	12	66	0.8	0.3	349	1,330	1,330
2993	Beals Senior Center	Classroom 104	1 senior center	2L4' T8 32w/EL	trof parabolic	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	0.1	298	2,340	1,638
2994	Beals Senior Center	Storage Kiln	1 senior center	2L4' T8 32w/EL	trof parabolic	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	22	700	700
2995	Beals Senior Center	Conference Community Room	1 senior center	2L4' T8 32w/EL	trof parabolic	12	12	60	0.7	2L4' T8 28w/ELEE LO	rlrb LF	12	44	0.5	0.2	240	1,260	1,260
2996	Beals Senior Center	Storage Card Room	1 senior center	2L4' T8 32w/EL	trof parabolic	9	9	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	9	44	0.4	0.1	100	700	700
2997	Beals Senior Center	Cafeteria Coffee	1 senior center	2L4' T8 32w/EL	trof parabolic	9	9	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	9	44	0.4	0.1	335	2,340	1,638
2998	Beals Senior Center	Retail Tag Sale	1 senior center	3L4' T8 32w/EL	trof parabolic	3	3	88	0.3	3L4' T8 28w/ELEE LO	rlrb LF	3	66	0.2	0.1	153	2,340	1,638
2999	Beals Senior Center	Office Friends	1 senior center	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	55	1,260	1,260
3000	Beals Senior Center	Office Friends	1 senior center	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	55	1,260	1,260
3001	Beals Senior Center	Storage Drinks	1 senior center	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	15	350	350
3002	Beals Senior Center	Lobby Clinic	1 senior center	4L4' T8 32w/EL-8'	valance	4	4	112	0.4	4L4' T8 28w/ELEE LO-8'	rlrb LF	4	87	0.3	0.1	199	2,002	2,002
3003	Beals Senior Center	Office Open Clinic	1 senior center	3L4' T8 32w/EL	trof parabolic	3	3	88	0.3	3L4' T8 28w/ELEE LO	rlrb LF	3	66	0.2	0.1	153	2,340	1,638
3004	Beals Senior Center	Bath Clinic	1 senior center	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	37	2,340	1,638
3005	Beals Senior Center	Storage Compressor	1 senior center	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	8	500	350
3006	Beals Senior Center	Storage Supplies	1 senior center	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	22	1,000	700
3007	Beals Senior Center	Office Dental	1 senior center	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	39	1,800	1,260
3008	Beals Senior Center	Office Exam A	1 senior center	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	39	1,800	1,260
3009	Beals Senior Center	Office Aprn	1 senior center	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	39	1,800	1,260
3010	Beals Senior Center	Office Exam B	1 senior center	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	39	1,800	1,260
3011	Beals Senior Center	Kitchen Near Exam Rooms	1 senior center	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	51	2,340	1,638
3012	Beals Senior Center	Foyer Near Clinic	1 senior center	2L2' T8 17w/EL	trof parabolic	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	27	2,860	2,860
3013	Beals Senior Center	Hall Clinic - Conf 101	1 senior center	4L4' T8 32w/EL-8'	valance	15	15	112	1.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	15	87	1.3	0.4	1,066	2,860	2,002
3014	Beals Senior Center	Hall Clinic - Conf 101	1 senior center	75W INCANDESCENT	track can	5	5	75	0.4	8 WATT LED SI	screw in LED par20	5	8	0.0	0.3	952	2,860	2,860
3015	Beals Senior Center	Hall Adjacent To Maint Office	1 senior center	4L4' T8 32w/EL-8'	valance	5	5	112	0.6	4L4' T8 28w/ELEE LO-8'	rlrb LF	5	87	0.4	0.1	355	2,860	2,002
3016	Beals Senior Center	Hall Adjacent To Maint Office	1 senior center	2L3' T8 25w/EL	valance	1	1	47	0.0	2L3' T8 21w/ELEE LO	rlrb LF	1	42	0.0	0.0	14	2,860	2,002
3017	Beals Senior Center	Hall Conf 101 - K	1 senior center	4L4' T8 32w/EL-8'	valance	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	142	2,860	2,002
3018	Beals Senior Center	Hall Conf 101 - K	1 senior center	2L4' T8 32w/EL	valance	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	45	2,860	2,002
3019	Beals Senior Center	Hall Adj To Art	1 senior center	4L4' T8 32w/EL-8'	valance	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	213	2,860	2,002
3020	Beals Senior Center	Hall Adj To Art	1 senior center	2L4' T8 32w/EL	valance	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	45	2,860	2,002
3021	Beals Senior Center	Hall K - Billiards	1 senior center	4L4' T8 32w/EL-8'	valance	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	640	2,860	2,002
3022	Beals Senior Center	Hall K - Billiards	1 senior center	2L4' T8 32w/EL	valance	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	45	2,860	2,002
3023	Beals Senior Center	Hall K - Billiards	1 senior center	2L3' T8 25w/EL	valance	1	1	47	0.0	2L3' T8 21w/ELEE LO	rlrb LF	1	42	0.0	0.0	14	2,860	2,002
3024	Beals Senior Center	Foyer Near Gym	1 senior center	2L2' T8 17w/EL	trof parabolic	1	1	33	0.0	2L2' T8 15w/ELEE LO	rlrb LF	1	28	0.0	0.0	13	2,860	2,860
3025	Beals Senior Center	Hall K - Main Entry	1 senior center	4L4' T8 32w/EL-8'	valance	10	10	112	1.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	10	87	0.9	0.2	711	2,860	2,002
3026	Beals Senior Center	Hall K - Main Entry	1 senior center	4L3' T8 25w/EL-6'	valance	1	1	88	0.1	4L3' T8 21w/ELEE LO-6'	rlrb LF	1	84	0.1	0.0	11	2,860	2,002
3027	Beals Senior Center	Hall K - Main Entry	1 senior center	2L2' T8 17w/EL	trof parabolic	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	27	2,860	2,002
3039	Dennis Malone Aquatic Center	Lobby Main	1	250W MERCURY VAPOR	cylinder surf mt.	4	4	290	1.2	46 WATT LED/KIT	can kit LED Spectrum	4	48	0.2	1.0	4,848	5,278	5,278
3040	Dennis Malone Aquatic Center	Lobby Main	1	13W CF HARDWIRED	can rec 6"	7		15	0.1	NO RETRO	no change		16	0.1			5,278	5,278
3041	Dennis Malone Aquatic Center	Locker Mens Vestibule	1	13W CF HARDWIRED	can rec 6"	1		15	0.0	NO RETRO	no change		16	0.0			5,278	3,695
3042	Dennis Malone Aquatic Center	Storage Fire Alarm	1	60W INCANDESCENT	drum	1	1	60	0.1	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	21	500	350
3043	Dennis Malone Aquatic Center	Locker Men	1	2L4' T8 32w/EL	trof acr	10	10	60	0.6	2L4' T8 28w/ELEE LO	rlrb LF	10	44	0.4	0.2	797	5,278	5,278
3044	Dennis Malone Aquatic Center	Locker Men	1	2L4' T8 32w/EL	vanity	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	159	5,278	5,278
3045	Dennis Malone Aquatic Center	Locker Men	1	2L4' T8 32w/EL	vapor tight	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	159	5,278	5,278
3046	Dennis Malone Aquatic Center	Locker Men	1	13W CF HARDWIRED	can rec 6"	1		15	0.0	NO RETRO	no change		16	0.0			5,278	3,695
3047	Dennis Malone Aquatic Center	Locker Womans	1	2L4' T8 32w/EL	trof acr	12	12	60	0.7	2L4' T8 28w/ELEE LO	rlrb LF	12	44	0.5	0.2	957	5,278	5,278
3048	Dennis Malone Aquatic Center	Locker Womans	1	2L4' T8 32w/EL	vanity	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	159	5,278	5,278
3049	Dennis Malone Aquatic Center	Locker Womans	1	13W CF HARDWIRED	can rec 6"	5		15	0.1	NO RETRO	no change		16	0.1			5,278	3,695
3050	Dennis Malone Aquatic Center	Pool Pool	1	250W MERCURY VAPOR	high bay	20	20	290	5.8	98 WATT LED/NEW	new LED hibay wg	20	103	2.1	3.7	18,763	5,278	5,278
3051	Dennis Malone Aquatic Center	Locker Staff	1	2L4' T8 32w/EL	wrap	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	239	5,278	3,695
3052	Dennis Malone Aquatic Center	Bath Staff	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	80	5,278	3,695
3053	Dennis Malone Aquatic Center	Bath Shower	1	18W CF HARDWIRED	box acrylic	2	2	20	0.0	16 WATT LED/NEW	new LED drum	2	17	0.0	0.0	32	5,278	3,695
3054	Dennis Malone Aquatic Center	Locker Changing	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	125	5,278	5,278
3055	Dennis Malone Aquatic Center	Locker Changing	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	80	5,278	5,278
3056	Dennis Malone Aquatic Center	Locker Changing	1	4L4' T8 32w/EL-8'	vanity	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	125	5,278	3,695
3057	Dennis Malone Aquatic Center	Storage Air Handler	1	4L4' T8 32w/EL-8'	industrial	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	47	1,000	700
3058	Dennis Malone Aquatic Center	Storage Mech Loft	2	4L4' T12 34w EE/EEMAG-8'	industrial	6	6	140	0.8	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.3	301	1,000	1,000
3059	Dennis Malone Aquatic Center	Mechanical Boiler	1	2L4' T8 32w/EL-8'	industrial	4	4	60	0.2	2L4' T8 28w/ELEE LO-8'	rlrb LF	4	44	0.2	0.1	30	500	500
3060	Dennis Malone Aquatic Center	Storage Janitor	1	1L4' T8 32w/EL	industrial	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	3	500	350

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
3061	Dennis Malone Aquatic Center	Storage Chairs	1	1L4' T8 32w/EL	industrial	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	13	1,000	700
3062	Dennis Malone Aquatic Center	Office Front	1	65W INCANDESCENT	can rec 6"	6	6	65	0.4	8 WATT LED SI	screw in LED Alamp	6	8	0.1	0.3	581	1,800	1,260
3066	Water Filtration Plant & High Service Pump Station	Storage Back Garage	1	4L4' T8 32w/EL-8'	industrial	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	112	500	350
3067	Water Filtration Plant & High Service Pump Station	Hall Back Garage	1	2L4' T8 32w/EL	vapor tight	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	119	2,500	1,750
3068	Water Filtration Plant & High Service Pump Station	Storage Raw Water Pump Station	1	60W INCANDESCENT	keyless	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	52	500	350
3069	Water Filtration Plant & High Service Pump Station	Storage High Service Station	1	150W INCANDESCENT	keyless	4	4	150	0.6	11 WATT LED SI	screw in LED Alamp	4	12	0.0	0.6	277	500	350
3070	Water Filtration Plant & High Service Pump Station	Foyer Main	1	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	23	2,500	1,750
3071	Water Filtration Plant & High Service Pump Station	Office 202	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	114	1,800	1,260
3072	Water Filtration Plant & High Service Pump Station	Office 203	1	2L4' T8 32w/EL	trof acr	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	86	1,800	1,260
3073	Water Filtration Plant & High Service Pump Station	Office 204	1	2L4' T8 32w/EL	trof acr	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	86	1,800	1,260
3074	Water Filtration Plant & High Service Pump Station	Office 207 Control Room	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	114	1,800	1,260
3075	Water Filtration Plant & High Service Pump Station	Storage 214 Elect	1	2L4' T8 32w/EL	trof acr	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	48	1,000	700
3076	Water Filtration Plant & High Service Pump Station	Storage 212	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	32	1,000	700
3077	Water Filtration Plant & High Service Pump Station	Office 216	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	114	1,800	1,260
3078	Water Filtration Plant & High Service Pump Station	Lab 217	1	2L4' T8 32w/EL	trof acr	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	0.1	1,114	8,760	6,132
3079	Water Filtration Plant & High Service Pump Station	Lab 217	1	2L2' T8 17w/EL	trof acr	1	1	33	0.0	2L2' T8 15w/ELEE LO	rlrb LF	1	28	0.0	0.0	41	8,760	6,132
3080	Water Filtration Plant & High Service Pump Station	Storage 217	1	2L4' T8 32w/EL	trof acr	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	24	500	350
3081	Water Filtration Plant & High Service Pump Station	Storage 217	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	8	500	350
3082	Water Filtration Plant & High Service Pump Station	Bath 226	1	1L4' T8 32w/EL	trof acr 1' wide	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	35	2,500	1,750
3083	Water Filtration Plant & High Service Pump Station	Bath 226	1	60W INCANDESCENT	can rec 6"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	0.1	258	2,500	1,750
3084	Water Filtration Plant & High Service Pump Station	Locker 226	1	1L4' T8 32w/EL	trof acr 1' wide	3	3	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	3	23	0.1	0.0	52	2,500	1,750
3085	Water Filtration Plant & High Service Pump Station	Locker 226 (2)	1	75W INCANDESCENT	can rec 10"	4	4	75	0.3	8 WATT LED SI	screw in LED Alamp	4	8	0.0	0.3	666	2,500	2,500
3086	Water Filtration Plant & High Service Pump Station	Storage 225	1	2L2' T8 17w/EL	trof parabolic	1	1	33	0.0	2L2' T8 15w/ELEE LO	rlrb LF	1	28	0.0	0.0	2	500	350
3087	Water Filtration Plant & High Service Pump Station	Bath 224	1	1L4' T8 32w/EL	trof acr 1' wide	3	3	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	3	23	0.1	0.0	52	2,500	1,750
3088	Water Filtration Plant & High Service Pump Station	Bath 224	1	15W CF SCREWIN	can rec 6"	2	2	17	0.0	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.0	43	2,500	1,750
3089	Water Filtration Plant & High Service Pump Station	Locker 224	1	1L4' T8 32w/EL	trof acr 1' wide	6	6	30	0.2	1L4' T8 28w/ELEE LO	rlrb LF	6	23	0.1	0.0	104	2,500	1,750
3090	Water Filtration Plant & High Service Pump Station	Locker 224	1	75W INCANDESCENT	can rec 10"	1	1	75	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	167	2,500	2,500
3091	Water Filtration Plant & High Service Pump Station	Locker 224 (2)	1	75W INCANDESCENT	can rec 10"	4	4	75	0.3	8 WATT LED SI	screw in LED Alamp	4	8	0.0	0.3	666	2,500	2,500
3092	Water Filtration Plant & High Service Pump Station	Kitchen Near Lockers	1	2L4' T8 32w/EL	trof acr	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	72	1,500	1,050
3093	Water Filtration Plant & High Service Pump Station	Lounge Near Lockers	1	2L4' T8 32w/EL	trof acr	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	0.1	242	1,900	1,330
3094	Water Filtration Plant & High Service Pump Station	Conference 209	1	4L4' T8 32w/EL-8'	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	89	1,800	1,260
3095	Water Filtration Plant & High Service Pump Station	Hall Main	1	2L2' T8 17w/EL	trof acr	14	14	33	0.5	2L2' T8 15w/ELEE LO	rlrb LF	14	28	0.4	0.1	163	2,500	1,750
3096	Water Filtration Plant & High Service Pump Station	Hall Control-Lockers	1	2L2' T8 17w/EL	trof acr	13	13	33	0.4	2L2' T8 15w/ELEE LO	rlrb LF	13	28	0.4	0.1	151	2,500	1,750
3097	Water Filtration Plant & High Service Pump Station	Hall 228	1	2L4' T8 32w/EL	trof acr	25	25	60	1.5	2L4' T8 28w/ELEE LO	rlrb LF	25	44	1.1	0.4	994	2,500	1,750
3098	Water Filtration Plant & High Service Pump Station	Storage Tank Gallery	1	2L4' T8 32w/EL	vapor tight	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	0.1	64	500	350
3099	Water Filtration Plant & High Service Pump Station	Storage Tank Gallery	1	150W INCANDESCENT	flood	4	4	150	0.6	21 WATT LED/NEW	new LED flood	4	22	0.1	0.5	256	500	350
3100	Water Filtration Plant & High Service Pump Station	Storage Tank Gallery	1	2L4' T8 32w/EL	vapor tight	6	6	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	6	44	0.3	0.1	48	500	350
3101	Water Filtration Plant & High Service Pump Station	Storage 231	1	2L4' T8 32w/EL	vapor tight	15	15	60	0.9	2L4' T8 28w/ELEE LO	rlrb LF	15	44	0.7	0.2	239	1,000	700
3102	Water Filtration Plant & High Service Pump Station	Storage 231	1	2L4' T8 32w/EL	vapor tight	12	12	60	0.7	2L4' T8 28w/ELEE LO	rlrb LF	12	44	0.5	0.2	191	1,000	700
3103	Water Filtration Plant & High Service Pump Station	Storage 231	1	2L4' T8 32w/EL	vapor tight	15	15	60	0.9	2L4' T8 28w/ELEE LO	rlrb LF	15	44	0.7	0.2	239	1,000	700
3104	Water Filtration Plant & High Service Pump Station	Storage 230	1	2L4' T8 32w/EL	industrial	5	5	60	0.3	2L4' T8 28w/ELEE LO	rlrb LF	5	44	0.2	0.1	40	500	350
3105	Water Filtration Plant & High Service Pump Station	Stair Off 231	stair	2L4' T8 32w/EL	vanity	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	119	2,500	1,750
3106	Water Filtration Plant & High Service Pump Station	Storage Large Green Pipe	lower	2L4' T8 32w/EL	vapor tight	13	13	60	0.8	2L4' T8 28w/ELEE LO	rlrb LF	13	44	0.6	0.2	207	1,000	1,000
3107	Water Filtration Plant & High Service Pump Station	Storage Chem Lines (2)	lower	100W INCANDESCENT	explosion	2	2	100	0.2	15 WATT LED SI	screw in LED Alamp	2	16	0.0	0.2	84	500	350
3108	Water Filtration Plant & High Service Pump Station	Storage Wash Water Drains	lower	2L4' T8 32w/EL	vapor tight	12	12	60	0.7	2L4' T8 28w/ELEE LO	rlrb LF	12	44	0.5	0.2	191	1,000	700
3109	Water Filtration Plant & High Service Pump Station	Lobby Generator	lower	2L4' T8 32w/EL	industrial	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	159	2,500	1,750
3110	Water Filtration Plant & High Service Pump Station	Storage Generator	lower	2L4' T8 32w/EL	industrial	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	32	500	350
3111	Water Filtration Plant & High Service Pump Station	Stair Near Generator	stair	2L4' T8 32w/EL	vanity	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	80	2,500	1,750
3112	Water Filtration Plant & High Service Pump Station	Stair Near Generator	stair	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	40	2,500	2,500
3113	Water Filtration Plant & High Service Pump Station	Stair Near Main Lobby	stair	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	40	2,500	2,500
3114	Water Filtration Plant & High Service Pump Station	Stair Near Main Lobby	stair	2L4' T8 32w/EL	vanity	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	80	2,500	1,750
3115	Water Filtration Plant & High Service Pump Station	Mechanical 115	lower	2L4' T8 32w/EL	industrial	5	5	60	0.3	2L4' T8 28w/ELEE LO	rlrb LF	5	44	0.2	0.1	40	500	500
3116	Water Filtration Plant & High Service Pump Station	Storage Chem Treatment	lower	2L4' T8 32w/EL	vapor tight	49	49	60	2.9	2L4' T8 28w/ELEE LO	rlrb LF	49	44	2.2	0.8	779	1,000	700
3117	Water Filtration Plant & High Service Pump Station	Storage 113	lower	2L4' T8 32w/EL	vapor tight	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	32	500	350
3118	Water Filtration Plant & High Service Pump Station	Hall Time Clock	lower	2L4' T8 32w/EL	industrial	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	119	2,500	1,750
3119	Water Filtration Plant & High Service Pump Station	Storage Garage	lower	4L4' T5 HO/EL	high bay	6	6	234	1.4	98 WATT LED/NEW	new LED hibay wg	6	103	0.6	0.8	787	1,000	700
3120	Water Filtration Plant & High Service Pump Station	Storage Garage	lower	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	48	1,000	1,000
3121	Water Filtration Plant & High Service Pump Station	Storage Garage	lower	2L4' T8 32w/EL	industrial	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	32	1,000	1,000
3122	Water Filtration Plant & High Service Pump Station	Storage Chain Saws	lower	2L4' T8 32w/EL	industrial	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	8	500	350
3123	Water Filtration Plant & High Service Pump Station	Storage 103	lower	2L4' T8 32w/EL	industrial	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	16	500	350
3124	Water Filtration Plant & High Service Pump Station	Storage 104	lower	2L4' T8 32w/EL	industrial	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	16	500	350
3125	Water Filtration Plant & High Service Pump Station	Storage 105	lower	2L4' T8 32w/EL	industrial	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	16	500	350
3126	Water Filtration Plant & High Service Pump Station	Storage 106	lower	2L4' T8 32w/EL	industrial	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	8	500	350
3127	Water Filtration Plant & High Service Pump Station	Bath 107	lower	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	40	2,500	1,750
3128	Water Filtration Plant & High Service Pump Station	Storage Garage Mez	lower	2L4' T8 32w/EL	industrial	5	5	60	0.3	2L4' T8 28w/ELEE LO	rlrb LF	5	44	0.2	0.1	40	500	350
3129	Water Filtration Plant & High Service Pump Station	Stair Near Lockers	stair	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	40	2,500	2,500
3130	Water Filtration Plant & High Service Pump Station	Stair Near Lockers	stair	2L4' T8 32w/EL	vanity	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	80	2,500	1,750
3131	Water Filtration Plant & High Service Pump Station	Storage 110	lower	2L4' T8 32w/EL	vapor tight	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	32	500	350
3132	Water Filtration Plant & High Service Pump Station	Storage 111	lower	2L4' T8 32w/EL	vapor tight	5	5	60	0.3	2L4' T8 28w/ELEE LO	rlrb LF	5	44	0.2	0.1	40	500	350
3138	#1 Well House	Storage All	1	2L4' T12 34w EE/EEMAG	industrial	4	4	70	0.3	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	52	500	500
3140	#2 Well House	Storage Well 2	1	4L4' T8 32w/EL-8'	vapor tight	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	12	500	500
3141	#2 Well House	Storage Well Chem Bldg	1	2L4' T12 34w EE/EEMAG	vapor tight	9	9	70	0.6	2L4' T8 28w/ELEE LO	rlrb LF	9	44	0.4	0.2	117	500	500
3144	Chemical Control, Generator & #3-5 Well Houses	Storage #3 Well House	1	100W INCANDESCENT	explosion	2	2	100	0.2	15 WATT LED SI	screw in LED Alamp	2	16	0.0	0.2	84	500	500

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
3145	Chemical Control, Generator & #3-5 Well Houses	Storage #4 Well House	1	150W INCANDESCENT	explosion	2	2	150	0.3	15 WATT LED SI	screw in LED Alamp	2	16	0.0	0.3	134	500	500
3146	Chemical Control, Generator & #3-5 Well Houses	Storage #5 Well House	1	150W INCANDESCENT	explosion	2	2	150	0.3	15 WATT LED SI	screw in LED Alamp	2	16	0.0	0.3	134	500	500
3147	Chemical Control, Generator & #3-5 Well Houses	Storage Generator	1	2L8' T12 60w EE/EEMAG	strip	4	4	123	0.5	2L4' T8 28w/ELEE HI/NEW-8'	new LF strip	4	67	0.3	0.2	112	500	500
3148	Chemical Control, Generator & #3-5 Well Houses	Storage Main Bldg	1	120W INCANDESCENT	explosion	4	4	120	0.5	15 WATT LED SI	screw in LED Alamp	4	16	0.1	0.4	209	500	500
3149	Chemical Control, Generator & #3-5 Well Houses	Storage Chem Room	1	120W INCANDESCENT	explosion	2	2	120	0.2	15 WATT LED SI	screw in LED Alamp	2	16	0.0	0.2	104	500	500
3152	Chemical Control - Mechanic St	Storage Mechanic St	1	2L4' T12 34w EE/EEMAG	vapor tight	4	4	70	0.3	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	52	500	500
3153	Chemical Control - Mechanic St	Storage Mechanic St	1	28W CF HARDWIRED	rectangular	1		30	0.0	NO RETRO	no change		32	0.0			500	500
3155	Pump Control - Peck Lane	Storage Pump Room	1	2L4' T8 32w/EL	vapor tight	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	0.1	64	500	500
3158	Pump Control & Generator - Hill St.	Storage Pump Room	1	200W INCANDESCENT	keyless	10	10	200	2.0	19 WATT LED SI	screw in LED Alamp	10	20	0.2	1.8	900	500	500
3159	Pump Control & Generator - Hill St.	Mechanical Boiler	1	200W INCANDESCENT	keyless	2	2	200	0.4	19 WATT LED SI	screw in LED Alamp	2	20	0.0	0.4	180	500	500
3161	Pump and Control - Wolcott St	Storage Pump Room	1	2L4' T8 32w/EL	vapor tight	9	9	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	9	44	0.4	0.1	72	500	500
3163	Rockwell Park & Pavilion	Auditorium Main	1	2L4' T8 32w/EL	wrap	12	12	60	0.7	2L4' T8 28w/ELEE LO	rlrb LF	12	44	0.5	0.2	95	500	500
3164	Rockwell Park & Pavilion	Hall Restrooms	1	60W INCANDESCENT	jar	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	52	500	500
3165	Rockwell Park & Pavilion	Bath Men (2)	1	2x13W CF HARDWIRED	square surface mt.	2	2	30	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.0	13	500	350
3166	Rockwell Park & Pavilion	Storage Christmas Supplies	1	13W CF HARDWIRED	keyless	1		15	0.0	NO RETRO	no change		16	0.0			500	350
3167	Rockwell Park & Pavilion	Mechanical Boiler	1	60W INCANDESCENT	keyless	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	52	500	350
3168	Rockwell Park & Pavilion	Storage Boiler	1	13W CF HARDWIRED	keyless	1		15	0.0	NO RETRO	no change		16	0.0			500	500
3169	Rockwell Park & Pavilion	Kitchen Main	1	2x60W INCANDESCENTS	square surface mt.	1	1	120	0.1	16 WATT LED/NEW	new LED drum	1	17	0.0	0.1	52	500	350
3170	Rockwell Park & Pavilion	Storage K	1	2x60W INCANDESCENTS	square surface mt.	1	1	120	0.1	16 WATT LED/NEW	new LED drum	1	17	0.0	0.1	52	500	350
3171	Bathhouse	Storage Boats	1	60W INCANDESCENT	square surface mt.	10		60	0.6	NO RETRO	no change per customer		63	0.6				
3172	Bathhouse	Bath Men (2)	1	60W INCANDESCENT	square surface mt.	4		60	0.2	NO RETRO	no change per customer		63	0.2				
3173	Bathhouse	Storage Goals	1	60W INCANDESCENT	square surface mt.	2		60	0.1	NO RETRO	no change per customer		63	0.1				
3174	Bathhouse	Stair Main	stair	60W INCANDESCENT	square surface mt.	4		60	0.2	NO RETRO	no change per customer		63	0.2				
3175	Bathhouse	Storage Trees	2	60W INCANDESCENT	square surface mt.	8		60	0.5	NO RETRO	no change per customer		63	0.5				
3176	Bathhouse	Storage Changing (2)	2	60W INCANDESCENT	square surface mt.	4		60	0.2	NO RETRO	no change per customer		63	0.2				
3180	Muzzy Field	Storage Locker Room	1	4L4' T12 34w EE/EEMAG	trof acr	2	2	140	0.3	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.1	53	500	500
3181	Muzzy Field	Locker Main	1	4L4' T12 34w EE/EEMAG	trof acr	6	6	140	0.8	4L4' T8 28w/ELEE LO	rlrb LF	6	87	0.5	0.3	48	150	150
3182	Muzzy Field	Bath Locker Room	1	2L4' T12 34w EE/EEMAG	trof acr	2	2	70	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.1	8	150	150
3183	Muzzy Field	Bath Locker Room	1	4L4' T12 34w EE/EEMAG	trof acr	2	2	140	0.3	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.1	16	150	150
3184	Muzzy Field	Storage Concession	1	4L4' T12 34w EE/EEMAG-8'	wrap	2	2	140	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.1	53	500	500
3185	Muzzy Field	Bath Main (2)	1	4L4' T12 34w EE/EEMAG-8'	wrap	4	4	140	0.6	4L4' T8 28w/ELEE LO-8'	rlrb LF	4	87	0.3	0.2	32	150	150
3186	Muzzy Field	Mechanical Boiler	1	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	3	50	50
3188	Muzzy Field	Storage Electric	1	2L8' T12 60w EE/EEMAG	wrap narrow	3	3	123	0.4	2L4' T8 28w/ELEE HI/NEW-8'	new LF wrap	3	67	0.2	0.2	84	500	500
3189	Muzzy Field	Storage Pads (2)	1	2L8' T12 60w EE/EEMAG	wrap narrow	4	4	123	0.5	2L4' T8 28w/ELEE HI/NEW-8'	new LF wrap	4	67	0.3	0.2	112	500	500
3190	Muzzy Field	Locker Main	1	2L8' T12 60w EE/EEMAG	wrap narrow	12	12	123	1.5	2L4' T8 28w/ELEE HI/NEW-8'	new LF wrap	12	67	0.8	0.7	100	150	150
3191	Muzzy Field	Storage Locker Room	1	60W INCANDESCENT	keyless	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	52	500	500
3192	Muzzy Field	Locker Officials	1	2L8' T12 60w EE/EEMAG	wrap narrow	3	3	123	0.4	2L4' T8 28w/ELEE HI/NEW-8'	new LF wrap	3	67	0.2	0.2	25	150	150
3193	Muzzy Field	Locker Officials	1	1L4' T12 34w EE/EEMAG	vanity	1	1	40	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	3	150	150
3194	Muzzy Field	Bath Men (2)	1	2L8' T12 60w EE/EEMAG	wrap narrow	6	6	123	0.7	2L4' T8 28w/ELEE HI/NEW-8'	new LF wrap	6	67	0.4	0.3	50	150	150
3195	Muzzy Field	Storage Concession	1	2L8' T12 60w EE/EEMAG	wrap narrow	3	3	123	0.4	2L4' T8 28w/ELEE HI/NEW-8'	new LF wrap	3	67	0.2	0.2	84	500	500
3197	Muzzy Field	Storage Press Box	2	2L8' T12 60w EE/EEMAG	wrap narrow	3	3	123	0.4	2L4' T8 28w/ELEE HI/NEW-8'	new LF wrap	3	67	0.2	0.2	84	500	500
3198	Muzzy Field	Storage Shed	1	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	26	500	500
3200	Ski Lodge	Bath Men	1	26W CF HARDWIRED	square surface mt.	1	1	28	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	6	500	350
3201	Ski Lodge	Exercise Rec	1	2L4' T12 34w EE/EEMAG	wrap wide	5	5	70	0.4	2L4' T8 28w/ELEE LO	rlrb LF	5	44	0.2	0.1	65	500	350
3202	Ski Lodge	Storage Tennis	1	2L4' T12 34w EE/EEMAG	wrap	1	1	70	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	13	500	350
3203	Ski Lodge	Bath Women	1	2x60W INCANDESCENTS	square surface mt.	1	1	120	0.1	16 WATT LED/NEW	new LED drum	1	17	0.0	0.1	52	500	350
3205	Page Park Pavilion	Lobby Main	1	22W & 32W CIRCLELINE HARDWIRED	drum	2	2	58	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.1	99	1,200	1,200
3206	Page Park Pavilion	Exercise Mats	1	4L4' T8 32w/EL-8'	wrap	4	4	112	0.4	4L4' T8 28w/ELEE LO-8'	rlrb LF	4	87	0.3	0.1	119	1,200	840
3207	Page Park Pavilion	Exercise Mats	1	60W INCANDESCENT	rectangular	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	124	1,200	840
3208	Page Park Pavilion	Exercise Mats	1	2L4' T12 34w EE/EEMAG	wrap	2	2	70	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.1	62	1,200	840
3209	Page Park Pavilion	Exercise Mats	1	4L4' T8 32w/EL-8'	wrap	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	60	1,200	840
3210	Page Park Pavilion	Storage Boiler	1	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	26	500	350
3211	Page Park Pavilion	Bath Men (2)	1	22W & 32W CIRCLELINE HARDWIRED	drum	2	2	58	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.1	99	1,200	840
3212	Page Park Pavilion	Bath Men (2)	1	2L2' T8 17w/EL	vanity	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	11	1,200	840
3217	Pool	Lobby Main	1	60W INCANDESCENT	square recessed	3	3	60	0.2	8 WATT LED SI	screw in LED Alamp	3	8	0.0	0.2	77	500	500
3218	Pool	Lobby Main	1	2L4' T12 34w EE/EEMAG	vapor tight	2	2	70	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.1	26	500	500
3219	Pool	Lounge Main	1	4L4' T12 34w EE/EEMAG-8'	wrap wide	1	1	140	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.1	26	500	350
3220	Pool	Storage Paint	1	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	26	500	500
3221	Pool	Storage Sink	1	60W INCANDESCENT	square recessed	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	52	500	350
3222	Pool	Locker Boys	1	2x13W CF HARDWIRED	square surface mt.	17	17	30	0.5	16 WATT LED/NEW	new LED drum	17	17	0.3	0.2	112	500	500
3223	Pool	Storage Goals	1	2L4' T12 34w EE/EEMAG	wrap	2	2	70	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.1	26	500	500
3224	Pool	Mechanical Boiler/Chlorine	1	28W CF HARDWIRED	old drum	3	3	30	0.1	16 WATT LED/NEW	new LED drum	3	17	0.1	0.0	20	500	500
3225	Pool	Mechanical Boiler/Chlorine	1	3 WATT LED	specialty application	5		3	0.0	NO RETRO	no change		3	0.0			500	500
3226	Pool	Storage Janitor	1	28W CF HARDWIRED	old drum	1	1	30	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	7	500	500
3227	Pool	Locker Girls	1	28W CF HARDWIRED	square surface mt.	15	15	30	0.5	16 WATT LED/NEW	new LED drum	15	17	0.3	0.2	99	500	500
3228	Pool	Storage Paddle Boards	1	2L4' T12 34w EE/EEMAG	wrap	2	2	70	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.1	26	500	500
3229	Pool	Storage Elect Panel	1	28W CF HARDWIRED	old drum	2	2	30	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.0	13	500	500
3230	Pool	Storage Paint	1	28W CF HARDWIRED	old drum	1	1	30	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	7	500	500
3231	Pool	Office Bench	1	2L4' T12 34w EE/EEMAG	wrap	1	1	70	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	13	500	500
3234	Recreation Building	Locker Equip	1	2L4' T12 34w EE/EEMAG	old industrial	11		70	0.8	NO RETRO	no change per customer		74	0.8			20	14
3235	Recreation Building	Bath Equip	1	60W INCANDESCENT	keyless	1		60	0.1	NO RETRO	no change per customer		63	0.1			20	14
3236	Recreation Building	Storage Garage	1	60W INCANDESCENT	keyless	1		60	0.1	NO RETRO	no change per customer		63	0.1			500	500
3237	Recreation Building	Storage 2Nd Floor	2	60W INCANDESCENT	keyless	3		60	0.2	NO RETRO	no change per customer		63	0.2			500	500

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
3238	Hill Street	Lobby Main	1	2L4' T12 34w EE/EEMAG	wrap	2		70	0.1	NO RETRO	no change per customer		74	0.1				
3239	Hill Street	Bath Men	1	2x13W CF HARDWIRED	drum	1		30	0.0	NO RETRO	no change per customer		32	0.0				
3240	Hill Street	Storage Computers	1	4L4' T12 34w EE/EEMAG	trof acr	3		140	0.4	NO RETRO	no change per customer		147	0.4				
3241	Hill Street	Storage Cases	1	2x60W INCANDESCENTS	drum	1		120	0.1	NO RETRO	no change per customer		126	0.1				
3242	Hill Street	Storage Janitor	1	2x60W INCANDESCENTS	drum	1		120	0.1	NO RETRO	no change per customer		126	0.1				
3243	Hill Street	Bath File	1	4L4' T12 34w EE/EEMAG-8'	wrap	1		140	0.1	NO RETRO	no change per customer		147	0.1				
3244	Hill Street	Storage Printers	1	2x60W INCANDESCENTS	drum	1		120	0.1	NO RETRO	no change per customer		126	0.1				
3245	Hill Street	Storage Tires	1	2L4' T12 34w EE/EEMAG	wrap	1		70	0.1	NO RETRO	no change per customer		74	0.1				
3246	Hill Street	Bath Women	1	2x13W CF HARDWIRED	drum	1		30	0.0	NO RETRO	no change per customer		32	0.0				
3247	Hill Street	Storage Fireplace	b	2L8' T12 60w EE/EEMAG	strip	4		123	0.5	NO RETRO	no change per customer		129	0.5				
3248	Hill Street	Storage Fireplace	b	2L4' T12 34w EE/EEMAG	strip	2		70	0.1	NO RETRO	no change per customer		74	0.1				
3249	Hill Street	Storage Oil Tanks (2)	b	60W INCANDESCENT	keyless	2		60	0.1	NO RETRO	no change per customer		63	0.1				
3251	Remote Pumping Stations	Storage Broad St	1	2L4' T12 34w EE/EEMAG	vapor tight	4	4	70	0.3	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	52	500	500
3252	Remote Pumping Stations	Storage Broad St	1	100W INCANDESCENT	explosion	8	8	100	0.8	15 WATT LED SI	screw in LED Alamp	8	16	0.1	0.7	337	500	500
3253	Remote Pumping Stations	Storage Cherry Hill	1	2L8' T12 60w EE/EEMAG	vapor tight	1	1	123	0.1	2L4' T8 28w/ELEE HI/NEW-8'	new LF vaportight	1	67	0.1	0.1	28	500	500
3254	Remote Pumping Stations	Storage Cherry Hill	1	100W INCANDESCENT	globe	2	2	100	0.2	11 WATT LED SI	screw in LED Alamp	2	12	0.0	0.2	88	500	500
3255	Remote Pumping Stations	Storage Cross	1	2L4' T12 34w EE/EEMAG	vapor tight	3	3	70	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.1	39	500	500
3259	Remote Pumping Stations	Storage Drayla	1	100W INCANDESCENT	globe	1	1	100	0.1	11 WATT LED SI	screw in LED Alamp	1	12	0.0	0.1	44	500	500
3261	Remote Pumping Stations	Storage East Main	1	2L4' T12 34w EE/EEMAG	vapor tight	2	2	70	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.1	26	500	500
3263	Remote Pumping Stations	Storage Wooster	1	2L4' T12 34w EE/EEMAG	strip	2	2	70	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.1	26	500	500
3265	Remote Pumping Stations	Storage Ivy	1	2L4' T12 34w EE/EEMAG	strip	2	2	70	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.1	26	500	500
3266	Remote Pumping Stations	Storage Ivy	1	100W INCANDESCENT	explosion	1	1	100	0.1	15 WATT LED SI	screw in LED Alamp	1	16	0.0	0.1	42	500	500
3267	Remote Pumping Stations	Storage Julia	1	2L4' T12 34w EE/EEMAG	strip	2	2	70	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.1	26	500	500
3269	Remote Pumping Stations	Storage Lake	1	100W INCANDESCENT	globe	3	3	100	0.3	11 WATT LED SI	screw in LED Alamp	3	12	0.0	0.3	133	500	500
3272	Remote Pumping Stations	Storage Lufkin	1	2L4' T12 34w EE/EEMAG	vapor tight	3	3	70	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.1	39	500	500
3274	Remote Pumping Stations	Storage Matthews	1	2L4' T12 34w EE/EEMAG	wrap	5	5	70	0.4	2L4' T8 28w/ELEE LO	rlrb LF	5	44	0.2	0.1	65	500	500
3276	Remote Pumping Stations	Storage Middle	1	2L4' T12 34w EE/EEMAG	wrap	5	5	70	0.4	2L4' T8 28w/ELEE LO	rlrb LF	5	44	0.2	0.1	65	500	500
3278	Remote Pumping Stations	Storage Minor	1	2L4' T12 34w EE/EEMAG	wrap	5	5	70	0.4	2L4' T8 28w/ELEE LO	rlrb LF	5	44	0.2	0.1	65	500	500
3280	Remote Pumping Stations	Storage Boivin	1	2L4' T8 32w/EL	vapor tight	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	16	500	500
3281	Remote Pumping Stations	Storage Boivin	1	100W INCANDESCENT	globe	2	2	100	0.2	11 WATT LED SI	screw in LED Alamp	2	12	0.0	0.2	88	500	500
3282	Remote Pumping Stations	Storage Allentown	1	2L4' T12 34w EE/EEMAG	vapor tight	3	3	70	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.1	39	500	500
3284	Remote Pumping Stations	Storage Tyler	1	2L8' T12 60w EE/EEMAG	vapor tight	2	2	123	0.2	2L4' T8 28w/ELEE HI/NEW-8'	new LF vaportight	2	67	0.1	0.1	56	500	500
3286	Administration Building & Warehouse	Warehouse By Admin Bldg	1	3L4' T8 32w/EL	industrial	19	19	88	1.7	3L4' T8 28w/ELEE LO	rlrb LF	19	66	1.3	0.4	1,133	2,730	2,730
3287	Administration Building & Warehouse	Storage Paint	1	100W INCANDESCENT	explosion	1	1	100	0.1	15 WATT LED SI	screw in LED Alamp	1	16	0.0	0.1	42	500	500
3288	Administration Building & Warehouse	Office Paint	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	45	1,800	1,260
3294	Administration Building & Warehouse	Stair Ends (2)	stair	2L2' T8 17w/EL	box acrylic	6	6	33	0.2	2L2' T8 15w/ELEE LO	rlrb LF	6	28	0.2	0.0	94	3,380	3,380
3295	Administration Building & Warehouse	Stair Ends (2)	stair	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	63	3,380	3,380
3296	Administration Building & Warehouse	Stair Ends (2)	stair	15W INCANDESCENT	can rec	2	2	15	0.0	8 WATT LED SI	screw in LED par20	2	8	0.0	0.0	45	3,380	3,380
3297	Administration Building & Warehouse	Hall 3Rd	3	2L2' T8 17w/EL	trof acr	10	10	33	0.3	2L2' T8 15w/ELEE LO	rlrb LF	10	28	0.3	0.0	157	3,380	3,380
3298	Administration Building & Warehouse	Bath Mens	3	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	37	2,340	2,340
3299	Administration Building & Warehouse	Office Open 35	3	4L4' T8 32w/EL	trof acr	9	9	112	1.0	4L4' T8 28w/ELEE LO	rlrb LF	9	87	0.8	0.2	523	2,340	2,340
3300	Administration Building & Warehouse	Office 35	3	4L4' T8 32w/EL	trof acr	3	3	112	0.3	4L4' T8 28w/ELEE LO	rlrb LF	3	87	0.3	0.1	134	1,800	1,800
3301	Administration Building & Warehouse	Office 35 (4)	3	4L4' T8 32w/EL	trof acr	8	8	112	0.9	4L4' T8 28w/ELEE LO	rlrb LF	8	87	0.7	0.2	358	1,800	1,800
3302	Administration Building & Warehouse	Storage 36	3	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	25	500	500
3303	Administration Building & Warehouse	Conference 36	3	4L4' T8 32w/EL	trof acr	6	6	112	0.7	4L4' T8 28w/ELEE LO	rlrb LF	6	87	0.5	0.1	268	1,800	1,800
3304	Administration Building & Warehouse	Office 36	3	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	0.0	45	1,800	1,800
3305	Administration Building & Warehouse	Office 36	3	4L4' T8 32w/EL	trof acr	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	0.1	179	1,800	1,800
3306	Administration Building & Warehouse	Office Open 34	3	4L4' T8 32w/EL	trof acr	5	5	112	0.6	4L4' T8 28w/ELEE LO	rlrb LF	5	87	0.4	0.1	337	2,716	1,901
3307	Administration Building & Warehouse	Storage 34	3	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	25	500	350
3308	Administration Building & Warehouse	Office Open 32	3	4L4' T8 32w/EL	trof acr	5	5	112	0.6	4L4' T8 28w/ELEE LO	rlrb LF	5	87	0.4	0.1	291	2,340	1,638
3309	Administration Building & Warehouse	Office 32	3	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	89	1,800	1,260
3310	Administration Building & Warehouse	Conference 32	3	4L4' T8 32w/EL	trof acr	3	3	112	0.3	4L4' T8 28w/ELEE LO	rlrb LF	3	87	0.3	0.1	134	1,800	1,260
3311	Administration Building & Warehouse	Storage To Roof	3	2x13W CF HARDWIRED	square surface mt.	2	2	30	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.0	13	500	500
3312	Administration Building & Warehouse	Bath Women	3	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	37	2,340	2,340
3313	Administration Building & Warehouse	Auditorium Main	2	300W INCANDESCENT	decorative	8	8	300	2.4	40 WATT LED/KIT	area kit LED	8	42	0.3	2.1	1,032	500	500
3314	Administration Building & Warehouse	Conference Main	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	4L4' T8 28w/ELEE LO	rlrb LF	3	87	0.3	0.1	134	1,800	1,260
3315	Administration Building & Warehouse	Closet Main	2	150W INCANDESCENT	keyless	1	1	150	0.2	11 WATT LED SI	screw in LED Alamp	1	12	0.0	0.1	69	500	500
3316	Administration Building & Warehouse	Hall 2Nd	2	2L4' T8 32w/EL	trof acr	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	0.1	430	3,380	3,380
3317	Administration Building & Warehouse	Hall 2Nd	2	65W INCANDESCENT	track head	6	6	65	0.4	8 WATT LED SI	screw in LED par20	6	8	0.1	0.3	1,148	3,380	3,380
3318	Administration Building & Warehouse	Hall 2Nd	2	65W INCANDESCENT	can rec	4	4	65	0.3	8 WATT LED SI	screw in LED Alamp	4	8	0.0	0.2	765	3,380	3,380
3319	Administration Building & Warehouse	Hall 2Nd	2	200W INCANDESCENT	decorative	2		200	0.4	NO RETRO	no change -specialized fixture		210	0.4			3,380	3,380
3320	Administration Building & Warehouse	Bath Men	2	2L2' T8 17w/EL	box acrylic	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	22	2,340	1,638
3321	Administration Building & Warehouse	Bath Men	2	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	37	2,340	1,638
3322	Administration Building & Warehouse	Office Open 25	2	4L4' T8 32w/EL	trof acr	18	18	112	2.0	4L4' T8 28w/ELEE LO	rlrb LF	18	87	1.6	0.4	1,047	2,340	1,638
3323	Administration Building & Warehouse	Office 25	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	89	1,800	1,260
3324	Administration Building & Warehouse	Conference 25	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	89	1,800	1,260
3325	Administration Building & Warehouse	Storage Copy	2	4L4' T8 32w/EL-8'	wrap	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	17	350	350
3326	Administration Building & Warehouse	Office Open 26	2	4L4' T8 32w/EL	trof acr	6	6	112	0.7	4L4' T8 28w/ELEE LO	rlrb LF	6	87	0.5	0.1	431	2,891	2,024
3327	Administration Building & Warehouse	Office Open 26	2	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	22	2,340	1,638
3328	Administration Building & Warehouse	Office 26	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	63	1,260	1,260
3329	Administration Building & Warehouse	Office 26	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	89	1,800	1,260
3330	Administration Building & Warehouse	Office 26	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	89	1,800	1,260
3331	Administration Building & Warehouse	Conference 26	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	89	1,800	1,260

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
3332	Administration Building & Warehouse	Office Open 24	2	4L4' T8 32w/EL	trof acr	5	5	112	0.6	4L4' T8 28w/ELEE LO	rlrb LF	5	87	0.4	0.1	291	2,340	1,638
3333	Administration Building & Warehouse	Office Open 24	2	4L4' T8 32w/EL-8'	strip	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	116	2,340	1,638
3334	Administration Building & Warehouse	Office Open 24	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	116	2,340	1,638
3335	Administration Building & Warehouse	Office Open 24	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	116	2,340	1,638
3336	Administration Building & Warehouse	Lounge 22	2	2L2' T8 17w/EL	trof acr	6	6	33	0.2	2L2' T8 15w/ELEE LO	rlrb LF	6	28	0.2	0.0	53	1,900	1,330
3337	Administration Building & Warehouse	Bath Women	2	2L2' T8 17w/EL	box acrylic	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	22	2,340	1,638
3338	Administration Building & Warehouse	Bath Women	2	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	37	2,340	1,638
3339	Administration Building & Warehouse	Office Open 11	1	2L2' T8 17w/EL	trof acr	1	1	33	0.0	2L2' T8 15w/ELEE LO	rlrb LF	1	28	0.0	0.0	11	2,340	2,340
3340	Administration Building & Warehouse	Office Open 11	1	4L4' T8 32w/EL	trof acr	12	12	112	1.3	4L4' T8 28w/ELEE LO	rlrb LF	12	87	1.0	0.3	698	2,340	1,638
3341	Administration Building & Warehouse	Office 11	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	89	1,800	1,260
3342	Administration Building & Warehouse	Office 11	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	89	1,800	1,260
3343	Administration Building & Warehouse	Office 11	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	89	1,800	1,260
3344	Administration Building & Warehouse	Storage Near 11 (2)	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	16	500	500
3345	Administration Building & Warehouse	Hall Back Office	1	2L4' T8 32w/EL	wrap	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	215	3,380	3,380
3346	Administration Building & Warehouse	Hall 1St	1	2L4' T8 32w/EL	box acrylic	9	9	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	9	44	0.4	0.1	484	3,380	3,380
3347	Administration Building & Warehouse	Hall 1St	1	2L4' T8 32w/EL	trof acr	5	5	60	0.3	2L4' T8 28w/ELEE LO	rlrb LF	5	44	0.2	0.1	269	3,380	3,380
3348	Administration Building & Warehouse	Hall 1St	1	65W INCANDESCENT	track can	14	14	65	0.9	8 WATT LED SI	screw in LED par20	14	8	0.1	0.8	2,678	3,380	3,380
3349	Administration Building & Warehouse	Bath Men	1	2L2' T8 17w/EL	box acrylic	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	22	2,340	2,340
3350	Administration Building & Warehouse	Closet Clean	1	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	26	500	500
3351	Administration Building & Warehouse	Office Open 16	1	3L4' T8 32w/EL	wrap wide	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	205	2,340	2,340
3352	Administration Building & Warehouse	Conference 16	1	3L4' T8 32w/EL	wrap wide	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	79	1,800	1,800
3353	Administration Building & Warehouse	Office 16	1	3L4' T8 32w/EL	wrap wide	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	39	1,800	1,800
3354	Administration Building & Warehouse	Office 16	1	3L4' T8 32w/EL	wrap wide	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	39	1,800	1,800
3355	Administration Building & Warehouse	Storage Books	1	2L2' T8 17w/EL	box acrylic	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	9	1,000	1,000
3356	Administration Building & Warehouse	Office Open 15	1	2L4' T8 32w/EL	strip	6	6	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	6	44	0.3	0.1	223	2,340	2,340
3357	Administration Building & Warehouse	Office Open 15	1	4L4' T8 32w/EL-8'	strip	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	174	2,340	2,340
3358	Administration Building & Warehouse	Office Open 15	1	2L2' T8 17w/EL	box acrylic	1	1	33	0.0	2L2' T8 15w/ELEE LO	rlrb LF	1	28	0.0	0.0	11	2,340	2,340
3359	Administration Building & Warehouse	Office Open 15	1	3L4' T8 32w/EL	wrap wide	3	3	88	0.3	3L4' T8 28w/ELEE LO	rlrb LF	3	66	0.2	0.1	153	2,340	2,340
3360	Administration Building & Warehouse	Office Open 15	1	4L4' T8 32w/EL	wrap wide	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.0	116	2,340	2,340
3361	Administration Building & Warehouse	Classroom 17	1	3L4' T8 32w/EL	wrap wide	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	227	2,600	1,820
3362	Administration Building & Warehouse	Office Open 14	1	3L4' T8 32w/EL	wrap wide	6	6	88	0.5	3L4' T8 28w/ELEE LO	rlrb LF	6	66	0.4	0.1	299	2,278	1,595
3363	Administration Building & Warehouse	Office Custodian	1	2L4' T8 32w/EL	strip	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	29	1,800	1,800
3364	Administration Building & Warehouse	Office Open 12	1	3L4' T8 32w/EL	wrap wide	8	8	88	0.7	3L4' T8 28w/ELEE LO	rlrb LF	8	66	0.5	0.2	409	2,340	2,340
3365	Administration Building & Warehouse	Office 12	1	3L4' T8 32w/EL	wrap wide	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	39	1,800	1,800
3366	Administration Building & Warehouse	Conference 12	1	3L4' T8 32w/EL	wrap wide	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	79	1,800	1,800
3367	Administration Building & Warehouse	Office 12	1	3L4' T8 32w/EL	wrap wide	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	39	1,800	1,800
3368	Administration Building & Warehouse	Office 12	1	3L4' T8 32w/EL	wrap wide	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	39	1,800	1,800
3369	Administration Building & Warehouse	Bath Women	1	2L2' T8 17w/EL	box acrylic	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	22	2,340	1,638
3370	Stafford ES	Office Open Main	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	265	1,779	1,779
3371	Stafford ES	Office Open Main	1	2L4' T8 32w/EL	valance	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	27	1,680	1,680
3372	Stafford ES	Office Principal	1	65W INCANDESCENT	can rec	7	7	65	0.5	8 WATT LED SI	screw in LED Alamp	7	8	0.1	0.4	792	2,000	1,400
3373	Stafford ES	Office Literacy	1	65W INCANDESCENT	can rec	2	2	65	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	226	2,000	1,400
3374	Stafford ES	Office Literacy	1	2L4' T8 32w U/EL	box acrylic	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	51	2,000	1,400
3375	Stafford ES	Office Literacy	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	32	2,000	1,400
3376	Stafford ES	Hall Main Floor	1	65W INCANDESCENT	can rec	1	1	65	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	170	3,000	3,000
3377	Stafford ES	Hall Main Floor	1	4L4' T8 32w/EL-8'	valance	22	22	112	2.5	4L4' T8 28w/ELEE LO-8'	rlrb LF	22	87	1.9	0.5	1,640	3,000	3,000
3378	Stafford ES	Hall Main Floor	1	2L4' T8 32w/EL	valance	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	0.1	382	3,000	3,000
3379	Stafford ES	Hall Main Floor	1	2L4' T8 32w U/EL	box acrylic	16	16	60	1.0	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	16	35	0.6	0.4	1,217	3,000	3,000
3380	Stafford ES	Hall Main Floor	1	3L2' F40 BIAX/EL	decorative	1		102	0.1	NO RETRO	no change -specialized fixture		107	0.1			3,000	3,000
3381	Stafford ES	Hall Main Floor	1	65W INCANDESCENT	can rec	4	4	65	0.3	8 WATT LED SI	screw in LED Alamp	4	8	0.0	0.2	679	3,000	3,000
3382	Stafford ES	Hall Main Floor	1	4L3' T8 25w/EL-6'	valance	12	12	88	1.1	4L3' T8 21w/ELEE LO-6'	rlrb LF	12	84	1.0	0.0	144	3,000	3,000
3383	Stafford ES	Bath Boys	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	95	3,000	2,100
3384	Stafford ES	Bath Girls	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	95	3,000	2,100
3385	Stafford ES	Bath Handicap	1	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	21	3,000	3,000
3386	Stafford ES	Storage 29	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	16	1,000	1,000
3387	Stafford ES	Library Main	1	4L4' T8 32w/EL-8'	box acr 6" wide	8	8	112	0.9	4L4' T8 28w/ELEE LO-8'	rlrb LF	8	87	0.7	0.2	358	1,800	1,260
3388	Stafford ES	Library Main	1	2L4' T8 32w/EL	box acr 6" wide	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	114	1,800	1,260
3389	Stafford ES	Library Main	1	65W INCANDESCENT	can rec 8"	24	24	65	1.6	8 WATT LED SI	screw in LED Alamp	24	8	0.2	1.4	2,445	1,800	1,800
3390	Stafford ES	Library Main	1	15W CF SCREWIN	cylinder surf mt.	3	3	17	0.1	8 WATT LED SI	screw in LED Alamp	3	8	0.0	0.0	46	1,800	1,800
3391	Stafford ES	Library Main	1	2x15W INCANDESCENTS	exit sign	1	1	30	0.0	3 WATT LED/NEW EXIT BATTERY	new LED exit bat	1	3	0.0	0.0	235	8,760	8,760
3392	Stafford ES	Office Lib	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	64	2,000	1,400
3393	Stafford ES	Office Lib	1	2L3' T8 25w/EL	task strip	3	3	47	0.1	2L3' T8 21w/ELEE LO	rlrb LF	3	42	0.1	0.0	30	2,000	2,000
3394	Stafford ES	Storage Lib	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	32	1,000	700
3395	Stafford ES	Storage Lib	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	32	1,000	1,000
3396	Stafford ES	Classroom 32	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
3397	Stafford ES	Classroom 32	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	115	1,540	1,540
3398	Stafford ES	Bath 32	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	48	3,000	3,000
3399	Stafford ES	Storage 32	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	500	500
3400	Stafford ES	Classroom 30	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	192	1,288	1,288
3401	Stafford ES	Classroom 30	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	115	1,540	1,540
3402	Stafford ES	Bath 30	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	48	3,000	3,000
3403	Stafford ES	Storage 30	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	500	500
3404	Stafford ES	Storage Across 30	1	2L4' T8 32w/EL	strip	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	16	500	500

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
3405	Stafford ES	Stair To Roof	stair	2L4' T8 32w/EL	strip	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	48	3,000	3,000
3406	Stafford ES	Classroom 27	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
3407	Stafford ES	Classroom 27	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	115	1,540	1,540
3408	Stafford ES	Bath 27	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	48	3,000	3,000
3409	Stafford ES	Storage 27	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	500	500
3410	Stafford ES	Classroom 28	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	192	1,288	1,288
3411	Stafford ES	Classroom 28	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	115	1,540	1,540
3412	Stafford ES	Bath 28	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	48	3,000	3,000
3413	Stafford ES	Storage 28	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	500	500
3414	Stafford ES	Classroom 25	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	210	1,411	1,411
3415	Stafford ES	Classroom 25	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	115	1,540	1,540
3416	Stafford ES	Classroom 26	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	137	920	920
3417	Stafford ES	Classroom 26	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	115	1,540	1,540
3418	Stafford ES	Bath 26	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	48	3,000	3,000
3419	Stafford ES	Storage 26	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	500	500
3420	Stafford ES	Classroom 23	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	238	1,595	1,595
3421	Stafford ES	Classroom 23	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	115	1,540	1,540
3422	Stafford ES	Classroom 24	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
3423	Stafford ES	Classroom 24	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	115	1,540	1,540
3424	Stafford ES	Bath 24	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	48	3,000	3,000
3425	Stafford ES	Storage 24	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	500	500
3426	Stafford ES	Classroom 21	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	156	1,043	1,043
3427	Stafford ES	Classroom 21	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	115	1,540	1,540
3428	Stafford ES	Bath 21	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	48	3,000	3,000
3429	Stafford ES	Storage 21	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	500	500
3430	Stafford ES	Classroom 22	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
3431	Stafford ES	Classroom 22	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	115	1,540	1,540
3432	Stafford ES	Bath 22	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	48	3,000	3,000
3433	Stafford ES	Storage 22	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	500	500
3434	Stafford ES	Bath Staff	1	1L2' T8 17w/EL	soffit	2	2	17	0.0	1L2' T8 15w/ELEE LO	rlrb LF	2	15	0.0	0.0	14	3,000	3,000
3435	Stafford ES	Bath Staff	1	1L2' T8 17w/EL	soffit	2	2	17	0.0	1L2' T8 15w/ELEE LO	rlrb LF	2	15	0.0	0.0	14	3,000	3,000
3436	Stafford ES	Office 19	1	4L4' T8 32w/EL-8'	box acr 6" wide	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	50	2,000	2,000
3437	Stafford ES	Stair To Basement	stair	2L4' T8 32w U/EL	box acrylic	4	4	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	304	3,000	3,000
3438	Stafford ES	Hall To Caf	B	2L4' T8 32w U/EL	box acrylic	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	152	3,000	3,000
3439	Stafford ES	Cafeteria Main	B	3L4' T8 32w/EL	trof acr	23	23	88	2.0	3L4' T8 28w/ELEE LO	rlrb LF	23	66	1.5	0.5	598	1,190	1,190
3440	Stafford ES	Cafeteria Main	B	2L2' T8 17w/EL	trof acr	15	15	33	0.5	2L2' T8 15w/ELEE LO	rlrb LF	15	28	0.4	0.1	83	1,190	1,190
3441	Stafford ES	Cafeteria Main	B	2L4' T8 32w U/EL	trof acr	20	20	60	1.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	20	35	0.7	0.5	603	1,190	1,190
3442	Stafford ES	Cafeteria Main	B	2L4' T8 32w U/EL	box acrylic	7	7	60	0.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	7	35	0.2	0.2	302	1,700	1,700
3443	Stafford ES	Office 36	B	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	32	2,000	1,400
3444	Stafford ES	Kitchen Main	B	2L4' T8 32w/EL	wrap	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	0.1	242	1,900	1,900
3445	Stafford ES	Kitchen Main	B	90W INCANDESCENT	range hood	2	2	90	0.2	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.2	310	1,900	1,900
3446	Stafford ES	Storage Pantry	B	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	32	1,000	700
3447	Stafford ES	Hall Basement Classes	B	2L4' T8 32w U/EL	box acrylic	6	6	60	0.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	6	35	0.2	0.2	456	3,000	3,000
3448	Stafford ES	Bath Handicap	B	2L3' T8 25w/EL-6'	soffit	2	2	47	0.1	2L3' T8 21w/ELEE LO-6'	rlrb LF	2	42	0.1	0.0	30	3,000	3,000
3449	Stafford ES	Classroom 35	B	2L4' T8 32w U/EL	trof acr	4	4	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	223	2,200	1,540
3450	Stafford ES	Stair Across Boiler	stair	2L4' T8 32w U/EL	box acrylic	4	4	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	304	3,000	3,000
3451	Stafford ES	Mechanical Boiler	B	2L4' T8 32w/EL	vapor tight	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	8	500	500
3452	Stafford ES	Mechanical Boiler	B	2L4' T12 34w EE/EEMAG	vapor tight	1	1	70	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	13	500	500
3453	Stafford ES	Mechanical Boiler	B	2L4' T8 32w/EL	strip reflector	6	6	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	6	44	0.3	0.1	48	500	500
3454	Stafford ES	Storage Clean	B	2L4' T12 34w EE/EEMAG	strip reflector	1	1	70	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	13	500	500
3455	Stafford ES	Storage Clean	B	2L4' T12 34w EE/EEMAG	strip reflector	1	1	70	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	13	500	500
3456	Stafford ES	Classroom 34	B	2L4' T8 32w U/EL	trof acr	18	18	60	1.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	18	35	0.6	0.5	703	1,540	1,540
3457	Stafford ES	Storage 34	B	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	51	1,000	1,000
3458	Stafford ES	Storage 34	B	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	32	1,000	1,000
3459	Stafford ES	Storage 34	B	2L4' T8 32w/EL	strip	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	16	1,000	1,000
3460	Stafford ES	Storage Large Supply	B	2L4' T12 34w EE/EEMAG	strip reflector	11	11	70	0.8	2L4' T8 28w/ELEE LO	rlrb LF	11	44	0.5	0.3	142	500	500
3461	Stafford ES	Storage Large Supply	B	4L4' T8 32w/EL-8'	wrap wide	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	37	500	500
3462	Stafford ES	Classroom 33	B	2L4' T8 32w U/EL	trof acr	17	17	60	1.0	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	17	35	0.6	0.4	664	1,540	1,540
3463	Stafford ES	Storage Music	B	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	16	500	500
3464	Stafford ES	Mechanical Switchgear	B	2L4' T12 34w EE/EEMAG	strip reflector	1	1	70	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	13	500	500
3465	Stafford ES	Storage Old Locker	B	2L4' T12 34w EE/EEMAG	vapor tight	8	8	70	0.6	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	0.2	104	500	500
3466	Stafford ES	Storage Old Locker	B	2L4' T8 32w/EL	strip reflector	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	16	500	500
3467	Stafford ES	Storage Old Locker	B	2L4' T8 32w/EL	vapor tight	11	11	60	0.7	2L4' T8 28w/ELEE LO	rlrb LF	11	44	0.5	0.2	87	500	500
3468	Stafford ES	Storage Old Locker	B	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	14	500	500
3469	Stafford ES	Stair By Office	stair	2L4' T8 32w U/EL	box acrylic	3	3	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	0.1	228	3,000	3,000
3470	Stafford ES	Classroom 17	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
3471	Stafford ES	Classroom 17	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	115	1,540	1,540
3472	Stafford ES	Classroom 20	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
3473	Stafford ES	Classroom 20	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	115	1,540	1,540
3474	Stafford ES	Classroom 15	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	146	982	982
3475	Stafford ES	Classroom 15	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	115	1,540	1,540
3476	Stafford ES	Bath 15	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	48	3,000	3,000
3477	Stafford ES	Storage 15	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	500	500

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
3478	Stafford ES	Classroom 18	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	165	1,104	1,104
3479	Stafford ES	Classroom 18	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	115	1,540	1,540
3480	Stafford ES	Classroom 13	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	192	1,288	1,288
3481	Stafford ES	Classroom 13	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	115	1,540	1,540
3482	Stafford ES	Bath 13	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	48	3,000	3,000
3483	Stafford ES	Storage 13	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	500	500
3484	Stafford ES	Classroom 16	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
3485	Stafford ES	Classroom 16	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	115	1,540	1,540
3486	Stafford ES	Bath 16	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	48	3,000	3,000
3487	Stafford ES	Storage 16	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	500	500
3488	Stafford ES	Classroom 14	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
3489	Stafford ES	Classroom 14	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	115	1,540	1,540
3490	Stafford ES	Bath Girls	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	95	3,000	2,100
3491	Stafford ES	Bath Boys	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	95	3,000	2,100
3492	Stafford ES	Closet Clean	1	2L4' T8 32w/EL	strip	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	8	500	500
3493	Stafford ES	Classroom 12	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
3494	Stafford ES	Classroom 12	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	115	1,540	1,540
3495	Stafford ES	Classroom 11	1	4L4' T8 32w/EL-8'	box acr 6" wide	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	55	2,200	2,200
3496	Stafford ES	Classroom 11	1	2L4' T8 32w/EL	box acr 6" wide	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	35	2,200	2,200
3497	Stafford ES	Classroom 11	1	2L4' T8 32w/EL	trof acr 6" wide	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	35	2,200	2,200
3498	Stafford ES	Classroom 9&10	1	4L4' T8 32w/EL-8'	valance	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	55	2,200	2,200
3499	Stafford ES	Classroom 9&10	1	2L4' T8 32w/EL	wrap narrow	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	35	2,200	2,200
3500	Stafford ES	Classroom 9&10	1	4L4' T8 32w/EL-8'	box acr 6" wide	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	55	2,200	2,200
3501	Stafford ES	Classroom 9&10	1	2L4' T8 32w/EL	box acr 6" wide	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	35	2,200	2,200
3502	Stafford ES	Classroom 9&10	1	2L4' T8 32w/EL	trof acr 6" wide	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	35	2,200	2,200
3503	Stafford ES	Classroom 8	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	174	1,166	1,166
3504	Stafford ES	Classroom 8	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	115	1,540	1,540
3505	Stafford ES	Classroom 7	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
3506	Stafford ES	Classroom 7	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	115	1,540	1,540
3507	Stafford ES	Gym Main	1	4L4' T5 HO/EL	high bay	24	24	234	5.6	98 WATT LED/NEW	new LED hibay wg	24	103	2.5	3.1	6,293	2,000	1,400
3508	Stafford ES	Storage Gymnasium	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	8	500	500
3509	Stafford ES	Stage Main	1	2L4' T8 32w/EL	strip	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	102	1,600	1,600
3510	Stafford ES	Mechanical Equip	1	90W INCANDESCENT	keyless	3	3	90	0.3	8 WATT LED SI	screw in LED Alamp	3	8	0.0	0.2	122	500	500
3511	Stafford ES	Conference Main	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	64	2,000	1,400
3512	Stafford ES	Lounge Staff	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	57	1,800	1,260
3513	Stafford ES	Lounge Staff	1	2L4' T8 32w/EL	wrap	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	60	1,260	1,260
3514	Stafford ES	Bath Staff	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	48	3,000	3,000
3515	Stafford ES	Bath Handicap	1	4L4' T8 32w/EL-8'	soffit	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	75	3,000	3,000
3516	Stafford ES	Office Open Health	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	38	2,400	2,400
3517	Stafford ES	Office Open Health	1	2L4' T8 32w U/EL	box acrylic	4	4	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	170	1,680	1,680
3518	Stafford ES	Office Open Health	1	3x13W CF HARDWIRED	drum	4	4	45	0.2	16 WATT LED/NEW	new LED drum	4	17	0.1	0.1	271	2,400	2,400
3519	Stafford ES	Bath Health	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	48	3,000	3,000
3520	Stafford ES	Closet Post-Its	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	500	500
3521	Stafford ES	Classroom 6	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
3522	Stafford ES	Classroom 6	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	115	1,540	1,540
3523	Stafford ES	Bath 6	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	48	3,000	3,000
3524	Stafford ES	Storage 6	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	500	500
3525	Stafford ES	Classroom 5	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
3526	Stafford ES	Classroom 5	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	115	1,540	1,540
3527	Stafford ES	Bath 5	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	48	3,000	3,000
3528	Stafford ES	Storage 5	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	500	500
3529	Stafford ES	Classroom 4	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	146	982	982
3530	Stafford ES	Classroom 4	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	115	1,540	1,540
3531	Stafford ES	Bath 4	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	48	3,000	3,000
3532	Stafford ES	Storage 4	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	500	500
3533	Stafford ES	Classroom 3	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
3534	Stafford ES	Classroom 3	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	115	1,540	1,540
3535	Stafford ES	Bath 3	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	48	3,000	3,000
3536	Stafford ES	Storage 3	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	500	500
3537	Stafford ES	Classroom 2	1	4L4' T8 32w/EL-8'	valance	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	344	1,540	1,540
3538	Stafford ES	Classroom 2	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	70	2,200	2,200
3539	Stafford ES	Classroom 1	1	2L4' T8 32w/EL	wrap	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
3540	Stafford ES	Storage 1	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	8	500	500
3548	Edgewood ES	Hall Main	1	60W INCANDESCENT	can rec 8"	21	21	60	1.3	8 WATT LED SI	screw in LED par20	21	8	0.2	1.1	2,763	3,000	3,000
3549	Edgewood ES	Hall Main	1	60W INCANDESCENT	square surface mt.	10	10	60	0.6	8 WATT LED SI	screw in LED Alamp	10	8	0.1	0.5	1,316	3,000	3,000
3550	Edgewood ES	Hall Main	1	4L4' T8 32w/EL	strip	15	15	112	1.7	4L4' T8 28w/ELEE LO	rlrb LF	15	87	1.3	0.4	951	3,000	3,000
3551	Edgewood ES	Hall Main	1	4L4' T8 32w/EL-8'	soffit	10	10	112	1.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	10	87	0.9	0.2	634	3,000	3,000
3552	Edgewood ES	Hall Main	1	4L4' T8 32w/EL-8'	soffit	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	63	3,000	3,000
3553	Edgewood ES	Classroom K-B	1	4L4' T8 32w/EL-8'	box acr 1' wide	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
3554	Edgewood ES	Classroom K-B	1	2L4' T8 32w/EL-8'	cove	3	3	60	0.2	2L4' T8 28w/ELEE LO-8'	rlrb LF	3	44	0.1	0.0	89	2,200	1,540
3555	Edgewood ES	Classroom K-B	1	60W INCANDESCENT	square surface mt.	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	193	2,200	1,540
3556	Edgewood ES	Bath K-B	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	132	3,000	3,000
3557	Edgewood ES	Storage K-B	1	13W CF HARDWIRED	drum	1	1	15	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	-1	500	500

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
3558	Edgewood ES	Classroom K-A	1	4L4' T8 32w/EL-8'	box acr 1' wide	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
3559	Edgewood ES	Classroom K-A	1	2L4' T8 32w/EL-8'	cove	3	3	60	0.2	2L4' T8 28w/ELEE LO-8'	rlrb LF	3	44	0.1	0.0	89	2,200	1,540
3560	Edgewood ES	Classroom K-A	1	60W INCANDESCENT	square surface mt.	3	3	60	0.2	8 WATT LED SI	screw in LED Alamp	3	8	0.0	0.2	289	2,200	1,540
3561	Edgewood ES	Bath K-A	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	132	3,000	3,000
3562	Edgewood ES	Storage K-A	1	13W CF HARDWIRED	drum	1	1	15	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	-1	500	500
3563	Edgewood ES	Classroom Art	1	4L4' T8 32w/EL-8'	wrap	11	11	112	1.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	11	87	1.0	0.3	511	2,200	1,540
3564	Edgewood ES	Storage Art	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	14	500	500
3565	Edgewood ES	Classroom 19	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
3566	Edgewood ES	Storage 19	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	14	500	500
3567	Edgewood ES	Storage Av Closet	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	27	1,000	1,000
3568	Edgewood ES	Classroom 18	1	4L4' T8 32w/EL-8'	box acr 1' wide	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
3569	Edgewood ES	Classroom 17	1	4L4' T8 32w/EL-8'	box acr 1' wide	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
3570	Edgewood ES	Classroom 16	1	4L4' T8 32w/EL-8'	box acr 1' wide	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
3571	Edgewood ES	Bath Boys	1	4L4' T8 32w/EL-8'	vanity	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	190	3,000	2,100
3572	Edgewood ES	Bath Boys	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	41	3,000	2,100
3573	Edgewood ES	Bath Boys	1	2L3' T8 25w/EL	vanity	1	1	47	0.0	2L3' T8 21w/ELEE LO	rlrb LF	1	42	0.0	0.0	13	3,000	2,100
3574	Edgewood ES	Storage Kiln	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	7	500	500
3575	Edgewood ES	Shop Custodian	1	4L4' T8 32w/EL-8'	wrap	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	93	2,200	2,200
3576	Edgewood ES	Shop Custodian	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	30	2,200	2,200
3577	Edgewood ES	Bath Staff	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	41	3,000	3,000
3578	Edgewood ES	Storage Clean	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	2	500	500
3579	Edgewood ES	Storage Clean	1	2L4' T8 32w/EL	strip	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	7	500	500
3580	Edgewood ES	Storage Clean	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	7	500	500
3581	Edgewood ES	Mechanical Boiler	1	2L4' T12 34w EE/EEMAG	strip reflector	1	1	70	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	11	500	500
3582	Edgewood ES	Mechanical Boiler	1	2L4' T8 32w/EL	strip reflector	5	5	60	0.3	2L4' T8 28w/ELEE LO	rlrb LF	5	44	0.2	0.1	34	500	500
3583	Edgewood ES	Kitchen Main	1	2L4' T8 32w U/EL	trof acr	13	13	60	0.8	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	13	35	0.5	0.3	532	1,900	1,900
3584	Edgewood ES	Kitchen Main	1	90W INCANDESCENT	range hood	3	3	90	0.3	8 WATT LED SI	screw in LED Alamp	3	8	0.0	0.2	395	1,900	1,900
3585	Edgewood ES	Storage Pantry	1	2L4' T8 32w U/EL	trof acr	3	3	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	0.1	65	1,000	700
3586	Edgewood ES	Classroom 15	1	4L4' T8 32w/EL-8'	box acr 1' wide	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
3587	Edgewood ES	Hall 153-146	1	2L4' T8 32w/EL	wrap	6	6	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	6	44	0.3	0.1	243	3,000	3,000
3588	Edgewood ES	Office 153	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	0.1	175	2,000	1,400
3589	Edgewood ES	Office 153	1	1L4' T8 32w/EL	cove	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	12	2,000	1,400
3590	Edgewood ES	Office 153	1	1L3' T8 25w/EL	cove	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	0.0	7	2,000	1,400
3591	Edgewood ES	Office 153	1	1L4' T8 32w/EL	task strip	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	12	2,000	1,400
3592	Edgewood ES	Office 153	1	1L3' T8 25w/EL	task strip	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	0.0	7	2,000	1,400
3593	Edgewood ES	Office 152	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	0.1	175	2,000	1,400
3594	Edgewood ES	Office 152	1	1L4' T8 32w/EL	cove	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	12	2,000	1,400
3595	Edgewood ES	Office 152	1	1L3' T8 25w/EL	cove	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	0.0	7	2,000	1,400
3596	Edgewood ES	Office 152	1	1L4' T8 32w/EL	task strip	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	12	2,000	1,400
3597	Edgewood ES	Office 152	1	1L3' T8 25w/EL	task strip	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	0.0	7	2,000	1,400
3598	Edgewood ES	Office 149	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	0.1	175	2,000	1,400
3599	Edgewood ES	Office 149	1	1L4' T8 32w/EL	cove	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	12	2,000	1,400
3600	Edgewood ES	Office 149	1	1L3' T8 25w/EL	cove	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	0.0	7	2,000	1,400
3601	Edgewood ES	Office 149	1	1L4' T8 32w/EL	task strip	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	12	2,000	1,400
3602	Edgewood ES	Office 149	1	1L3' T8 25w/EL	task strip	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	0.0	7	2,000	1,400
3603	Edgewood ES	Office 148	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	0.1	175	2,000	1,400
3604	Edgewood ES	Office 148	1	1L4' T8 32w/EL	cove	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	12	2,000	1,400
3605	Edgewood ES	Office 148	1	1L3' T8 25w/EL	cove	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	0.0	7	2,000	1,400
3606	Edgewood ES	Office 148	1	1L4' T8 32w/EL	task strip	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	12	2,000	1,400
3607	Edgewood ES	Office 148	1	1L3' T8 25w/EL	task strip	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	0.0	7	2,000	1,400
3608	Edgewood ES	Office 146	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	0.1	175	2,000	1,400
3609	Edgewood ES	Office 146	1	1L4' T8 32w/EL	cove	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	12	2,000	1,400
3610	Edgewood ES	Office 146	1	1L3' T8 25w/EL	cove	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	0.0	7	2,000	1,400
3611	Edgewood ES	Office 146	1	1L4' T8 32w/EL	task strip	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	12	2,000	1,400
3612	Edgewood ES	Office 146	1	1L3' T8 25w/EL	task strip	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	0.0	7	2,000	1,400
3613	Edgewood ES	Office 154	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	0.1	175	2,000	1,400
3614	Edgewood ES	Office 154	1	1L4' T8 32w/EL	cove	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	23	2,000	1,400
3615	Edgewood ES	Office 154	1	1L4' T8 32w/EL	task strip	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	23	2,000	1,400
3616	Edgewood ES	Office 151	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	0.1	175	2,000	1,400
3617	Edgewood ES	Office 151	1	1L4' T8 32w/EL	cove	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	23	2,000	1,400
3618	Edgewood ES	Office 151	1	1L4' T8 32w/EL	task strip	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	23	2,000	1,400
3619	Edgewood ES	Office 147	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	0.1	175	2,000	1,400
3620	Edgewood ES	Office 147	1	2L4' T8 32w/EL-8'	cove	2	2	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	2	44	0.1	0.0	54	2,000	1,400
3621	Edgewood ES	Office 147	1	1L3' T8 25w/EL	cove	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	0.0	7	2,000	1,400
3622	Edgewood ES	Office 147	1	2L4' T8 32w/EL-8'	task strip	2	2	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	2	44	0.1	0.0	54	2,000	1,400
3623	Edgewood ES	Library Main	1	4L4' T8 32w/EL	trof acr	14	14	112	1.6	4L4' T8 28w/ELEE LO	rlrb LF	14	87	1.2	0.3	532	1,800	1,260
3624	Edgewood ES	Library Main	1	2L2' T8 17w/EL	trof acr	1	1	33	0.0	2L2' T8 15w/ELEE LO	rlrb LF	1	28	0.0	0.0	7	1,800	1,260
3625	Edgewood ES	Library Main	1	4L4' T8 32w/EL	trof acr	12	12	112	1.3	4L4' T8 28w/ELEE LO	rlrb LF	12	87	1.0	0.3	456	1,800	1,260
3626	Edgewood ES	Library Main	1	2x9W CF HARDWIRED	drum	3	3	22	0.1	16 WATT LED/NEW	new LED drum	3	17	0.1	0.0	24	1,800	1,800
3627	Edgewood ES	Storage Near Lib	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	14	1,000	1,000
3628	Edgewood ES	Storage Near Lib	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	44	1,000	1,000
3629	Edgewood ES	Office Lib	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	42	2,000	1,400
3630	Edgewood ES	Office Lib	1	1L4' T12 34w EE/EEMAG	cove	6	6	40	0.2	2L4' T8 28w/ELEE LO/TW-8'	rlrb LF tw	3	44	0.1	0.1	183	2,000	1,400

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
3631	Edgewood ES	Office Lib	1	1L4' T12 34w EE/EEMAG	cove	2	2	40	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	57	2,000	1,400
3632	Edgewood ES	Office Lib	1	1L3' T12 25w EE/EEMAG	cove	3	3	38	0.1	1L3' T8 21w/ELEE LO	rlrb LF	3	22	0.1	0.0	81	2,000	1,400
3633	Edgewood ES	Closet Lib	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	7	500	500
3634	Edgewood ES	Office Lib	1	1L4' T12 34w EE/EEMAG	cove	4	4	40	0.2	1L4' T8 28w/ELEE LO	rlrb LF	4	23	0.1	0.1	115	2,000	1,400
3635	Edgewood ES	Office Lib	1	1L3' T12 25w EE/EEMAG	cove	2	2	38	0.1	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	0.0	54	2,000	1,400
3636	Edgewood ES	Office Lib	1	1L4' T8 32w/EL	task strip	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	23	2,000	1,400
3637	Edgewood ES	Office Lib	1	1L3' T8 25w/EL	task strip	3	3	24	0.1	1L3' T8 21w/ELEE LO	rlrb LF	3	22	0.1	0.0	10	2,000	1,400
3638	Edgewood ES	Cafeteria Main	1	4L4' T5 HO/EL	high bay	12	12	234	2.8	98 WATT LED/NEW	new LED hibay wg	12	103	1.2	1.6	2,273	1,700	1,700
3639	Edgewood ES	Cafeteria Main	1	60W INCANDESCENT	can rec 8"	20	20	60	1.2	8 WATT LED SI	screw in LED par20	20	8	0.2	1.0	1,491	1,700	1,700
3640	Edgewood ES	Office Coach	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	54	2,000	1,400
3641	Edgewood ES	Office Open Main	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	89	2,400	1,680
3642	Edgewood ES	Office Open Main	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	89	2,400	1,680
3643	Edgewood ES	Office Open Main	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	0.1	211	2,400	1,680
3644	Edgewood ES	Hall Main	1	60W INCANDESCENT	can rec 8"	5	5	60	0.3	8 WATT LED SI	screw in LED par20	5	8	0.0	0.3	658	3,000	3,000
3645	Edgewood ES	Office Principal	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	74	2,000	1,400
3646	Edgewood ES	Office Principal	1	1L4' T8 32w/EL	cove	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	23	2,000	1,400
3647	Edgewood ES	Conference Principal	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	74	2,000	1,400
3648	Edgewood ES	Conference Principal	1	1L4' T8 32w/EL	cove	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	23	2,000	1,400
3649	Edgewood ES	Office Small Copier	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	42	2,000	1,400
3650	Edgewood ES	Office Small Copier	1	1L4' T12 34w EE/EEMAG	task strip	1	1	40	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	29	2,000	1,400
3651	Edgewood ES	Office Small Copier	1	1L3' T12 25w EE/EEMAG	task strip	3	3	38	0.1	1L3' T8 21w/ELEE LO	rlrb LF	3	22	0.1	0.0	81	2,000	1,400
3652	Edgewood ES	Office Copier	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	42	2,000	1,400
3653	Edgewood ES	Office Copier	1	1L4' T12 34w EE/EEMAG	task strip	6	6	40	0.2	1L4' T8 28w/ELEE LO	rlrb LF	6	23	0.1	0.1	172	2,000	1,400
3654	Edgewood ES	Office Copier	1	1L3' T12 25w EE/EEMAG	task strip	2	2	38	0.1	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	0.0	54	2,000	1,400
3655	Edgewood ES	Office Copier	1	1L4' T12 34w EE/EEMAG	cove	6	6	40	0.2	2L4' T8 28w/ELEE LO/TW-8'	rlrb LF tw	3	44	0.1	0.1	183	2,000	1,400
3656	Edgewood ES	Office Copier	1	1L4' T12 34w EE/EEMAG	cove	3	3	40	0.1	1L4' T8 28w/ELEE LO	rlrb LF	3	23	0.1	0.1	86	2,000	1,400
3657	Edgewood ES	Lounge Staff	1	60W INCANDESCENT	can rec 8"	8	8	60	0.5	8 WATT LED SI	screw in LED par20	8	8	0.1	0.4	632	1,800	1,260
3658	Edgewood ES	Lounge Staff	1	1L3' T12 25w EE/EEMAG	task strip	5	5	38	0.2	1L3' T8 21w/ELEE LO	rlrb LF	5	22	0.1	0.1	122	1,800	1,260
3659	Edgewood ES	Lounge Staff	1	1L4' T12 34w EE/EEMAG	cove	6	6	40	0.2	2L4' T8 28w/ELEE LO/TW-8'	rlrb LF tw	3	44	0.1	0.1	165	1,800	1,260
3660	Edgewood ES	Lounge Staff	1	1L4' T12 34w EE/EEMAG	cove	1	1	40	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	26	1,800	1,260
3661	Edgewood ES	Bath Staff	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	41	3,000	3,000
3662	Edgewood ES	Bath Staff	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	41	3,000	3,000
3663	Edgewood ES	Bath Staff	1	60W INCANDESCENT	can rec 8"	9	9	60	0.5	8 WATT LED SI	screw in LED par20	9	8	0.1	0.5	1,184	3,000	2,100
3664	Edgewood ES	Bath Staff	1	60W INCANDESCENT	can rec 8"	4	4	60	0.2	8 WATT LED SI	screw in LED par20	4	8	0.0	0.2	526	3,000	2,100
3665	Edgewood ES	Closet Clean	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	2	500	500
3666	Edgewood ES	Bath Handicap	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	41	3,000	3,000
3667	Edgewood ES	Office Open Nurse	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	32	2,400	2,400
3668	Edgewood ES	Office Open Nurse	1	4L4' T8 32w/EL-8'	wrap	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	0.1	152	2,400	2,400
3669	Edgewood ES	Office Open Nurse	1	1L4' T12 34w EE/EEMAG	task strip	1	1	40	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	34	2,400	2,400
3670	Edgewood ES	Office Open Nurse	1	2L4' T8 32w/EL	vanity	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	65	2,400	2,400
3671	Edgewood ES	Bath Nurse	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	41	3,000	3,000
3672	Edgewood ES	Office Nurse	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	27	2,000	2,000
3673	Edgewood ES	Office Nurse	1	1L4' T12 34w EE/EEMAG	task strip	2	2	40	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	57	2,000	2,000
3674	Edgewood ES	Bath Boys	1	4L4' T8 32w/EL-8'	vanity	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	63	3,000	2,100
3675	Edgewood ES	Bath Boys	1	2L4' T8 32w/EL	vanity	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	122	3,000	2,100
3676	Edgewood ES	Bath Boys	1	2L3' T8 25w/EL	vanity	1	1	47	0.0	2L3' T8 21w/ELEE LO	rlrb LF	1	42	0.0	0.0	13	3,000	2,100
3677	Edgewood ES	Bath Girls	1	4L4' T8 32w/EL-8'	vanity	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	63	3,000	2,100
3678	Edgewood ES	Bath Girls	1	2L4' T8 32w/EL	vanity	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	122	3,000	2,100
3679	Edgewood ES	Bath Girls	1	2L3' T8 25w/EL	vanity	1	1	47	0.0	2L3' T8 21w/ELEE LO	rlrb LF	1	42	0.0	0.0	13	3,000	2,100
3680	Edgewood ES	Classroom 1	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
3681	Edgewood ES	Bath 1	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	132	3,000	3,000
3682	Edgewood ES	Classroom 2	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
3683	Edgewood ES	Bath 2	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	132	3,000	3,000
3684	Edgewood ES	Classroom 3	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
3685	Edgewood ES	Bath 3	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	132	3,000	3,000
3686	Edgewood ES	Classroom 4	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
3687	Edgewood ES	Bath 4	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	132	3,000	3,000
3688	Edgewood ES	Classroom 5	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
3689	Edgewood ES	Bath 5	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	132	3,000	3,000
3690	Edgewood ES	Classroom 6	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
3691	Edgewood ES	Bath 6	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	132	3,000	3,000
3692	Edgewood ES	Classroom 7	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
3693	Edgewood ES	Bath 7	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	132	3,000	3,000
3694	Edgewood ES	Classroom 8	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
3695	Edgewood ES	Bath 8	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	132	3,000	3,000
3696	Edgewood ES	Classroom 9	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
3697	Edgewood ES	Bath 9	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	132	3,000	3,000
3698	Edgewood ES	Classroom 10	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
3699	Edgewood ES	Bath 10	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	132	3,000	3,000
3700	Edgewood ES	Classroom 11	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
3701	Edgewood ES	Bath 11	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	132	3,000	3,000
3702	Edgewood ES	Classroom 12	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	418	2,200	1,540
3703	Edgewood ES	Bath 12	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	132	3,000	3,000

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
3706	Ivy Drive ES	Mechanical Boiler	1	4L4' T8 32w/EL-8'	industrial	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	75	500	350
3707	Ivy Drive ES	Kitchen Z	1	3L2' T8 17w/EL	box acrylic	3	3	47	0.1	3L2' T8 15w/ELEE LO	rlrb LF	3	41	0.1	0.0	34	1,900	1,900
3708	Ivy Drive ES	Kitchen Z	1	3L4' T8 32w/EL	trof acr	15	15	88	1.3	3L4' T8 28w/ELEE LO	rlrb LF	15	66	1.0	0.3	623	1,900	1,900
3709	Ivy Drive ES	Kitchen Z	1	2L4' T8 32w/EL	range hood	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	121	1,900	1,900
3710	Ivy Drive ES	Storage Dry Good	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	25	1,000	700
3711	Ivy Drive ES	Bath Kit	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	1	57	0.1	0.0	11	2,100	2,100
3712	Ivy Drive ES	Hall Slop Sink	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	2	57	0.1	0.0	32	3,000	2,100
3713	Ivy Drive ES	Office Custodian	1	4L4' T8 32w/EL-8'	wrap	4	4	112	0.4	4L4' T8 28w/ELEE LO-8'	rlrb LF	4	87	0.3	0.1	199	2,000	1,400
3714	Ivy Drive ES	Office Custodian	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	32	2,000	1,400
3715	Ivy Drive ES	Bath Custodian	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	1	57	0.1	0.0	16	3,000	3,000
3716	Ivy Drive ES	Hall Main	1	2L2' 24W T5HO/EL	troffer indirect	15		52	0.8	NO RETRO	no change -specialized fixture		55	0.8			2,100	2,100
3717	Ivy Drive ES	Hall Main	1	2L2' 24W T5HO/EL	troffer indirect	22		52	1.1	NO RETRO	no change -specialized fixture		55	1.1			350	350
3718	Ivy Drive ES	Hall Main	1	26W CF HARDWIRED	can rec	48		28	1.3	NO RETRO	no change		29	1.3			2,100	2,100
3719	Ivy Drive ES	Hall Main	1	2x26W CF HARDWIRED/EL	can rec	23	23	54	1.2	10 WATT LED/KIT	can kit LED Spectrum	23	11	0.2	1.0	2,101	2,100	2,100
3720	Ivy Drive ES	Hall Main	1	2x26W CF HARDWIRED/EL	can rec	11	11	54	0.6	10 WATT LED/KIT	can kit LED Spectrum	11	11	0.1	0.5	167	350	350
3721	Ivy Drive ES	Hall Main	1	2L4' T8 32w/EL-8'	cove	14	14	60	0.8	2L4' T8 28w/ELEE LO-8'	rlrb LF	14	44	0.6	0.2	78	350	350
3722	Ivy Drive ES	Hall Main	1	1L4' T8 32w/EL	cove	4	4	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	4	23	0.1	0.0	10	350	350
3723	Ivy Drive ES	Hall Main	1	2L4' T8 32w/EL-8'	cove	40	40	60	2.4	2L4' T8 28w/ELEE LO-8'	rlrb LF	40	44	1.8	0.6	668	2,100	2,100
3724	Ivy Drive ES	Hall Main	1	1L4' T8 32w/EL	cove	17	17	30	0.5	1L4' T8 28w/ELEE LO	rlrb LF	17	23	0.4	0.1	123	2,100	2,100
3725	Ivy Drive ES	Hall Main	1	2x26W CF HARDWIRED/EL	sconce	4		54	0.2	NO RETRO	no change		57	0.2			2,100	2,100
3726	Ivy Drive ES	Hall Main	1	3 WATT LED	cove	1		3	0.0	NO RETRO	no change		3	0.0			350	350
3727	Ivy Drive ES	Hall Main	1	75W INCANDESCENT	track head	12	12	75	0.9	8 WATT LED SI	screw in LED par20	12	8	0.1	0.8	1,678	2,100	2,100
3728	Ivy Drive ES	Classroom Music23	1	4L4' T8 32w/EL-8'	wrap narrow	12	12	112	1.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	12	87	1.0	0.3	459	1,540	1,540
3729	Ivy Drive ES	Office Music23	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	2	57	0.1	0.0	15	1,400	1,400
3730	Ivy Drive ES	Storage Music23	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	9	350	350
3731	Ivy Drive ES	Classroom Art24	1	4L4' T8 32w/EL-8'	wrap narrow	12	12	112	1.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	12	87	1.0	0.3	459	1,540	1,540
3732	Ivy Drive ES	Office Art24	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	2	57	0.1	0.0	15	1,400	1,400
3733	Ivy Drive ES	Storage Art24	1	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	8	350	350
3734	Ivy Drive ES	Storage Art24	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	9	350	350
3735	Ivy Drive ES	Storage Clean	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	8	500	500
3736	Ivy Drive ES	Storage Electric	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	9	350	350
3737	Ivy Drive ES	Classroom 20	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
3738	Ivy Drive ES	Classroom 20	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
3739	Ivy Drive ES	Classroom 21	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
3740	Ivy Drive ES	Classroom 21	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
3741	Ivy Drive ES	Bath Women	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	1	57	0.1	0.0	11	2,100	2,100
3742	Ivy Drive ES	Bath Men	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	1	57	0.1	0.0	11	2,100	2,100
3743	Ivy Drive ES	Classroom 22	1	4L4' T8 32w/EL-8'	wrap narrow	5	5	112	0.6	4L4' T8 28w/ELEE LO-8'	rlrb LF	5	87	0.4	0.1	191	1,540	1,540
3744	Ivy Drive ES	Classroom 22	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
3745	Ivy Drive ES	Classroom 15	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
3746	Ivy Drive ES	Classroom 15	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
3747	Ivy Drive ES	Classroom 14	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
3748	Ivy Drive ES	Classroom 14	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
3749	Ivy Drive ES	Classroom 13	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
3750	Ivy Drive ES	Classroom 13	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
3751	Ivy Drive ES	Classroom 12	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
3752	Ivy Drive ES	Classroom 12	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
3753	Ivy Drive ES	Office Psychologist	1	4L4' T8 32w/EL-8'	wrap narrow	4	4	112	0.4	4L4' T8 28w/ELEE LO-8'	rlrb LF	4	87	0.3	0.1	139	1,400	1,400
3754	Ivy Drive ES	Office Psychologist	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	61	1,400	1,400
3755	Ivy Drive ES	Storage Equip	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	12	500	500
3756	Ivy Drive ES	Storage Clean	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
3757	Ivy Drive ES	Bath Boys	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	2	57	0.1	0.0	22	2,100	2,100
3758	Ivy Drive ES	Bath Boys	1	4L4' T8 32w/EL-8'	soffit	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	104	2,100	2,100
3759	Ivy Drive ES	Bath Boys	1	2L4' T8 32w/EL	soffit	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	33	2,100	2,100
3760	Ivy Drive ES	Bath Boys	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	91	2,100	2,100
3761	Ivy Drive ES	Bath Girls	1	4L2' T8 17w/EL	trof acr	3	3	62	0.2	4L2' T8 15w/ELEE LO	rlrb LF	3	57	0.2	0.0	33	2,100	2,100
3762	Ivy Drive ES	Bath Girls	1	4L4' T8 32w/EL-8'	soffit	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	104	2,100	2,100
3763	Ivy Drive ES	Bath Girls	1	2L4' T8 32w/EL	soffit	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	33	2,100	2,100
3764	Ivy Drive ES	Bath Girls	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	91	2,100	2,100
3765	Ivy Drive ES	Classroom 19	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
3766	Ivy Drive ES	Classroom 19	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
3767	Ivy Drive ES	Classroom 16	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
3768	Ivy Drive ES	Classroom 16	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
3769	Ivy Drive ES	Classroom 18	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
3770	Ivy Drive ES	Classroom 18	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
3771	Ivy Drive ES	Classroom 17	1	4L4' T8 32w/EL-8'	wrap narrow	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	0.2	344	1,540	1,540
3772	Ivy Drive ES	Lounge Staff	1	2L2' 24W T5HO/EL	troffer indirect	12		52	0.6	NO RETRO	no change -specialized fixture		55	0.6			1,260	1,260
3773	Ivy Drive ES	Lounge Staff	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	55	1,260	1,260
3774	Ivy Drive ES	Bath Staff	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	1	57	0.1	0.0	11	2,100	2,100
3775	Ivy Drive ES	Bath Boys	1	4L2' T8 17w/EL	trof acr	3	3	62	0.2	4L2' T8 15w/ELEE LO	rlrb LF	3	57	0.2	0.0	33	2,100	2,100
3776	Ivy Drive ES	Bath Boys	1	4L4' T8 32w/EL-8'	soffit	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	104	2,100	2,100
3777	Ivy Drive ES	Bath Boys	1	2L4' T8 32w/EL	soffit	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	33	2,100	2,100
3778	Ivy Drive ES	Bath Girls	1	4L2' T8 17w/EL	trof acr	3	3	62	0.2	4L2' T8 15w/ELEE LO	rlrb LF	3	57	0.2	0.0	33	2,100	2,100

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
3779	Ivy Drive ES	Bath Girls	1	4L4' T8 32w/EL-8'	soffit	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	104	2,100	2,100
3780	Ivy Drive ES	Bath Girls	1	2L4' T8 32w/EL	soffit	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	33	2,100	2,100
3781	Ivy Drive ES	Storage Electric	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	9	350	350
3782	Ivy Drive ES	Classroom 10	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
3783	Ivy Drive ES	Classroom 10	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
3784	Ivy Drive ES	Classroom 9	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
3785	Ivy Drive ES	Classroom 9	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
3786	Ivy Drive ES	Classroom 8	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
3787	Ivy Drive ES	Classroom 8	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
3788	Ivy Drive ES	Classroom 7	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
3789	Ivy Drive ES	Classroom 7	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
3790	Ivy Drive ES	Storage Clean	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	8	500	500
3791	Ivy Drive ES	Storage Electric	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	9	350	350
3792	Ivy Drive ES	Storage A	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	12	500	350
3793	Ivy Drive ES	Classroom Kindergartena	1	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	441	1,540	1,540
3794	Ivy Drive ES	Classroom Kindergartena	1	2x26W CF HARDWIRED/EL	can rec	4	4	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	4	11	0.0	0.2	268	1,540	1,540
3795	Ivy Drive ES	Classroom Kindergartena	1	4L4' T8 32w/EL-8'	trof acr 1' wide	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	55	2,200	2,200
3796	Ivy Drive ES	Classroom Kindergartena	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	2	57	0.1	0.0	16	1,540	1,540
3797	Ivy Drive ES	Bath Kindergartena	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	1	57	0.1	0.0	16	3,000	3,000
3798	Ivy Drive ES	Storage Kindergartena	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	44	1,000	1,000
3799	Ivy Drive ES	Classroom Kindergartenb	1	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	441	1,540	1,540
3800	Ivy Drive ES	Classroom Kindergartenb	1	2x26W CF HARDWIRED/EL	can rec	4	4	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	4	11	0.0	0.2	268	1,540	1,540
3801	Ivy Drive ES	Classroom Kindergartenb	1	4L4' T8 32w/EL-8'	trof acr 1' wide	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	55	2,200	2,200
3802	Ivy Drive ES	Classroom Kindergartenb	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	2	57	0.1	0.0	16	1,540	1,540
3803	Ivy Drive ES	Bath Kindergartenb	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	1	57	0.1	0.0	16	3,000	3,000
3804	Ivy Drive ES	Storage Kindergartenb	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	44	1,000	1,000
3805	Ivy Drive ES	Classroom Kindergartenc	1	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	441	1,540	1,540
3806	Ivy Drive ES	Classroom Kindergartenc	1	2x26W CF HARDWIRED/EL	can rec	4	4	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	4	11	0.0	0.2	268	1,540	1,540
3807	Ivy Drive ES	Classroom Kindergartenc	1	4L4' T8 32w/EL-8'	trof acr 1' wide	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	55	2,200	2,200
3808	Ivy Drive ES	Classroom Kindergartenc	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	2	57	0.1	0.0	16	1,540	1,540
3809	Ivy Drive ES	Bath Kindergartenc	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	1	57	0.1	0.0	16	3,000	3,000
3810	Ivy Drive ES	Storage Kindergartenc	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	44	1,000	1,000
3811	Ivy Drive ES	Classroom Kindergartend	1	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO-8'	rlrb LF	6	132	0.8	0.3	441	1,540	1,540
3812	Ivy Drive ES	Classroom Kindergartend	1	2x26W CF HARDWIRED/EL	can rec	4	4	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	4	11	0.0	0.2	268	1,540	1,540
3813	Ivy Drive ES	Classroom Kindergartend	1	4L4' T8 32w/EL-8'	trof acr 1' wide	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	55	2,200	2,200
3814	Ivy Drive ES	Classroom Kindergartend	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	2	57	0.1	0.0	16	1,540	1,540
3815	Ivy Drive ES	Bath Kindergartend	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	1	57	0.1	0.0	16	3,000	3,000
3816	Ivy Drive ES	Storage Kindergartend	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	44	1,000	1,000
3817	Ivy Drive ES	Classroom 6	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
3818	Ivy Drive ES	Classroom 6	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
3819	Ivy Drive ES	Classroom 3	1	2L2' 24W T5HO/EL	troffer indirect	8		52	0.4	NO RETRO	no change -specialized fixture		55	0.4			1,540	1,540
3820	Ivy Drive ES	Classroom 5	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
3821	Ivy Drive ES	Classroom 5	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
3822	Ivy Drive ES	Classroom 2	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
3823	Ivy Drive ES	Classroom 2	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
3824	Ivy Drive ES	Classroom 2	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
3825	Ivy Drive ES	Classroom 2	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	73	1,540	1,540
3826	Ivy Drive ES	Classroom 1	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	230	1,540	1,540
3827	Ivy Drive ES	Classroom 1	1	2L4' T8 32w/EL	wrap narrow	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	49	1,540	1,540
3828	Ivy Drive ES	Storage Speech	1	2L2' 24W T5HO/EL	troffer indirect	2		52	0.1	NO RETRO	no change -specialized fixture		55	0.1			1,000	1,000
3829	Ivy Drive ES	Library Media	1	2x26W CF HARDWIRED/EL	can rec	18	18	54	1.0	10 WATT LED/KIT	can kit LED Spectrum	18	11	0.2	0.8	1,409	1,800	1,800
3830	Ivy Drive ES	Library Media	1	26W CF HARDWIRED	can rec	6		28	0.2	NO RETRO	no change		29	0.2			1,800	1,800
3831	Ivy Drive ES	Library Media	1	2L2' 24W T5HO/EL	troffer indirect	2		52	0.1	NO RETRO	no change -specialized fixture		55	0.1			1,800	1,800
3832	Ivy Drive ES	Library Media	1	6L4' T8 32w/EL-8'	indirect/direct	11	11	180	2.0	6L4' T8 28w/ELEE LO-8'	rlrb LF	11	132	1.5	0.5	944	1,800	1,800
3833	Ivy Drive ES	Library Media	1	6L4' T8 32w/EL-8'	indirect/direct	4	4	180	0.7	6L4' T8 28w/ELEE LO-8'	rlrb LF	4	132	0.5	0.2	343	1,800	1,800
3834	Ivy Drive ES	Storage Annex	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	4L2' T8 15w/ELEE LO	rlrb LF	4	57	0.2	0.0	15	700	700
3835	Ivy Drive ES	Storage Head-End	1	2L4' T8 32w/EL-8'	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	0.0	11	700	700
3836	Ivy Drive ES	Office Workrm	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	2	57	0.1	0.0	15	1,400	1,400
3837	Ivy Drive ES	Storage Electric	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	8	500	500
3838	Ivy Drive ES	Bath Men	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	1	57	0.1	0.0	11	2,100	2,100
3839	Ivy Drive ES	Bath Women	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	1	57	0.1	0.0	11	2,100	2,100
3840	Ivy Drive ES	Office Open Workrm	1	2L2' 24W T5HO/EL	troffer indirect	6		52	0.3	NO RETRO	no change -specialized fixture		55	0.3			1,680	1,680
3841	Ivy Drive ES	Office Open Health	1	2L2' 24W T5HO/EL	troffer indirect	7		52	0.4	NO RETRO	no change -specialized fixture		55	0.4			1,680	1,680
3842	Ivy Drive ES	Office Open Health	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	1	57	0.1	0.0	13	2,400	2,400
3843	Ivy Drive ES	Office Open Health	1	1L4' T8 32w/EL	task strip	3	3	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	3	23	0.1	0.0	50	2,400	2,400
3844	Ivy Drive ES	Bath Health	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	1	57	0.1	0.0	11	2,100	2,100
3845	Ivy Drive ES	Storage 2Nd Equip	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	1	57	0.1	0.0	3	500	500
3846	Ivy Drive ES	Office Open Main	1	2L2' 24W T5HO/EL	troffer indirect	12		52	0.6	NO RETRO	no change -specialized fixture		55	0.6			1,680	1,680
3847	Ivy Drive ES	Office Principal	1	2L2' 24W T5HO/EL	troffer indirect	8		52	0.4	NO RETRO	no change -specialized fixture		55	0.4			1,400	1,400
3848	Ivy Drive ES	Office Open Main	1	2L2' 24W T5HO/EL	troffer indirect	3		52	0.2	NO RETRO	no change -specialized fixture		55	0.2			1,680	1,680
3849	Ivy Drive ES	Office Open Main	1	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	146	1,680	1,680
3850	Ivy Drive ES	Storage Main	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	8	500	500
3851	Ivy Drive ES	Conference Main	1	2L2' 24W T5HO/EL	troffer indirect	6		52	0.3	NO RETRO	no change -specialized fixture		55	0.3			1,400	1,400

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
3852	Ivy Drive ES	Bath Staff	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	1	57	0.1	0.0	11	2,100	2,100
3853	Ivy Drive ES	Bath Staff	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	1	57	0.1	0.0	11	2,100	2,100
3854	Ivy Drive ES	Cafeteria	1	2L4' T8 32w U/EL	trof acr	5	5	60	0.3	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	5	35	0.2	0.1	215	1,700	1,700
3855	Ivy Drive ES	Cafeteria	1	6L4' T8 32w/EL-8'	indirect/direct	36	36	180	6.5	6L4' T8 28w/ELEE LO-8'	rlrb LF	36	132	4.8	1.7	2,919	1,700	1,700
3856	Ivy Drive ES	Gym	1	6L4' T5HO/EL	trof acr dim	28		160	4.5	NO RETRO	no change -specialized fixture		168	4.5			2,000	2,000
3857	Ivy Drive ES	Hall By Stage	1	2L2' 24W T5HO/EL	troffer indirect	2		52	0.1	NO RETRO	no change -specialized fixture		55	0.1			3,000	3,000
3858	Ivy Drive ES	Stage Z	1	4L4' T8 32w/EL-8'	industrial	7	7	112	0.8	4L4' T8 28w/ELEE LO-8'	rlrb LF	7	87	0.6	0.2	278	1,600	1,600
3859	Ivy Drive ES	Stage Z	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	40	1,600	1,600
3860	Ivy Drive ES	Stage Z	1	75W INCANDESCENT	dome	9		75	0.7	NO RETRO	no change -low hours		79	0.7			100	100
3861	Ivy Drive ES	Storage B	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	12	500	500
3862	Ivy Drive ES	Office Pe	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	87	2,000	1,400
3867	City Hall & Annex	Mechanical Pent	P	100W INCANDESCENT	keyless	11	11	100	1.1	15 WATT LED SI	screw in LED Alamp	11	16	0.2	0.9	463	500	350
3868	City Hall & Annex	Stair North	S	3x60W INCANDESCENTS	drum	4	4	180	0.7	8 WATT LED SI	screw in LED Alamp	4	8	0.0	0.7	2,677	3,900	3,900
3869	City Hall & Annex	Stair North	S	2L2' T8 17w/EL	box acrylic	6	6	33	0.2	2L2' T8 15w/ELEE LO	rlrb LF	6	28	0.2	0.0	109	3,900	3,900
3870	City Hall & Annex	Stair North	S	13W CF HARDWIRED	can rec	8		15	0.1	NO RETRO	no change		16	0.1			3,900	3,900
3871	City Hall & Annex	Stair North	S	2L2' T8 17w/EL	trof acr	8	8	33	0.3	2L2' T8 15w/ELEE LO	rlrb LF	8	28	0.2	0.0	145	3,900	3,900
3872	City Hall & Annex	Stair North	S	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	99	3,900	3,900
3873	City Hall & Annex	Stair North	S	1L3' T8 25w/EL	wrap narrow	16	16	24	0.4	1L3' T8 21w/ELEE LO	rlrb LF	16	22	0.4	0.0	122	3,900	3,900
3874	City Hall & Annex	Stair South	S	1L3' T8 25w/EL	wrap narrow	12	12	24	0.3	1L3' T8 21w/ELEE LO	rlrb LF	12	22	0.3	0.0	91	3,900	3,900
3875	City Hall & Annex	Stair South	S	4L4' T8 32w/EL-8'	wrap	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	194	3,900	3,900
3876	City Hall & Annex	Hall 3Rd	3	2L4' T8 32w/EL-8'	soffit	18	18	60	1.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	18	44	0.8	0.3	1,116	3,900	3,900
3877	City Hall & Annex	Hall 3Rd	3	1L2' T8 17w/EL	soffit	1	1	17	0.0	1L2' T8 15w/ELEE LO	rlrb LF	1	15	0.0	0.0	9	3,900	3,900
3878	City Hall & Annex	Hall 3Rd	3	2x13W CF HARDWIRED	can rec	18		30	0.5	NO RETRO	no change		32	0.5			3,900	3,900
3879	City Hall & Annex	Hall Mis	3	2L2' T8 17w/EL	trof minicube	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	73	3,900	3,900
3880	City Hall & Annex	Office Open Mis	3	3L4' T8 32w/EL	trof minicube	12	12	88	1.1	3L4' T8 28w/ELEE LO	rlrb LF	12	66	0.8	0.3	750	2,860	2,860
3881	City Hall & Annex	Office Open Mis	3	2x9W CF HARDWIRED	exit sign	1	1	22	0.0	3 WATT LED/NEW EXIT BATTERY	new LED exit bat	1	3	0.0	0.0	165	8,760	8,760
3882	City Hall & Annex	Storage Mis (3)	3	1L3' T8 25w/EL	wrap narrow	3	3	24	0.1	1L3' T8 21w/ELEE LO	rlrb LF	3	22	0.1	0.0	3	500	500
3883	City Hall & Annex	Office Open Servers	3	4L4' T8 32w/EL	trof minicube	8	8	112	0.9	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	8	67	0.5	0.4	1,025	2,860	2,860
3884	City Hall & Annex	Office Mis	3	2L2' T8 17w/EL	trof minicube	6	6	33	0.2	2L2' T8 15w/ELEE LO	rlrb LF	6	28	0.2	0.0	56	2,002	2,002
3885	City Hall & Annex	Office Mis	3	4L4' T8 32w/EL	trof minicube	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	0.1	256	2,860	2,860
3886	City Hall & Annex	Office Open Mis	3	4L4' T8 32w/EL	trof minicube	12	12	112	1.3	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	12	67	0.8	0.5	1,538	2,860	2,860
3887	City Hall & Annex	Office Open Mail	3	3L4' T8 32w/EL	trof acr	6	6	88	0.5	3L4' T8 28w/ELEE LO	rlrb LF	6	66	0.4	0.1	262	2,002	2,002
3888	City Hall & Annex	Storage Electric	3	26W CF SCREWIN	keyless	1	1	28	0.0	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.0	10	500	500
3889	City Hall & Annex	Bath Men	3	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	50	2,002	2,002
3890	City Hall & Annex	Bath Men	3	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	32	2,002	2,002
3891	City Hall & Annex	Bath Men	3	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	32	2,002	2,002
3892	City Hall & Annex	Bath Men	3	13W CF SCREWIN	square surface mt.	1	1	15	0.0	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.0	19	2,860	2,860
3893	City Hall & Annex	Storage Electric	3	26W CF SCREWIN	keyless	1	1	28	0.0	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.0	10	500	500
3894	City Hall & Annex	Bath Women	3	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	50	2,002	2,002
3895	City Hall & Annex	Bath Women	3	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	32	2,002	2,002
3896	City Hall & Annex	Bath Women	3	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	32	2,002	2,002
3897	City Hall & Annex	Bath Women	3	13W CF SCREWIN	square surface mt.	1	1	15	0.0	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.0	19	2,860	2,860
3898	City Hall & Annex	Office Open Probate	3	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	27	2,860	2,002
3899	City Hall & Annex	Office Open Probate	3	4L4' T8 32w/EL	trof acr	8	8	112	0.9	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	8	67	0.5	0.4	1,025	2,860	2,002
3900	City Hall & Annex	Office Probate	3	2L2' T8 17w/EL	trof acr	6	6	33	0.2	2L2' T8 15w/ELEE LO	rlrb LF	6	28	0.2	0.0	56	2,002	2,002
3901	City Hall & Annex	Office Probate	3	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	0.1	256	2,860	2,860
3902	City Hall & Annex	Office Probate	3	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	27	2,860	2,860
3903	City Hall & Annex	Office Probate	3	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	0.1	256	2,860	2,860
3904	City Hall & Annex	Office Probate	3	2L2' T8 17w/EL	trof acr	8	8	33	0.3	2L2' T8 15w/ELEE LO	rlrb LF	8	28	0.2	0.0	106	2,860	2,002
3905	City Hall & Annex	Office Probate	3	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	0.1	256	2,860	2,002
3906	City Hall & Annex	Conference Probate	3	2L2' T8 17w/EL	trof acr	3	3	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	3	28	0.1	0.0	40	2,860	2,002
3907	City Hall & Annex	Storage Vault	3	4L4' T8 32w/EL-8'	wrap	4	4	112	0.4	4L4' T8 28w/ELEE LO-8'	rlrb LF	4	87	0.3	0.1	284	2,860	2,860
3908	City Hall & Annex	Office Open Comptroller	3	4L4' T8 32w/EL	trof acr	40	40	112	4.5	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	40	67	2.7	1.8	5,125	2,860	2,860
3909	City Hall & Annex	Office Comptroller	3	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	6	67	0.4	0.3	769	2,860	2,002
3910	City Hall & Annex	Office Comptroller	3	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	53	2,860	2,002
3911	City Hall & Annex	Storage Vault	3	4L4' T8 32w/EL-8'	wrap	4	4	112	0.4	4L4' T8 28w/ELEE LO-8'	rlrb LF	4	87	0.3	0.1	284	2,860	2,860
3912	City Hall & Annex	Lounge Comptroller	3	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	37	2,002	2,002
3913	City Hall & Annex	Office Cousel	3	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	0.1	256	2,860	2,002
3914	City Hall & Annex	Office Cousel	3	2L2' T8 17w/EL	trof acr	1	1	33	0.0	2L2' T8 15w/ELEE LO	rlrb LF	1	28	0.0	0.0	13	2,860	2,002
3915	City Hall & Annex	Conference Cousel	3	2L2' T8 17w/EL	trof acr	6	6	33	0.2	2L2' T8 15w/ELEE LO	rlrb LF	6	28	0.2	0.0	56	2,002	2,002
3916	City Hall & Annex	Office Open Cousel	3	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	6	67	0.4	0.3	769	2,860	2,860
3917	City Hall & Annex	Office Open Cousel	3	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	27	2,860	2,860
3918	City Hall & Annex	Office Cousel	3	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	4	67	0.3	0.2	359	2,002	2,002
3919	City Hall & Annex	Office Cousel	3	2L2' T8 17w/EL	trof acr	6	6	33	0.2	2L2' T8 15w/ELEE LO	rlrb LF	6	28	0.2	0.0	56	2,002	2,002
3920	City Hall & Annex	Office Cousel	3	2L2' T8 17w/EL	trof acr	6	6	33	0.2	2L2' T8 15w/ELEE LO	rlrb LF	6	28	0.2	0.0	56	2,002	2,002
3921	City Hall & Annex	Office Cousel	3	2L2' T8 17w/EL	trof acr	6	6	33	0.2	2L2' T8 15w/ELEE LO	rlrb LF	6	28	0.2	0.0	56	2,002	2,002
3922	City Hall & Annex	Office Open Treasurer	3	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	4	67	0.3	0.2	513	2,860	2,002
3923	City Hall & Annex	Office Open Treasurer	3	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	27	2,860	2,002
3924	City Hall & Annex	Office Treasurer	3	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	53	2,860	2,860
3925	City Hall & Annex	Office Treasurer	3	2L2' T8 17w/EL	trof acr	6	6	33	0.2	2L2' T8 15w/ELEE LO	rlrb LF	6	28	0.2	0.0	56	2,002	2,002
3926	City Hall & Annex	Office Open Mayor	3	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	4	67	0.3	0.2	513	2,860	2,002
3927	City Hall & Annex	Office Open Mayor	3	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	27	2,860	2,002
3928	City Hall & Annex	Storage Mayor	3	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	5	500	500

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
3929	City Hall & Annex	Hall Mayor	3	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	198	3,900	3,900
3930	City Hall & Annex	Bath Mayor	3	3x60W INCANDESCENTS	decorative	1	1	180	0.2	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.2	491	2,860	2,860
3931	City Hall & Annex	Bath Mayor	3	60W INCANDESCENT	exhaust fan light	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	148	2,860	2,860
3932	City Hall & Annex	Conference Mayor	3	3L4' T8 32w/EL	trof minicube	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	250	2,860	2,860
3933	City Hall & Annex	Conference Mayor	3	13W CF SCREWIN	can rec	11		15	0.2	NO RETRO	no change		16	0.2			2,860	2,860
3934	City Hall & Annex	Office Mayor	3	2L2' T8 17w/EL	trof acr	8	8	33	0.3	2L2' T8 15w/ELEE LO	rlrb LF	8	28	0.2	0.0	106	2,860	2,002
3935	City Hall & Annex	Office Mayor	3	13W CF SCREWIN	can rec	10		15	0.2	NO RETRO	no change		16	0.2			2,860	2,002
3936	City Hall & Annex	Hall 2Nd	2	2L4' T8 32w/EL-8'	soffit	20	20	60	1.2	2L4' T8 28w/ELEE LO-8'	rlrb LF	20	44	0.9	0.3	1,240	3,900	3,900
3937	City Hall & Annex	Hall 2Nd	2	1L2' T8 17w/EL	soffit	2	2	17	0.0	1L2' T8 15w/ELEE LO	rlrb LF	2	15	0.0	0.0	18	3,900	3,900
3938	City Hall & Annex	Hall 2Nd	2	2x13W CF HARDWIRED	can rec	14		30	0.4	NO RETRO	no change		32	0.4			3,900	3,900
3939	City Hall & Annex	Lounge Staff	2	3L4' T8 32w/EL	trof acr	8	8	88	0.7	3L4' T8 28w/ELEE LO	rlrb LF	8	66	0.5	0.2	350	2,002	2,002
3940	City Hall & Annex	Storage Vault	2	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	12	500	500
3941	City Hall & Annex	Office Open Development	2	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	6	67	0.4	0.3	769	2,860	2,002
3942	City Hall & Annex	Office Open Development	2	2L2' T8 17w/EL	trof acr	5	5	33	0.2	2L2' T8 15w/ELEE LO	rlrb LF	5	28	0.1	0.0	66	2,860	2,002
3943	City Hall & Annex	Office Development	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	3	67	0.2	0.1	269	2,002	2,002
3944	City Hall & Annex	Office Development	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	3	67	0.2	0.1	269	2,002	2,002
3945	City Hall & Annex	Office Development	2	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	4	67	0.3	0.2	359	2,002	2,002
3946	City Hall & Annex	Conference Development	2	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	6	67	0.4	0.3	538	2,002	2,002
3947	City Hall & Annex	Conference Development	2	2L2' T8 17w/EL	trof acr	1	1	33	0.0	2L2' T8 15w/ELEE LO	rlrb LF	1	28	0.0	0.0	9	2,002	2,002
3948	City Hall & Annex	Office Development	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	3	67	0.2	0.1	269	2,002	2,002
3949	City Hall & Annex	Office Development	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	3	67	0.2	0.1	269	2,002	2,002
3950	City Hall & Annex	Office Development	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	3	67	0.2	0.1	269	2,002	2,002
3951	City Hall & Annex	Storage Development	2	2L2' T8 17w/EL	trof acr	6	6	33	0.2	2L2' T8 15w/ELEE LO	rlrb LF	6	28	0.2	0.0	56	2,002	2,002
3952	City Hall & Annex	Storage Electric	2	26W CF SCREWIN	keyless	1	1	28	0.0	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.0	10	500	500
3953	City Hall & Annex	Bath Men	2	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	50	2,002	2,002
3954	City Hall & Annex	Bath Men	2	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	32	2,002	2,002
3955	City Hall & Annex	Bath Men	2	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	32	2,002	2,002
3956	City Hall & Annex	Bath Men	2	13W CF SCREWIN	square surface mt.	1	1	15	0.0	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.0	19	2,860	2,860
3957	City Hall & Annex	Storage Custodian	2	26W CF SCREWIN	keyless	1	1	28	0.0	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.0	10	500	500
3958	City Hall & Annex	Bath Women	2	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	50	2,002	2,002
3959	City Hall & Annex	Bath Women	2	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	32	2,002	2,002
3960	City Hall & Annex	Bath Women	2	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	32	2,002	2,002
3961	City Hall & Annex	Bath Women	2	13W CF SCREWIN	square surface mt.	1	1	15	0.0	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.0	19	2,860	2,860
3962	City Hall & Annex	Office Open Parks	2	4L4' T8 32w/EL	trof acr	9	9	112	1.0	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	9	67	0.6	0.4	1,153	2,860	2,002
3963	City Hall & Annex	Office Open Parks	2	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	53	2,860	2,002
3964	City Hall & Annex	Office Parks	2	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	19	2,002	2,002
3965	City Hall & Annex	Office Files	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	0.1	179	2,002	2,002
3966	City Hall & Annex	Office Parks	2	4L4' T8 32w/EL	trof acr	5	5	112	0.6	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	5	67	0.3	0.2	641	2,860	2,002
3967	City Hall & Annex	Office Parks	2	2L2' T8 17w/EL	trof acr	1	1	33	0.0	2L2' T8 15w/ELEE LO	rlrb LF	1	28	0.0	0.0	13	2,860	2,002
3968	City Hall & Annex	Office Open Renaissance	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	250	2,860	2,002
3969	City Hall & Annex	Conference Renaissance	2	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	6	67	0.4	0.3	538	2,002	2,002
3970	City Hall & Annex	Office Renaissance	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	175	2,002	2,002
3971	City Hall & Annex	Storage Telecom	2	13W CF SCREWIN	can rec	1		15	0.0	NO RETRO	no change		16	0.0			500	500
3972	City Hall & Annex	Office Open Purchasing	2	4L4' T8 32w/EL	trof acr	9	9	112	1.0	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	9	67	0.6	0.4	1,153	2,860	2,860
3973	City Hall & Annex	Storage Purchasing	2	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	8	500	500
3974	City Hall & Annex	Office Purchasing	2	3L4' T8 32w/EL	trof acr	3	3	88	0.3	3L4' T8 28w/ELEE LO	rlrb LF	3	66	0.2	0.1	131	2,002	2,002
3975	City Hall & Annex	Office Purchasing	2	3L4' T8 32w/EL	trof acr	3	3	88	0.3	3L4' T8 28w/ELEE LO	rlrb LF	3	66	0.2	0.1	131	2,002	2,002
3976	City Hall & Annex	Conference Purchasing	2	2L2' T8 17w/EL	trof acr	6	6	33	0.2	2L2' T8 15w/ELEE LO	rlrb LF	6	28	0.2	0.0	80	2,860	2,002
3977	City Hall & Annex	Office Open Building	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	3	67	0.2	0.1	384	2,860	2,860
3978	City Hall & Annex	Office Open Building	2	2L2' T8 17w/EL	trof acr	8	8	33	0.3	2L2' T8 15w/ELEE LO	rlrb LF	8	28	0.2	0.0	106	2,860	2,860
3979	City Hall & Annex	Storage Vault	2	4L4' T8 32w/EL-8'	wrap	4	4	112	0.4	4L4' T8 28w/ELEE LO-8'	rlrb LF	4	87	0.3	0.1	50	500	500
3980	City Hall & Annex	Office Building	2	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	4	67	0.3	0.2	513	2,860	2,860
3981	City Hall & Annex	Office Building	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	0.1	256	2,860	2,860
3982	City Hall & Annex	Office Building	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	0.1	256	2,860	2,860
3983	City Hall & Annex	Office Building	2	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	37	2,002	2,002
3984	City Hall & Annex	Lounge Building	2	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	19	2,002	2,002
3985	City Hall & Annex	Office Building	2	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	37	2,002	2,002
3986	City Hall & Annex	Conference Building	2	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	6	67	0.4	0.3	769	2,860	2,860
3987	City Hall & Annex	Bath Building	2	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	62	2,860	2,002
3988	City Hall & Annex	Office Open Claims	2	3L4' T8 32w/EL	trof acr	3	3	88	0.3	3L4' T8 28w/ELEE LO	rlrb LF	3	66	0.2	0.1	131	2,002	2,002
3989	City Hall & Annex	Office Claims	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	0.1	179	2,002	2,002
3990	City Hall & Annex	Storage Claims	2	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	44	2,002	2,002
3991	City Hall & Annex	Storage Claims	2	2L2' T8 17w/EL	trof acr	1	1	33	0.0	2L2' T8 15w/ELEE LO	rlrb LF	1	28	0.0	0.0	9	2,002	2,002
3992	City Hall & Annex	Office Personnel	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	3	67	0.2	0.1	269	2,002	2,002
3993	City Hall & Annex	Office Open Personnel	2	4L4' T8 32w/EL	trof acr	11	11	112	1.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	11	67	0.7	0.5	1,409	2,860	2,002
3994	City Hall & Annex	Office Open Personnel	2	2L2' T8 17w/EL	trof acr	6	6	33	0.2	2L2' T8 15w/ELEE LO	rlrb LF	6	28	0.2	0.0	80	2,860	2,002
3995	City Hall & Annex	Storage Personnel	2	2L4' T8 32w U/EL	trof acr	4	4	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	203	2,002	2,002
3996	City Hall & Annex	Storage Personnel	2	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	26	500	500
3997	City Hall & Annex	Storage Personnel	2	4L4' T8 32w/EL-8'	wrap	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	142	2,860	2,860
3998	City Hall & Annex	Conference Personnel	2	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	4	67	0.3	0.2	359	2,002	2,002
3999	City Hall & Annex	Office Personnel	2	4L4' T8 32w/EL	trof acr	5	5	112	0.6	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	5	67	0.3	0.2	448	2,002	2,002
4000	City Hall & Annex	Office Personnel	2	3L4' T8 32w/EL	trof acr	3	3	88	0.3	3L4' T8 28w/ELEE LO	rlrb LF	3	66	0.2	0.1	131	2,002	2,002
4001	City Hall & Annex	Hall 1St	1	2L4' T8 32w/EL-8'	soffit	18	18	60	1.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	18	44	0.8	0.3	1,116	3,900	3,900

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
4002	City Hall & Annex	Hall 1St	1	1L2' T8 17w/EL	soffit	1	1	17	0.0	1L2' T8 15w/ELEE LO	rlrb LF	1	15	0.0	0.0	9	3,900	3,900
4003	City Hall & Annex	Hall 1St	1	2x13W CF HARDWIRED	can rec	16		30	0.5	NO RETRO	no change		32	0.5			3,900	3,900
4004	City Hall & Annex	Hall 1St	1	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	36	3,900	3,900
4005	City Hall & Annex	Office Open Clerk	1	3L4' T8 32w/EL	trof acr	13	13	88	1.1	3L4' T8 28w/ELEE LO	rlrb LF	13	66	0.9	0.3	812	2,860	2,002
4006	City Hall & Annex	Office Open Clerk	1	2L2' T8 17w/EL	trof acr	5	5	33	0.2	2L2' T8 15w/ELEE LO	rlrb LF	5	28	0.1	0.0	66	2,860	2,002
4007	City Hall & Annex	Storage File Vault	1	4L4' T8 32w/EL	trof acr	11	11	112	1.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	11	67	0.7	0.5	1,409	2,860	2,860
4008	City Hall & Annex	Storage File Vault	1	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	3	67	0.2	0.1	384	2,860	2,860
4009	City Hall & Annex	Hall Clerk	1	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	51	2,730	2,730
4010	City Hall & Annex	Hall Clerk	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	1	67	0.1	0.0	122	2,730	2,730
4011	City Hall & Annex	Office Clerk	1	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	37	2,002	2,002
4012	City Hall & Annex	Office Clerk	1	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	53	2,860	2,002
4013	City Hall & Annex	Office Clerk	1	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	53	2,860	2,002
4014	City Hall & Annex	Office Open Tax	1	4L4' T8 32w/EL	trof acr	16	16	112	1.8	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	16	67	1.1	0.7	2,050	2,860	2,002
4015	City Hall & Annex	Office Open Tax	1	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	27	2,860	2,002
4016	City Hall & Annex	Office Open Tax	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	0.1	256	2,860	2,860
4017	City Hall & Annex	Office Tax	1	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	53	2,860	2,002
4018	City Hall & Annex	Office Tax	1	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	37	2,002	2,002
4019	City Hall & Annex	Storage Tax	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	16	500	500
4020	City Hall & Annex	Office Open Assessor	1	4L4' T8 32w/EL	trof acr	15	15	112	1.7	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	15	67	1.0	0.7	1,922	2,860	2,002
4021	City Hall & Annex	Office Open Assessor	1	2L2' T8 17w/EL	trof acr	5	5	33	0.2	2L2' T8 15w/ELEE LO	rlrb LF	5	28	0.1	0.0	66	2,860	2,002
4022	City Hall & Annex	Storage Assessor	1	4L4' T8 32w/EL-8'	wrap	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	142	2,860	2,860
4023	City Hall & Annex	Storage Assessor	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	91	2,860	2,860
4024	City Hall & Annex	Office Assessor	1	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	37	2,002	2,002
4025	City Hall & Annex	Office Assessor	1	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	0.0	37	2,002	2,002
4026	City Hall & Annex	Conference Assessor	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	0.1	256	2,860	2,002
4027	City Hall & Annex	Storage Electric	1	26W CF SCREWIN	keyless	1	1	28	0.0	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.0	10	500	500
4028	City Hall & Annex	Bath Men	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	71	2,860	2,002
4029	City Hall & Annex	Bath Men	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	45	2,860	2,002
4030	City Hall & Annex	Bath Men	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	45	2,860	2,002
4031	City Hall & Annex	Bath Men	1	13W CF SCREWIN	square surface mt.	1	1	15	0.0	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.0	19	2,860	2,860
4032	City Hall & Annex	Storage Electric	1	26W CF SCREWIN	keyless	1	1	28	0.0	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.0	10	500	500
4033	City Hall & Annex	Bath Women	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	71	2,860	2,002
4034	City Hall & Annex	Bath Women	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	45	2,860	2,002
4035	City Hall & Annex	Bath Women	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	45	2,860	2,002
4036	City Hall & Annex	Bath Women	1	13W CF SCREWIN	square surface mt.	1	1	15	0.0	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.0	19	2,860	2,860
4037	City Hall & Annex	Office Open Registrar	1	4L4' T8 32w/EL	trof acr	10	10	112	1.1	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	10	67	0.7	0.4	1,281	2,860	2,002
4038	City Hall & Annex	Storage Registrar	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	0.1	179	2,002	2,002
4039	City Hall & Annex	Office Registrar	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	0.1	179	2,002	2,002
4040	City Hall & Annex	Office Registrar	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	0.1	179	2,002	2,002
4041	City Hall & Annex	Office Registrar	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	0.1	179	2,002	2,002
4042	City Hall & Annex	Office Registrar	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	0.1	179	2,002	2,002
4043	City Hall & Annex	Office Open Army	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	1	67	0.1	0.0	128	2,860	2,860
4044	City Hall & Annex	Office Open Army	1	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	4	67	0.3	0.2	513	2,860	2,860
4045	City Hall & Annex	Office Open Army	1	40W INCANDESCENT	can rec	2		40	0.1	NO RETRO	no change		42	0.1			2,860	2,860
4046	City Hall & Annex	Office Open Army	1	2L2' T8 17w/EL	trof acr	1	1	33	0.0	2L2' T8 15w/ELEE LO	rlrb LF	1	28	0.0	0.0	13	2,860	2,860
4047	City Hall & Annex	Storage Army	1	2L2' T8 17w/EL	trof acr	1	1	33	0.0	2L2' T8 15w/ELEE LO	rlrb LF	1	28	0.0	0.0	13	2,860	2,860
4048	City Hall & Annex	Office Army	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	0.1	256	2,860	2,002
4049	City Hall & Annex	Office Army	1	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	4	67	0.3	0.2	513	2,860	2,002
4050	City Hall & Annex	Office Army	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	0.1	179	2,002	2,002
4051	City Hall & Annex	Hall Executive	1	2x13W CF HARDWIRED	can rec	4		30	0.1	NO RETRO	no change		32	0.1			3,900	2,730
4052	City Hall & Annex	Conference Mtg Rm	1	4L4' T8 32w/EL	trof acr	9	9	112	1.0	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	9	67	0.6	0.4	1,153	2,860	2,002
4053	City Hall & Annex	Conference Mtg Rm	1	2x13W CF HARDWIRED	can rec	2		30	0.1	NO RETRO	no change		32	0.1			2,860	2,002
4054	City Hall & Annex	Conference Executive	1	3L4' T8 32w/EL	trof parabolic	5	5	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	5	66	0.3	0.1	219	2,002	2,002
4055	City Hall & Annex	Bath Executive	1	4x40W INCANDESCENTS	decorative	1	1	160	0.2	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.2	434	2,860	2,860
4056	City Hall & Annex	Office Open Chambers	1	4L4' T8 32w/EL-8'	cove	16	16	112	1.8	4L4' T8 28w/ELEE LO-8'	rlrb LF	16	87	1.4	0.4	1,137	2,860	2,860
4057	City Hall & Annex	Office Open Chambers	1	6L2' F40 BIAX/EL	decorative	9		204	1.8	NO RETRO	no change -specialized fixture		214	1.8			2,860	2,860
4058	City Hall & Annex	Hall Ground	G	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	99	3,900	3,900
4059	City Hall & Annex	Hall Ground	G	2L4' T8 32w/EL-8'	soffit	8	8	60	0.5	2L4' T8 28w/ELEE LO-8'	rlrb LF	8	44	0.4	0.1	496	3,900	3,900
4060	City Hall & Annex	Hall Ground	G	1L4' T8 32w/EL	soffit	3	3	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	3	23	0.1	0.0	81	3,900	3,900
4061	City Hall & Annex	Hall Ground	G	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	6	67	0.4	0.3	1,048	3,900	3,900
4062	City Hall & Annex	Hall Ground	G	2x13W CF HARDWIRED	can rec	4		30	0.1	NO RETRO	no change		32	0.1			3,900	3,900
4063	City Hall & Annex	Office Open Facilities	G	4L4' T8 32w/EL	trof acr	57	57	112	6.4	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	57	67	3.8	2.6	7,303	2,860	2,860
4064	City Hall & Annex	Office Open Facilities	G	2L4' T8 32w/EL-8'	soffit	6	6	60	0.4	2L4' T8 28w/ELEE LO-8'	rlrb LF	6	44	0.3	0.1	273	2,860	2,860
4065	City Hall & Annex	Office Open Facilities	G	1L4' T8 32w/EL	soffit	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	0.0	39	2,860	2,860
4066	City Hall & Annex	Office Open Facilities	G	2x13W CF HARDWIRED	can rec	4		30	0.1	NO RETRO	no change		32	0.1			2,860	2,860
4067	City Hall & Annex	Office Drawings	G	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	19	2,002	2,002
4068	City Hall & Annex	Office Mgr	G	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	0.1	179	2,002	2,002
4069	City Hall & Annex	Office Director	G	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	3	67	0.2	0.1	269	2,002	2,002
4070	City Hall & Annex	Office Engr	G	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	0.1	179	2,002	2,002
4071	City Hall & Annex	Office Plotter	G	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	6	67	0.4	0.3	538	2,002	2,002
4072	City Hall & Annex	Office Plotter	G	4L4' T8 32w/EL	trof acr	8	8	112	0.9	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	8	67	0.5	0.4	718	2,002	2,002
4073	City Hall & Annex	Office Vault	G	2L4' T8 32w/EL	wrap	6	6	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	6	44	0.3	0.1	273	2,860	2,860
4074	City Hall & Annex	Office Open Landuse	G	4L4' T8 32w/EL	trof acr	8	8	112	0.9	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	8	67	0.5	0.4	1,025	2,860	2,002

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
4075	City Hall & Annex	Office Open Landuse	G	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	4	67	0.3	0.2	359	2,002	2,002
4076	City Hall & Annex	Conference Landuse	G	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	3	67	0.2	0.1	269	2,002	2,002
4077	City Hall & Annex	Office Pw Analyst	G	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	27	2,860	2,860
4078	City Hall & Annex	Bath Women	G	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	1	67	0.1	0.0	90	2,002	2,002
4079	City Hall & Annex	Bath Women	G	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	32	2,002	2,002
4080	City Hall & Annex	Bath Men	G	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	0.1	179	2,002	2,002
4081	City Hall & Annex	Bath Men	G	2L4' T8 32w/EL	vanity	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	64	2,002	2,002
4082	City Hall & Annex	Storage Files	G	4L4' T8 32w/EL-8'	industrial	8	8	112	0.9	4L4' T8 28w/ELEE LO-8'	rlrb LF	8	87	0.7	0.2	99	500	500
4083	City Hall & Annex	Storage Files	G	2L4' T8 32w/EL	industrial	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	24	500	500
4084	City Hall & Annex	Storage Recycle Bins	G	4L4' T8 32w/EL-8'	industrial	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	0.1	75	500	500
4085	City Hall & Annex	Storage Pistol	G	4L4' T8 32w/EL-8'	wrap	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	17	350	350
4086	City Hall & Annex	Storage Pistol	G	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	11	350	350
4087	City Hall & Annex	Bath Pistol	G	2x60W INCANDESCENTS	decorative	1	1	120	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	319	2,860	2,860
4088	City Hall & Annex	Bath Pistol	G	60W INCANDESCENT	can rec	1		60	0.1	NO RETRO	no change		63	0.1			2,860	2,860
4089	City Hall & Annex	Office Pistol	G	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	145	2,860	2,860
4090	City Hall & Annex	Office Pistol	G	3L4' T8 32w/EL	trof acr	3	3	88	0.3	3L4' T8 28w/ELEE LO	rlrb LF	3	66	0.2	0.1	187	2,860	2,860
4091	City Hall & Annex	Office Pistol	G	4L4' T8 32w/EL-8'	strip	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	0.0	142	2,860	2,860
4092	City Hall & Annex	Office Pistol	G	75W INCANDESCENT	flood	32	32	75	2.4	17 WATT LED SI	screw in LED par38	32	18	0.6	1.8	5,230	2,860	2,860
4093	City Hall & Annex	Storage Custodian	G	2L4' T8 32w/EL	industrial	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	0.1	364	2,860	2,002
4094	City Hall & Annex	Office Open Maintenance	G	2L4' T8 32w/EL	strip	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	45	2,860	2,860
4095	City Hall & Annex	Office Open Maintenance	G	1L8' T12 60w EE/STD	strip	2	2	83	0.2	2L4' T8 28w/ELEE/STRIP KIT-8'	rlrb LF strip kit	2	50	0.1	0.1	186	2,860	2,860
4096	City Hall & Annex	Office Open Maintenance	G	60W INCANDESCENT	keyless	3	3	60	0.2	8 WATT LED SI	screw in LED Alamp	3	8	0.0	0.2	443	2,860	2,860
4097	City Hall & Annex	Office Open Maintenance	G	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	27	2,860	2,860
4098	City Hall & Annex	Storage Vault	G	4L4' T8 32w/EL	wrap wide	6	6	112	0.7	4L4' T8 28w/ELEE LO	rlrb LF	6	87	0.5	0.1	426	2,860	2,860
4099	City Hall & Annex	Storage Vault	G	1L8' T12 60w EE/STD	strip	2	2	83	0.2	2L4' T8 28w/ELEE/STRIP KIT-8'	rlrb LF strip kit	2	50	0.1	0.1	186	2,860	2,860
4100	City Hall & Annex	Mechanical Boiler	G	26W CF HARDWIRED	drum	1		28	0.0	NO RETRO	no change		29	0.0			500	500
4101	City Hall & Annex	Mechanical Boiler	G	26W CF HARDWIRED	dome	12		28	0.3	NO RETRO	no change		29	0.3			500	500
4102	City Hall & Annex	Mechanical Elevator	G	13W CF HARDWIRED	jar	2		15	0.0	NO RETRO	no change		16	0.0			500	500
4103	City Hall & Annex	Storage Electric	G	13W CF HARDWIRED	jar	1		15	0.0	NO RETRO	no change		16	0.0			500	500
4104	City Hall & Annex	Storage Telecom	G	2L4' T12 34w EE/EEMAG	wrap	2	2	70	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.1	148	2,860	2,860
4105	City Hall & Annex	Storage Telecom	G	4L4' T12 34w EE/EEMAG	wrap wide	2	2	140	0.3	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	0.1	302	2,860	2,860
4106	City Hall & Annex	Hall Bridge To Police	3	2L4' T8 32w/EL-8'	strip	15	15	60	0.9	2L4' T8 28w/ELEE LO-8'	rlrb LF	15	44	0.7	0.2	930	3,900	3,900
4107	City Hall & Annex	Hall Bridge To Police	3	1L4' T8 32w/EL	strip	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	27	3,900	3,900
4108	City Hall & Annex	Storage Annex	1	2L4' T8 32w/EL	industrial	9	9	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	9	44	0.4	0.1	409	2,860	2,860
4109	City Hall & Annex	Storage Annex	1	15W CF SCREWIN	keyless	2	2	17	0.0	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.0	49	2,860	2,860
4112	Police Court & Parking Garage	Lobby 4Th	4	23W CF SCREWIN	can rec	19	19	25	0.5	8 WATT LED SI	screw in LED par20	19	8	0.2	0.3	2,763	8,760	8,760
4113	Police Court & Parking Garage	Stair Z	S	23W CF SCREWIN	can rec	24	24	25	0.6	8 WATT LED SI	screw in LED par20	24	8	0.2	0.4	3,490	8,760	8,760
4114	Police Court & Parking Garage	Lobby 3Rd	3	23W CF SCREWIN	can rec	20	20	25	0.5	8 WATT LED SI	screw in LED par20	20	8	0.2	0.3	2,908	8,760	8,760
4115	Police Court & Parking Garage	Mechanical Parking	3	2L4' T8 32w/EL	wrap	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	32	500	500
4116	Police Court & Parking Garage	Mechanical Parking	3	2L4' T8 32w/EL	wrap	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	32	500	500
4117	Police Court & Parking Garage	Lobby 2Nd	2	2L2' T8 17w/EL	troffer indirect	8	8	33	0.3	2L2' T8 15w/ELEE LO	rlrb LF	8	28	0.2	0.0	326	8,760	8,760
4118	Police Court & Parking Garage	Hall Courts	2	23W CF SCREWIN	can rec	96	96	25	2.4	8 WATT LED SI	screw in LED par20	96	8	0.8	1.6	13,960	8,760	8,760
4119	Police Court & Parking Garage	Hall Courts	2	2L4' T8 32w/EL	valance	20	20	60	1.2	2L4' T8 28w/ELEE LO	rlrb LF	20	44	0.9	0.3	2,786	8,760	8,760
4120	Police Court & Parking Garage	Office Open Court3	2	4L4' T8 32w/EL	trof acr	12	12	112	1.3	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	12	67	0.8	0.5	1,538	2,860	2,002
4121	Police Court & Parking Garage	Office Open Court2	2	2L4' T8 32w/EL-8'	cove	16	16	60	1.0	2L4' T8 28w/ELEE LO-8'	rlrb LF	16	44	0.7	0.3	728	2,860	2,860
4122	Police Court & Parking Garage	Office Open Court2	2	1L4' T8 32w/EL	cove	4	4	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	4	23	0.1	0.0	79	2,860	2,860
4123	Police Court & Parking Garage	Office Open Court2	2	4L3' T8 25w/EL	trof acr 3x3	24	24	88	2.1	4L3' T8 21w/ELEE LO	rlrb LF	24	84	2.0	0.1	275	2,860	2,860
4124	Police Court & Parking Garage	Office Open Court2	2	26W CF HARDWIRED	can rec	8		28	0.2	NO RETRO	no change		29	0.2			2,860	2,860
4125	Police Court & Parking Garage	Office Open Court2	2	2x9W CF HARDWIRED	exit sign	3	3	22	0.1	3 WATT LED/NEW EXIT BATTERY	new LED exit bat	3	3	0.0	0.1	495	8,760	8,760
4126	Police Court & Parking Garage	Hall To Judge	2	2L4' T8 32w U/EL	trof acr	4	4	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	888	8,760	8,760
4127	Police Court & Parking Garage	Office Judge	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	0.1	179	2,002	2,002
4128	Police Court & Parking Garage	Office Judge	2	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	0.0	19	2,002	2,002
4129	Police Court & Parking Garage	Office Judge	2	2L4' T8 32w/EL	trof acr 1' wide	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	32	2,002	2,002
4130	Police Court & Parking Garage	Bath Judge	2	3x40W INCANDESCENTS	decorative	1	1	120	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	319	2,860	2,860
4131	Police Court & Parking Garage	Hall To Holding	2	2L4' T8 32w U/EL	trof acr	3	3	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	0.1	666	8,760	8,760
4132	Police Court & Parking Garage	Cell Women	2	2L4' T8 32w/EL	wrap	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	0.0	136	2,860	2,860
4133	Police Court & Parking Garage	Cell Women	2	2L4' T8 32w U/EL	box acrylic	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	73	2,860	2,860
4134	Police Court & Parking Garage	Cell Men	2	90W INCANDESCENT	square surface mt.	3	3	90	0.3	15 WATT LED SI	screw in LED Alamp	3	16	0.0	0.2	637	2,860	2,860
4135	Police Court & Parking Garage	Office Open Court1	2	2L4' T8 32w/EL-8'	cove	22	22	60	1.3	2L4' T8 28w/ELEE LO-8'	rlrb LF	22	44	1.0	0.3	1,000	2,860	2,860
4136	Police Court & Parking Garage	Office Open Court1	2	1L4' T8 32w/EL	cove	4	4	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	4	23	0.1	0.0	79	2,860	2,860
4137	Police Court & Parking Garage	Office Open Court1	2	4L3' T8 25w/EL	trof acr 3x3	45	45	88	4.0	4L3' T8 21w/ELEE LO	rlrb LF	45	84	3.8	0.2	515	2,860	2,860
4138	Police Court & Parking Garage	Office Open Court1	2	26W CF HARDWIRED	can rec	10		28	0.3	NO RETRO	no change		29	0.3			2,860	2,860
4139	Police Court & Parking Garage	Office Open Court1	2	2x9W CF HARDWIRED	exit sign	3	3	22	0.1	3 WATT LED/NEW EXIT BATTERY	new LED exit bat	3	3	0.0	0.1	495	8,760	8,760
4140	Police Court & Parking Garage	Office Judge	2	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	6	67	0.4	0.3	769	2,860	2,002
4141	Police Court & Parking Garage	Office Judge	2	3x60W INCANDESCENTS	decorative	1	1	180	0.2	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.2	491	2,860	2,860
4142	Police Court & Parking Garage	Office Marshall	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	125	2,860	2,860
4143	Police Court & Parking Garage	Office Marshall	2	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	73	2,860	2,860
4144	Police Court & Parking Garage	Office 201	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	125	2,860	2,860
4145	Police Court & Parking Garage	Office 201	2	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	73	2,860	2,860
4146	Police Court & Parking Garage	Office 202	2	3L4' T8 32w/EL	trof acr	3	3	88	0.3	3L4' T8 28w/ELEE LO	rlrb LF	3	66	0.2	0.1	131	2,002	2,002
4147	Police Court & Parking Garage	Office 202	2	2L2' T8 17w/EL	trof acr	1	1	33	0.0	2L2' T8 15w/ELEE LO	rlrb LF	1	28	0.0	0.0	9	2,002	2,002
4148	Police Court & Parking Garage	Bath Women	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	102	2,002	2,002
4149	Police Court & Parking Garage	Bath Women	2	3x40W INCANDESCENTS	decorative	3	3	120	0.4	8 WATT LED SI	screw in LED Alamp	3	8	0.0	0.3	670	2,002	2,002

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
4150	Police Court & Parking Garage	Bath Men	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	102	2,002	2,002
4151	Police Court & Parking Garage	Bath Men	2	3x40W INCANDESCENTS	decorative	3	3	120	0.4	8 WATT LED SI	screw in LED Alamp	3	8	0.0	0.3	670	2,002	2,002
4152	Police Court & Parking Garage	Office Public Defender	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	0.1	179	2,002	2,002
4153	Police Court & Parking Garage	Office Public Defender	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	102	2,002	2,002
4154	Police Court & Parking Garage	Office Public Defender	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	0.1	179	2,002	2,002
4155	Police Court & Parking Garage	Office Public Defender	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	102	2,002	2,002
4156	Police Court & Parking Garage	Office Open 203	2	4L4' T8 32w/EL	trof acr	5	5	112	0.6	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	5	67	0.3	0.2	641	2,860	2,860
4157	Police Court & Parking Garage	Office Open 203	2	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	73	2,860	2,860
4158	Police Court & Parking Garage	Storage 203	2	13W CF HARDWIRED	dome	1		15	0.0	NO RETRO	no change		16	0.0			500	500
4159	Police Court & Parking Garage	Storage 203	2	2x13W CF HARDWIRED	drum	1		30	0.0	NO RETRO	no change		32	0.0			500	500
4160	Police Court & Parking Garage	Office 203	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	3	67	0.2	0.1	269	2,002	2,002
4161	Police Court & Parking Garage	Office 203	2	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	51	2,002	2,002
4162	Police Court & Parking Garage	Office 203	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	0.1	179	2,002	2,002
4163	Police Court & Parking Garage	Office 203	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	102	2,002	2,002
4164	Police Court & Parking Garage	Office 203	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	0.1	179	2,002	2,002
4165	Police Court & Parking Garage	Office 203	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	102	2,002	2,002
4166	Police Court & Parking Garage	Office Open 204	2	4L4' T8 32w/EL	trof acr	9	9	112	1.0	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	9	67	0.6	0.4	1,153	2,860	2,002
4167	Police Court & Parking Garage	Office Open 204	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	0.1	179	2,002	2,002
4168	Police Court & Parking Garage	Office Open 204	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	102	2,002	2,002
4169	Police Court & Parking Garage	Office Open 204	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	0.1	179	2,002	2,002
4170	Police Court & Parking Garage	Office Open 204	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	102	2,002	2,002
4171	Police Court & Parking Garage	Office Open 205	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	3	67	0.2	0.1	269	2,002	2,002
4172	Police Court & Parking Garage	Office Open 205	2	2L4' T8 32w U/EL	trof acr	3	3	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	0.1	152	2,002	2,002
4173	Police Court & Parking Garage	Office 205	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	0.1	179	2,002	2,002
4174	Police Court & Parking Garage	Office 205	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	102	2,002	2,002
4175	Police Court & Parking Garage	Lounge Staff	2	4L4' T8 32w/EL	trof acr	9	9	112	1.0	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	9	67	0.6	0.4	807	2,002	2,002
4176	Police Court & Parking Garage	Bath Women	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	102	2,002	2,002
4177	Police Court & Parking Garage	Bath Women	2	3x40W INCANDESCENTS	decorative	3	3	120	0.4	8 WATT LED SI	screw in LED Alamp	3	8	0.0	0.3	670	2,002	2,002
4178	Police Court & Parking Garage	Bath Men	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	102	2,002	2,002
4179	Police Court & Parking Garage	Bath Men	2	3x40W INCANDESCENTS	decorative	3	3	120	0.4	8 WATT LED SI	screw in LED Alamp	3	8	0.0	0.3	670	2,002	2,002
4180	Police Court & Parking Garage	Office Open Jury	2	4L4' T8 32w/EL	trof acr	15	15	112	1.7	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	15	67	1.0	0.7	1,922	2,860	2,002
4181	Police Court & Parking Garage	Office Open Jury	2	2L4' T8 32w/EL	trof acr 1' wide	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	0.0	91	2,860	2,002
4182	Police Court & Parking Garage	Office Open Jury	2	2x9W CF HARDWIRED	exit sign	1	1	22	0.0	3 WATT LED/NEW EXIT BATTERY	new LED exit bat	1	3	0.0	0.0	165	8,760	8,760
4183	Police Court & Parking Garage	Bath Jury	2	3x40W INCANDESCENTS	decorative	3	3	120	0.4	8 WATT LED SI	screw in LED Alamp	3	8	0.0	0.3	958	2,860	2,860
4184	Police Court & Parking Garage	Bath Jury	2	3x40W INCANDESCENTS	decorative	3	3	120	0.4	8 WATT LED SI	screw in LED Alamp	3	8	0.0	0.3	958	2,860	2,860
4185	Police Court & Parking Garage	Storage Electric	2	26W CF HARDWIRED	dome	1		28	0.0	NO RETRO	no change		29	0.0			500	500
4186	Police Court & Parking Garage	Storage Files	2	4L4' T8 32w/EL	trof acr	14	14	112	1.6	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	14	67	0.9	0.6	314	500	350
4187	Police Court & Parking Garage	Storage Custodian	2	3x60W INCANDESCENTS	drum	1	1	180	0.2	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.2	86	500	500
4188	Police Court & Parking Garage	Mechanical Airh	2	150W INCANDESCENT	dome	10	10	150	1.5	15 WATT LED SI	screw in LED Alamp	10	16	0.2	1.3	671	500	500
4189	Police Court & Parking Garage	Hall Behind Courts	2	2L4' T8 32w U/EL	trof acr	17	17	60	1.0	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	17	35	0.6	0.4	3,775	8,760	8,760
4190	Police Court & Parking Garage	Classroom Training	2	4L4' T8 32w/EL	trof acr	28	28	112	3.1	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	28	67	1.9	1.3	3,588	2,860	2,002
4191	Police Court & Parking Garage	Office Training	2	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	1	67	0.1	0.0	90	2,002	2,002
4192	Police Court & Parking Garage	Office Training	2	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	1	67	0.1	0.0	90	2,002	2,002
4193	Police Court & Parking Garage	Hall To Narc	2	2L4' T8 32w U/EL	trof acr	9	9	60	0.5	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	9	35	0.3	0.2	1,999	8,760	8,760
4194	Police Court & Parking Garage	Office Interview	2	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	4	67	0.3	0.2	359	2,002	2,002
4195	Police Court & Parking Garage	Office Narc	2	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	6	67	0.4	0.3	769	2,860	2,002
4196	Police Court & Parking Garage	Office Narc	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	0.1	179	2,002	2,002
4197	Police Court & Parking Garage	Mechanical Narc	2	32W CF SCREWIN	dome	4		34	0.1	NO RETRO	no change		36	0.1			500	500
4198	Police Court & Parking Garage	Hall Reporter	2	2L4' T8 32w U/EL	trof acr	4	4	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	0.1	888	8,760	8,760
4199	Police Court & Parking Garage	Hall Reporter	2	2L4' T8 32w/EL	trof acr 1' wide	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	139	8,760	8,760
4200	Police Court & Parking Garage	Office Reporter	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	3	67	0.2	0.1	269	2,002	2,002
4201	Police Court & Parking Garage	Office Reporter	2	2L4' T8 32w U/EL	trof acr	3	3	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	0.1	152	2,002	2,002
4202	Police Court & Parking Garage	Storage Reporter	2	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	1	67	0.1	0.0	16	350	350
4203	Police Court & Parking Garage	Office Open Court Clerk	2	4L4' T8 32w/EL	trof acr	26	26	112	2.9	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	26	67	1.7	1.2	3,331	2,860	2,860
4204	Police Court & Parking Garage	Office Open Court Clerk	2	2L4' T8 32w U/EL	trof acr	8	8	60	0.5	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	8	35	0.3	0.2	580	2,860	2,860
4205	Police Court & Parking Garage	Office Open Court Clerk	2	4L4' T8 32w/EL-8'	trof acr 1' wide	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	71	2,860	2,860
4206	Police Court & Parking Garage	Storage Court Clerk	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	0.1	256	2,860	2,860
4207	Police Court & Parking Garage	Storage Court Clerk	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	145	2,860	2,860
4208	Police Court & Parking Garage	Office Court Clerk	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	3	67	0.2	0.1	269	2,002	2,002
4209	Police Court & Parking Garage	Office Court Clerk	2	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	0.0	51	2,002	2,002
4210	Police Court & Parking Garage	Storage Court Clerk	2	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	11	500	500
4211	Police Court & Parking Garage	Office Open State Atty	2	4L4' T8 32w/EL	trof acr	12	12	112	1.3	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	12	67	0.8	0.5	1,538	2,860	2,002
4212	Police Court & Parking Garage	Office State Atty	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	0.1	179	2,002	2,002
4213	Police Court & Parking Garage	Office State Atty	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	102	2,002	2,002
4214	Police Court & Parking Garage	Office State Atty	2	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	4	67	0.3	0.2	359	2,002	2,002
4215	Police Court & Parking Garage	Storage State Atty	2	2x13W CF HARDWIRED	drum	1		30	0.0	NO RETRO	no change		32	0.0			500	500
4216	Police Court & Parking Garage	Office State Atty	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	0.1	179	2,002	2,002
4217	Police Court & Parking Garage	Office State Atty	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	102	2,002	2,002
4218	Police Court & Parking Garage	Hall 1St	1	2x13W CF HARDWIRED	can rec	19		30	0.6	NO RETRO	no change		32	0.6			8,760	8,760
4219	Police Court & Parking Garage	Lobby Police	1	2x13W CF HARDWIRED	can rec	24		30	0.7	NO RETRO	no change		32	0.7			8,760	8,760
4220	Police Court & Parking Garage	Bath Police Lobby	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	125	2,860	2,002
4221	Police Court & Parking Garage	Bath Police Lobby	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	125	2,860	2,002
4222	Police Court & Parking Garage	Hall Z	1	2L2' F40 BIAX/EL	trof parabolic	7	7	72	0.5	36 WATT LED/KIT	trof kit LED	7	38	0.3	0.2	2,097	8,760	8,760

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
4223	Police Court & Parking Garage	Office Reception	1	3L4' T8 32w/EL	trof para dbl switch	2	2	88	0.2	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	2	67	0.1	0.0	119	2,860	2,002
4224	Police Court & Parking Garage	Office Interviewb	1	3L4' T8 32w/EL	trof para dbl switch	2	2	88	0.2	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	2	67	0.1	0.0	83	2,002	2,002
4225	Police Court & Parking Garage	Office Interviewa	1	3L4' T8 32w/EL	trof para dbl switch	2	2	88	0.2	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	2	67	0.1	0.0	83	2,002	2,002
4226	Police Court & Parking Garage	Hall Z	1	2L2' F40 BIAX/EL	trof parabolic	42	42	72	3.0	36 WATT LED/KIT	trof kit LED	42	38	1.6	1.4	12,583	8,760	8,760
4227	Police Court & Parking Garage	Office Open Detective	1	3L4' T8 32w/EL	trof para dbl switch	16	16	88	1.4	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	16	67	1.1	0.3	952	2,860	2,002
4228	Police Court & Parking Garage	Office Open Detective	1	3L4' T8 32w/EL	trof para dbl switch	2	2	88	0.2	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	2	67	0.1	0.0	83	2,002	2,002
4229	Police Court & Parking Garage	Office Open Detective	1	3L4' T8 32w/EL	trof para dbl switch	2	2	88	0.2	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	2	67	0.1	0.0	119	2,860	2,002
4230	Police Court & Parking Garage	Lounge Detective	1	2L2' F40 BIAX/EL	trof parabolic	2	2	72	0.1	36 WATT LED/KIT	trof kit LED	2	38	0.1	0.1	196	2,860	2,002
4231	Police Court & Parking Garage	Office Detective	1	3L4' T8 32w/EL	trof para dbl switch	2	2	88	0.2	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	2	67	0.1	0.0	83	2,002	2,002
4232	Police Court & Parking Garage	Office Detective	1	3L4' T8 32w/EL	trof para dbl switch	3	3	88	0.3	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	3	67	0.2	0.1	178	2,860	2,002
4233	Police Court & Parking Garage	Storage Electric	1	1L4' T8 32w/EL	wrap	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	20	2,860	2,860
4234	Police Court & Parking Garage	Hall Polygraph	1	2L2' F40 BIAX/EL	trof parabolic	3	3	72	0.2	36 WATT LED/KIT	trof kit LED	3	38	0.1	0.1	899	8,760	8,760
4235	Police Court & Parking Garage	Office Cyber	1	3L4' T8 32w/EL	trof para dbl switch	3	3	88	0.3	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	3	67	0.2	0.1	178	2,860	2,860
4236	Police Court & Parking Garage	Office Poly	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	145	2,860	2,860
4237	Police Court & Parking Garage	Mechanical Poly	1	3L4' T8 32w/EL	trof para dbl switch	2	2	88	0.2	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	2	67	0.1	0.0	15	350	350
4238	Police Court & Parking Garage	Office Poly	1	3L4' T8 32w/EL	trof parabolic	3	3	88	0.3	3L4' T8 28w/ELEE LO	rlrb LF	3	66	0.2	0.1	187	2,860	2,002
4239	Police Court & Parking Garage	Office Open Evidence	1	3L4' T8 32w/EL	trof parabolic	6	6	88	0.5	3L4' T8 28w/ELEE LO	rlrb LF	6	66	0.4	0.1	375	2,860	2,002
4240	Police Court & Parking Garage	Office Evidence	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	87	2,002	2,002
4241	Police Court & Parking Garage	Office Evidence	1	3L4' T8 32w/EL	trof parabolic	10	10	88	0.9	3L4' T8 28w/ELEE LO	rlrb LF	10	66	0.7	0.2	625	2,860	2,860
4242	Police Court & Parking Garage	Office Report	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	87	2,002	2,002
4243	Police Court & Parking Garage	Office Across Squad	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	87	2,002	2,002
4244	Police Court & Parking Garage	Office Open Squad	1	3L4' T8 32w/EL	trof parabolic	6	6	88	0.5	3L4' T8 28w/ELEE LO	rlrb LF	6	66	0.4	0.1	375	2,860	2,002
4245	Police Court & Parking Garage	Office Sergeant	1	3L4' T8 32w/EL	trof parabolic	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	250	2,860	2,002
4246	Police Court & Parking Garage	Storage Electric	1	1L4' T8 32w/EL	wrap	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	3	500	500
4247	Police Court & Parking Garage	Lounge Staff	1	3L4' T8 32w/EL	trof para dbl switch	6	6	88	0.5	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	6	67	0.4	0.1	357	2,860	2,002
4248	Police Court & Parking Garage	Office Shift Lt	1	3L4' T8 32w/EL	trof para dbl switch	4	4	88	0.4	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	4	67	0.3	0.1	167	2,002	2,002
4249	Police Court & Parking Garage	Office Schedule Lt	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	87	2,002	2,002
4250	Police Court & Parking Garage	Office Ert	1	3L4' T8 32w/EL	trof para dbl switch	6	6	88	0.5	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	6	67	0.4	0.1	357	2,860	2,002
4251	Police Court & Parking Garage	Office 117	1	3L4' T8 32w/EL	trof para dbl switch	1	1	88	0.1	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	1	67	0.1	0.0	59	2,860	2,860
4252	Police Court & Parking Garage	Locker Women	1	3L4' T8 32w/EL	trof parabolic	7	7	88	0.6	3L4' T8 28w/ELEE LO	rlrb LF	7	66	0.5	0.2	437	2,860	2,002
4253	Police Court & Parking Garage	Locker Women	1	4L4' T8 32w/EL-8'	wrap narrow	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	71	2,860	2,002
4254	Police Court & Parking Garage	Locker Women	1	2L4' T8 32w/EL	vapor tight	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	45	2,860	2,860
4255	Police Court & Parking Garage	Office Open Holding	1	3L4' T8 32w/EL	trof acr	11	11	88	1.0	3L4' T8 28w/ELEE LO	rlrb LF	11	66	0.7	0.2	687	2,860	2,860
4256	Police Court & Parking Garage	Hall Female	1	3L4' T8 32w/EL	trof acr	3	3	88	0.3	3L4' T8 28w/ELEE LO	rlrb LF	3	66	0.2	0.1	574	8,760	8,760
4257	Police Court & Parking Garage	Cell Female (4)	1	2L4' T8 32w/EL	corner secure	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	182	2,860	2,860
4258	Police Court & Parking Garage	Cell Female (4)	1	13W CF HARDWIRED	corner secure	4		15	0.1	NO RETRO	no change -specialized fixture		16	0.1			2,860	2,860
4259	Police Court & Parking Garage	Storage Clean	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	6	350	350
4260	Police Court & Parking Garage	Hall Male	1	3L4' T8 32w/EL	trof acr	6	6	88	0.5	3L4' T8 28w/ELEE LO	rlrb LF	6	66	0.4	0.1	1,148	8,760	8,760
4261	Police Court & Parking Garage	Cell Male (7)	1	2L4' T8 32w/EL	corner secure	7	7	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	7	44	0.3	0.1	318	2,860	2,860
4262	Police Court & Parking Garage	Cell Male (7)	1	13W CF HARDWIRED	corner secure	7		15	0.1	NO RETRO	no change -specialized fixture		16	0.1			2,860	2,860
4263	Police Court & Parking Garage	Office Intox	1	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	62	2,860	2,860
4264	Police Court & Parking Garage	Office Interview	1	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	62	2,860	2,860
4265	Police Court & Parking Garage	Cell Holding	1	3L4' T8 32w/EL	trof acrylic secure	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	125	2,860	2,860
4266	Police Court & Parking Garage	Cell Decon	1	2L4' T8 32w/EL	corner secure	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	45	2,860	2,860
4267	Police Court & Parking Garage	Cell Decon	1	13W CF HARDWIRED	corner secure	1		15	0.0	NO RETRO	no change -specialized fixture		16	0.0			2,860	2,860
4268	Police Court & Parking Garage	Parking Garage Sallyport	1	4L4' T8 32w/EL-8'	industrial	4	4	112	0.4	4L4' T8 28w/ELEE LO-8'	rlrb LF	4	87	0.3	0.1	435	4,380	4,380
4269	Police Court & Parking Garage	Storage Custodianb	1	1L4' T8 32w/EL	wrap	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	3	500	500
4270	Police Court & Parking Garage	Locker Mens	1	3L4' T8 32w/EL	trof parabolic	22	22	88	1.9	3L4' T8 28w/ELEE LO	rlrb LF	22	66	1.5	0.5	1,375	2,860	2,002
4271	Police Court & Parking Garage	Locker Mens	1	4L4' T8 32w/EL-8'	wrap narrow	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	71	2,860	2,002
4272	Police Court & Parking Garage	Locker Mens	1	4L4' T8 32w/EL-8'	vapor tight	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	0.0	71	2,860	2,860
4273	Police Court & Parking Garage	Storage Armorer	1	3L4' T8 32w/EL	trof parabolic	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	31	350	350
4274	Police Court & Parking Garage	Storage Armorer	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	22	500	500
4275	Police Court & Parking Garage	Storage E	1	1L4' T8 32w/EL	wrap	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	20	2,860	2,860
4276	Police Court & Parking Garage	Office Comm	1	4L4' T8 32w/EL-8'	indirect/direct dim	5		112	0.6	NO RETRO	no change -dimming		118	0.6			2,860	2,860
4277	Police Court & Parking Garage	Office Comm	1	2L4' T8 32w/EL	indirect/direct dim	2		60	0.1	NO RETRO	no change -dimming		63	0.1			2,860	2,860
4278	Police Court & Parking Garage	Office Comm	1	3L4' T8 32w/EL	trof para dbl switch	4	4	88	0.4	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	4	67	0.3	0.1	238	2,860	2,002
4279	Police Court & Parking Garage	Lounge Comm	1	3L4' T8 32w/EL	trof para dbl switch	2	2	88	0.2	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	2	67	0.1	0.0	83	2,002	2,002
4280	Police Court & Parking Garage	Bath Comm	1	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	44	2,002	2,002
4281	Police Court & Parking Garage	Storage Comm	1	1L4' T8 32w/EL	wrap	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	2	350	350
4282	Police Court & Parking Garage	Storage Electricd	1	1L4' T8 32w/EL	wrap	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	3	500	500
4283	Police Court & Parking Garage	Office Id Lab	1	3L4' T8 32w/EL	trof parabolic	5	5	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	5	66	0.3	0.1	312	2,860	2,002
4284	Police Court & Parking Garage	Office Id Lab	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	0.1	145	2,860	2,002
4285	Police Court & Parking Garage	Storage Id Lab	1	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	11	500	500
4286	Police Court & Parking Garage	Bath Women	1	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	44	2,002	2,002
4287	Police Court & Parking Garage	Bath Men	1	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	44	2,002	2,002
4288	Police Court & Parking Garage	Office Training	1	3L4' T8 32w/EL	trof parabolic	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	0.1	175	2,002	2,002
4289	Police Court & Parking Garage	Storage F	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	15	350	350
4290	Police Court & Parking Garage	Office Open Traffic	1	3L4' T8 32w/EL	trof parabolic	6	6	88	0.5	3L4' T8 28w/ELEE LO	rlrb LF	6	66	0.4	0.1	375	2,860	2,002
4291	Police Court & Parking Garage	Office Traffic	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	125	2,860	2,002
4292	Police Court & Parking Garage	Office Traffic	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	87	2,002	2,002
4293	Police Court & Parking Garage	Office Open Admin	1	2L2' F40 BIAX/EL	trof parabolic	10	10	72	0.7	36 WATT LED/KIT	trof kit LED	10	38	0.4	0.3	978	2,860	2,002
4294	Police Court & Parking Garage	Storage Admin	1	13W CF HARDWIRED	can rec	1		15	0.0	NO RETRO	no change		16	0.0			500	500
4295	Police Court & Parking Garage	Storage Admin	1	13W CF HARDWIRED	can rec	1		15	0.0	NO RETRO	no change		16	0.0			500	500

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
4296	Police Court & Parking Garage	Storage Electric	1	1L4' T8 32w/EL	wrap	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	2	350	350
4297	Police Court & Parking Garage	Office Admin Cmdr	1	3L4' T8 32w/EL	trof para dbl switch	3	3	88	0.3	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	3	67	0.2	0.1	178	2,860	2,002
4298	Police Court & Parking Garage	Conference Z	1	3L4' T8 32w/EL	trof para dbl switch	4	4	88	0.4	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	4	67	0.3	0.1	238	2,860	2,002
4299	Police Court & Parking Garage	Office Op Cmdr	1	3L4' T8 32w/EL	trof para dbl switch	4	4	88	0.4	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	4	67	0.3	0.1	167	2,002	2,002
4300	Police Court & Parking Garage	Office Admin Assist	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	87	2,002	2,002
4301	Police Court & Parking Garage	Office Chief	1	3L4' T8 32w/EL	trof para dbl switch	6	6	88	0.5	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	6	67	0.4	0.1	357	2,860	2,002
4302	Police Court & Parking Garage	Storage Chief	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	0.0	8	500	500
4303	Police Court & Parking Garage	Bath Chief	1	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	44	2,002	2,002
4304	Police Court & Parking Garage	Office Community	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	0.0	125	2,860	2,002
4305	Police Court & Parking Garage	Storage Clean	1	1L4' T8 32w/EL	wrap	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	0.0	3	500	500
4306	Police Court & Parking Garage	Office Open Records	1	3L4' T8 32w/EL	trof para dbl switch	16	16	88	1.4	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	16	67	1.1	0.3	952	2,860	2,002
4307	Police Court & Parking Garage	Bath Women	1	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	0.0	44	2,002	2,002
4308	Police Court & Parking Garage	Storage G	1	3L4' T8 32w/EL	trof para dbl switch	6	6	88	0.5	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	6	67	0.4	0.1	357	2,860	2,002
4309	Police Court & Parking Garage	Lounge Z	1	3L4' T8 32w/EL	trof parabolic	3	3	88	0.3	3L4' T8 28w/ELEE LO	rlrb LF	3	66	0.2	0.1	131	2,002	2,002
4310	Police Court & Parking Garage	Office Records Lt	1	3L4' T8 32w/EL	trof para dbl switch	2	2	88	0.2	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	2	67	0.1	0.0	119	2,860	2,002
4311	Police Court & Parking Garage	Office School Res	1	3L4' T8 32w/EL	trof para dbl switch	4	4	88	0.4	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	4	67	0.3	0.1	167	2,002	2,002
4318	Police Court & Parking Garage	Parking Garage Basement	B	2L4' T8 32w/EL	wrap	35	35	60	2.1	2L4' T8 28w/ELEE LO	rlrb LF	35	44	1.5	0.6	2,437	4,380	4,380
4319	Police Court & Parking Garage	Parking Garage Basement	B	2L4' T8 32w/EL-8'	strip reflector	15	15	60	0.9	2L4' T8 28w/ELEE LO-8'	rlrb LF	15	44	0.7	0.2	1,045	4,380	4,380
4320	Police Court & Parking Garage	Mechanical Basement	B	25W CF SCREWIN	dome	10	10	27	0.3	8 WATT LED SI	screw in LED Alamp	10	8	0.1	0.2	93	500	500
4321	Police Court & Parking Garage	Mechanical Basement	B	2L4' T8 32w/EL	strip reflector	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	0.1	32	500	500
4322	Police Court & Parking Garage	Stair All (2)	S	2L4' T8 32w/EL	wrap	16	16	60	1.0	2L4' T8 28w/ELEE LO	rlrb LF	16	44	0.7	0.3	2,229	8,760	8,760
Totals						**20,716**	**18,477**					**18,468**				**1,195,584**		

City of Bristol, CT	
Energy and Demand Savings Summary	
Measure ID:	**1A**
Measure Name:	**Lighting System Improvements - Interior - LED**
Measure Location:	
Engineers:	

Site Name:		**Central_High**	**Eastern_High**	**Chippens**	**NE_Middle**	**W_Bristol**
Item	Units	Savings	Savings	Savings	Savings	Savings
Electricity						
Energy On-Peak	kWh	208,533	177,194	176,296	54,488	87,298
Energy Off-Peak	kWh	0	0	0	0	0
Energy Total	kWh	208,533	177,194	176,296	54,488	87,298
Demand On-Peak, Monthly	kW	103.13	76.2	76.0	25.0	48.3
Demand On-Peak, Annual	kW	1,031.3	761.6	759.9	250.5	483.0
Demand Off-Peak, Monthly	kW	0.0	0.0	0.0	0.0	0.0
Demand Off-Peak, Annual	kW	0.0	0.0	0.0	0.0	0.0
Fossil Fuel						
Natural Gas (NG)	CCF	0	-4,017	-3,987	0	0
Liquid Propane Gas (LPG)	Gallons	0	0	0	0	0
Steam	Mlbs	0	0	0	0	0
Fuel Oil, #2	Gallons	-3,405	0	0	-937	0
Fuel Oil, #4	Gallons	0	0	0	0	0
Fuel Oil, #6	Gallons	0	0	0	0	0
Max Daily Demand (Natural Gas)	CCF (Demand)	0	0	0	0	0
Water						
Water Savings	CF					
Sewer						
Sewer Savings	CF					

Green-Hills	Hubbell	Stafford	Ivy_Drive	Edgewood	Mt_View	South_Side	Admin	City_Hall
Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings
36,474	56,467	42,082	37,758	41,652	30,723	51,768	31,542	48,536
0	0	0	0	0	0	0	0	69,840
36,474	56,467	42,082	37,758	41,652	30,723	51,768	31,542	118,376
22.5	24.9	24.4	22.4	18.8	17.6	29.9	14.4	40.5
225.3	249.1	243.7	223.9	187.7	176.1	299.1	172.6	486.4
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0	0	0	-822	0	-625	-1,227	-643	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	-973	-764	0	-665	0	0	0	-1,808
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

Water_Main	Filtration	Well_1	Well_2	Chem_Control	Chem_Mech_St	Pump_Peck_Lane	P_Control_Hill	P_Control_Wolcott
Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings
7,058	4,162	20	52	232	20	29	292	33
0	11,258	0	0	0	0	0	789	0
7,058	15,420	20	52	232	20	29	1,080	33
3.2	10.4	0.1	0.3	1.6	0.1	0.2	2.2	0.2
38.2	125.2	1.6	4.2	18.7	1.6	2.3	25.9	2.6
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
-116	-263	0	0	0	0	0	-19	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

Police	Rockwell_Park	Muzzy	Ski	Page_Park	Aquatic	Fire_HQ	Engine_2	Engine_3
Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings
47,265	390	417	75	756	29,381	14,338	1,254	880
99,330	0	0	0	0	0	0	0	0
146,595	390	417	75	756	29,381	14,338	1,254	880
38.0	0.7	3.3	0.3	0.7	6.3	7.4	1.1	0.8
455.7	8.8	39.5	3.8	7.9	75.3	88.8	13.1	9.4
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0	0	0	0	0	-701	0	0	-20
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
-2,289	-6	0	0	-13	0	-238	-21	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

Engine_5	Senior	Main_Library	Manross_Library	Youth	Animal	City_Yard	Transfer_Lake_Ave	Water_Pollution
Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings
968	32,439	54,787	17,252	5,653	458	20,064	1,046	2,422
0	15,051	73,086	0	0	0	0	0	7,669
968	47,490	127,872	17,252	5,653	458	20,064	1,046	10,091
0.8	25.6	33.7	5.5	2.9	0.9	15.1	2.6	8.2
9.6	306.7	404.5	66.5	34.3	10.9	181.2	30.9	98.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0	-959	-2,595	-386	0	-10	-455	0	-236
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
-16	0	0	0	-94	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

Pump_Stations	Pool	Summary
Savings	Savings	
435	567	1,323,554
0	0	277,022
435	567	1,600,577
2.9	1.1	720.3
35.0	13.6	7,664.9
0.0	0.0	0.0
0.0	0.0	0.0
		0
0	0	-16,681
0	0	0
0	0	0
0	-10	-11,636
0	0	0
0	0	0
0	0	0
		0
		0
		0
		0

City of Bristol, CT
Interactive Lighting Savings Calculation

AMERESCO

	Lighting Savings		Heating Penalty				Cooling Benefit			
A	B	C	D	E	F	G	H	I	J	K
Facility	Annual kW	Annual kWh	Heat Gain to Space	Heating Months	Heating System Efficiency	Heating Penalty MMBtu	Total Space Cooled	Cooling Months	Cooling System COP	Cooling Benefit MMBtu
Bristol Central High School	103.1	202,358	80.0%	8.0	78.0%	(472.2)	75.0%	2.0	3.28	21.1
Bristol Eastern High School	76.2	171,899	80.0%	8.0	76.0%	(411.7)	75.0%	2.0	3.25	18.1
Chippens Hill Middle Schoo	76.0	175,101	80.0%	8.0	78.0%	(408.6)	15.0%	2.0	2.93	4.1
Northeast Middle School	25.0	54,241	80.0%	8.0	76.0%	(129.9)	10.0%	2.0	2.93	0.8
West Bristol K8 School	48.3	95,703	80.0%	8.0	400.0%	(43.6)	100.0%	2.0	2.93	14.9
Green-Hills K8 Schoo	22.5	39,985	80.0%	8.0	400.0%	(18.2)	100.0%	2.0	2.93	6.2
Ellen P. Hubbell Elementary Schoo	24.9	56,339	80.0%	8.0	76.0%	(134.9)	5.0%	2.0	2.93	0.4
Stafford Elementary School	24.4	41,891	80.0%	8.0	72.0%	(105.9)	10.0%	2.0	2.93	0.7
Ivy Drive Elementary Schoo	22.4	36,115	80.0%	8.0	78.0%	(84.3)	100.0%	2.0	2.93	5.6
Edgewood Elementary Schoo	18.8	41,577	80.0%	8.0	82.0%	(92.3)	4.0%	2.0	2.93	0.3
Mountain View Elementary Schoo	17.6	29,561	80.0%	8.0	84.0%	(64.1)	95.0%	2.0	3.22	4.0
South Side Elementary Schoo	29.9	49,731	80.0%	8.0	72.0%	(125.7)	90.0%	2.0	2.93	7.0
Board of Education Administration Building & Warehous	14.4	29,693	80.0%	8.0	82.0%	(65.9)	65.0%	4.0	2.78	6.3
City Hall & Annex	40.5	107,447	80.0%	8.0	78.0%	(250.7)	95.0%	4.0	2.49	37.3
Water Main Office & Garage	3.2	6,718	80.0%	8.0	76.0%	(16.1)	50.0%	4.0	2.64	1.2
Water Filtration Plant & High Service Pump Station	10.4	14,813	80.0%	8.0	74.0%	(36.4)	45.0%	4.0	2.93	2.1
#1 Well House	0.1	69	80.0%	8.0	76.0%	(0.2)	0.0%	4.0	2.93	0.0
#2 Well House	0.3	175	80.0%	8.0	76.0%	(0.4)	0.0%	4.0	2.93	0.0
Chemical Control, Generator & #3-5 Well Houses	1.6	777	80.0%	8.0	76.0%	(1.9)	0.0%	4.0	2.93	0.0
Chemical Control - Mechanic St	0.1	69	80.0%	8.0	76.0%	(0.2)	0.0%	4.0	2.93	0.0
Pump Control - Peck Lane	0.2	97	80.0%	8.0	76.0%	(0.2)	0.0%	4.0	2.93	0.0
Pump Control & Generator - Hill St.	2.2	1,080	80.0%	8.0	76.0%	(2.6)	0.0%	4.0	2.93	0.0
Pump and Control - Wolcott St	0.2	109	80.0%	8.0	76.0%	(0.3)	0.0%	4.0	2.93	0.0
Police Court & Parking Garage	38.0	136,069	80.0%	8.0	78.0%	(317.5)	85.0%	4.0	2.93	35.9
Rockwell Park & Pavilion	0.7	365	80.0%	8.0	76.0%	(0.9)	60.0%	4.0	2.34	0.1
Muzzy Field	3.3	893	80.0%	8.0	100.0%	(1.6)	0.0%	4.0	2.93	0.0
Ski Lodge	0.3	160	80.0%	8.0	100.0%	(0.3)	0.0%	4.0	2.93	0.0
Page Park Pavilion	0.7	756	80.0%	8.0	76.0%	(1.8)	0.0%	4.0	2.93	0.0
Dennis Malone Aquatic Center	6.3	29,215	80.0%	8.0	74.0%	(71.9)	5.0%	4.0	2.34	0.6
Fire Head Quarters	7.4	13,781	80.0%	8.0	76.0%	(33.0)	40.0%	4.0	2.64	1.9
Engine 2	1.1	1,226	80.0%	8.0	76.0%	(2.9)	25.0%	4.0	2.93	0.1
Engine 3	0.8	860	80.0%	8.0	76.0%	(2.1)	25.0%	4.0	2.93	0.1
Engine 5	0.8	946	80.0%	8.0	78.0%	(2.2)	25.0%	4.0	2.93	0.1
Beals Senior Center	25.6	44,267	80.0%	8.0	82.0%	(98.3)	80.0%	4.0	2.93	11.0
Main Library	33.7	119,813	80.0%	8.0	82.0%	(266.0)	85.0%	4.0	3.37	27.5
Manross Library	5.5	16,501	80.0%	8.0	76.0%	(39.5)	50.0%	4.0	2.93	2.6
Youth Services Building	2.9	5,446	80.0%	8.0	76.0%	(13.0)	50.0%	4.0	3.52	0.7
Animal Control	0.9	448	80.0%	8.0	78.0%	(1.0)	25.0%	4.0	2.93	0.0
City Yard	15.1	19,973	80.0%	8.0	78.0%	(46.6)	5.0%	4.0	2.93	0.3
Transfer Stations - Lake Ave	2.6	3,042	80.0%	8.0	76.0%	(7.3)	50.0%	4.0	2.93	0.5
Water Pollution Control Park	8.2	10,091	80.0%	8.0	76.0%	(24.2)	0.0%	4.0	2.93	0.0
Remote Pumping Stations	2.9	1,458	80.0%	8.0	76.0%	(3.5)	0.0%	4.0	2.93	0.0
Pool	1.1	567	80.0%	8.0	76.0%	(1.4)	0.0%	4.0	2.93	0.0
Totals	**720.3**	**1,561,427**				**(3,401.3)**				**211.2**

Notes:	
A	Applicable building included in comprehensive energy audit
B	Lighting demand savings {kW} associated with lighting retrofit measures
C	Lighting energy savings {kWh} associated with lighting retrofit measures
D	Estimated percentage of lighting energy transmitted to conditioned space
E	Estimated length of heating season
F	Estimated heating system efficiency, interacted with other measures
G	Resulting heating penalty due to lighting upgrades = [col C] x [col D] x 3,413 x ([col E] / 12) / [col F] / 1,000,000
H	Estimated percentage of space cooled
I	Estimated Length of cooling season
J	Estimated cooling system efficiency, interacted with other measures
K	Resulting cooling benefit due to lighting upgrades = [col C] x [col D] x 3,413 x ([col I] / 12) / [col J] / 1,000,000

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
1.1	Bristol Central HS	Office 244	2	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	186	1,680	1,680
2.1	Bristol Central HS	Storage 244A	2	4L2' T8 17w/EL	trof parabolic	3	3	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	3	29	0.1	0.1	58	700	700
3.1	Bristol Central HS	Hall 244-230	2	4L2' T8 17w/EL	box acrylic	19	19	62	1.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	19	29	0.6	0.6	1,308	3,200	3,200
4.1	Bristol Central HS	Hall 230-224	2	4L2' T8 17w/EL	box acrylic	13	13	62	0.8	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	13	29	0.4	0.4	895	3,200	3,200
5.1	Bristol Central HS	Hall 224-206	2	4L2' T8 17w/EL	box acrylic	19	19	62	1.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	19	29	0.6	0.6	1,308	3,200	3,200
6.1	Bristol Central HS	Hall 206-244	2	4L2' T8 17w/EL	box acrylic	13	13	62	0.8	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	13	29	0.4	0.4	895	3,200	3,200
7.1	Bristol Central HS	Office 243	2	4L2' T8 17w/EL	trof parabolic	3	3	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	3	29	0.1	0.1	140	1,680	1,680
8.1	Bristol Central HS	Classroom 242	2	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	729	1,960	1,960
9.1	Bristol Central HS	Classroom 241	2	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	729	1,960	1,960
10.1	Bristol Central HS	Classroom 240	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
11.1	Bristol Central HS	Classroom 239	2	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	729	1,960	1,960
12.1	Bristol Central HS	Classroom 237	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
13.1	Bristol Central HS	Lab 238	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	391	1,890	1,890
14.1	Bristol Central HS	Lab 238	2	6L4' T8 32w/EL-12'	trof para dbl switch	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	351	1,890	1,890
15.1	Bristol Central HS	Classroom 235	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
16.1	Bristol Central HS	Classroom 236	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
17.1	Bristol Central HS	Classroom 233	2	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	729	1,960	1,960
18.1	Bristol Central HS	Classroom 234	2	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	729	1,960	1,960
19.1	Bristol Central HS	Classroom 232	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
20.1	Bristol Central HS	Bath 2Nd Floor (4)	2	1L3' T8 25w/EL	trof acr	4	4	24	0.1	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	4	13	0.1	0.0	87	2,240	2,240
21.1	Bristol Central HS	Bath 2Nd Floor (4)	2	1L2' T8 17w/EL	trof acr	4	4	17	0.1	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	9	0.0	0.0	58	2,240	2,240
22.1	Bristol Central HS	Classroom 230	2	4L2' T8 17w/EL	trof acr	6	6	62	0.4	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	6	29	0.2	0.2	326	1,960	1,960
23.1	Bristol Central HS	Storage Custodial	2	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	7	350	350
24.1	Bristol Central HS	Bath Near C229 Men	2	2L4' T8 32w/EL-8'	trof acr 1' wide	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	185	2,240	2,240
25.1	Bristol Central HS	Bath Near C229 Men	2	1L2' T8 17w/EL	trof acr 1' wide	1	1	17	0.0	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	9	0.0	0.0	14	2,240	2,240
26.1	Bristol Central HS	Bath Women	2	2L4' T8 32w/EL-8'	trof acr 1' wide	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	139	2,240	2,240
27.1	Bristol Central HS	Bath Women	2	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	23	2,240	2,240
28.1	Bristol Central HS	Bath Women	2	1L3' T8 25w/EL	trof acr 1' wide	1	1	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	13	0.0	0.0	22	2,240	2,240
29.1	Bristol Central HS	Classroom 229	2	4L4' T8 32w/EL-8'	trof para dbl switch	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.2	110	798	798
30.1	Bristol Central HS	Office 229	2	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	93	1,680	1,680
31.1	Bristol Central HS	Classroom 228	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
32.1	Bristol Central HS	Classroom 227	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
33.1	Bristol Central HS	Storage Mech Ac-2	2	2L4' T8 32w/EL	strip cage	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	29	350	350
34.1	Bristol Central HS	Classroom 226	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	241	1,166	1,166
35.1	Bristol Central HS	Storage Book Room	2	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	39	700	700
36.1	Bristol Central HS	Storage To Roof	2	2L4' T8 32w/EL	strip cage	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	7	350	350
37.1	Bristol Central HS	Office Ss	2	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	93	1,680	1,680
38.1	Bristol Central HS	Classroom 224	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
39.1	Bristol Central HS	Classroom 222	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
40.1	Bristol Central HS	Office 221	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	348	1,680	1,680
41.1	Bristol Central HS	Classroom 219	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
42.1	Bristol Central HS	Classroom 220	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
43.1	Bristol Central HS	Classroom 217	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
44.1	Bristol Central HS	Classroom 218	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	89	430	430
45.1	Bristol Central HS	Classroom 215	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
46.1	Bristol Central HS	Classroom 216	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
47.1	Bristol Central HS	Classroom 213	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
48.1	Bristol Central HS	Classroom 214	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
49.1	Bristol Central HS	Classroom 211	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	254	1,227	1,227
50.1	Bristol Central HS	Classroom 212	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
51.1	Bristol Central HS	Classroom 209	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
52.1	Bristol Central HS	Classroom 210	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
53.1	Bristol Central HS	Classroom 207	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
54.1	Bristol Central HS	Classroom 208	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
55.1	Bristol Central HS	Office 205	2	4L2' T8 17w/EL	box acrylic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	93	1,680	1,680
56.1	Bristol Central HS	Classroom 206	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
57.1	Bristol Central HS	Storage Custodian	2	2L4' T8 32w/EL	strip cage	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	7	350	350
58.1	Bristol Central HS	Bath Near C229 Men	2	2L4' T8 32w/EL-8'	trof acr 1' wide	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	185	2,240	2,240
59.1	Bristol Central HS	Bath Near C229 Men	2	1L2' T8 17w/EL	trof acr 1' wide	1	1	17	0.0	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	9	0.0	0.0	14	2,240	2,240
60.1	Bristol Central HS	Bath Near C229 Men	2	1L3' T8 25w/EL	trof acr 1' wide	1	1	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	13	0.0	0.0	22	2,240	2,240
61.1	Bristol Central HS	Bath Women	2	2L4' T8 32w/EL-8'	trof acr 1' wide	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	185	2,240	2,240
62.1	Bristol Central HS	Bath Women	2	1L4' T8 32w/EL	trof acr 1' wide	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	46	2,240	2,240
63.1	Bristol Central HS	Lab 204	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	391	1,890	1,890
64.1	Bristol Central HS	Classroom 203	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
65.1	Bristol Central HS	Classroom 202	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
66.1	Bristol Central HS	Lab 201	2	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	391	1,890	1,890
67.1	Bristol Central HS	Stair 1-2 (2)	stair	2L4' T8 32w/EL	wrap wall mt.	10	10	60	0.6	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	10	36	0.4	0.2	661	3,200	3,200
68.1	Bristol Central HS	Stair 1-2 (2)	stair	2L4' T8 32w/EL	wrap wall mt.	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	0.2	529	3,200	3,200
69.1	Bristol Central HS	Stair 3	stair	2L4' T8 32w/EL	wrap wall mt.	5	5	60	0.3	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	36	0.2	0.1	330	3,200	3,200
70.1	Bristol Central HS	Stair 3	stair	2L4' T8 32w/EL	wrap wall mt.	5	5	60	0.3	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	36	0.2	0.1	330	3,200	3,200
71.1	Bristol Central HS	Stair 4	stair	2L4' T8 32w/EL	wrap wall mt.	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	0.1	397	3,200	3,200
72.1	Bristol Central HS	Stair 4	stair	2L4' T8 32w/EL	wrap wall mt.	5	5	60	0.3	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	36	0.2	0.1	330	3,200	3,200
73.1	Bristol Central HS	Hall 106-Boys Locker	1	4L2' T8 17w/EL	box acrylic	13	13	62	0.8	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	13	29	0.4	0.4	895	3,200	3,200

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
74.1	Bristol Central HS	Hall 106-Boys Locker	1	4L4' T8 32w/EL	box acr 4x4	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	171	3,200	3,200
75.1	Bristol Central HS	Lobby Near Stair 2	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	355	3,200	3,200
76.1	Bristol Central HS	Hall 134-Lib	1	4L2' T8 17w/EL	box acrylic	11	11	62	0.7	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	11	29	0.3	0.4	757	3,200	3,200
77.1	Bristol Central HS	Hall 134-Lib	1	2x26W CF HARDWIRED/EL	can rec 8"	2	2	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	2	16	0.0	0.1	162	3,200	3,200
78.1	Bristol Central HS	Lobby Main	1	2x26W CF HARDWIRED/EL	can rec 8"	2	2	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	2	16	0.0	0.1	208	3,200	3,200
79.1	Bristol Central HS	Hall 124-Lib	1	4L2' T8 17w/EL	box acrylic	15	15	62	0.9	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	15	29	0.4	0.5	1,033	3,200	3,200
80.1	Bristol Central HS	Hall 124-Lib	1	4L4' T8 32w/EL	box acr 4x4	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	171	3,200	3,200
81.1	Bristol Central HS	Lobby Stair 1	1	4L2' T8 17w/EL	box acrylic	3	3	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	3	29	0.1	0.1	266	3,200	3,200
82.1	Bristol Central HS	Hall 124-106	1	4L2' T8 17w/EL	box acrylic	20	20	62	1.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	20	29	0.6	0.7	1,377	3,200	3,200
83.1	Bristol Central HS	Gym Wrestling	1	4L2' T8 17w/EL	box acrylic	24	24	62	1.5	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	24	29	0.7	0.8	1,982	2,980	2,980
84.1	Bristol Central HS	Storage Near Wrestling	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	21	1,000	700
85.1	Bristol Central HS	Bath Men	1	2L4' T8 32w/EL-8'	trof acr 1' wide	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	185	2,240	2,240
86.1	Bristol Central HS	Bath Men	1	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	23	2,240	2,240
87.1	Bristol Central HS	Bath Men	1	1L3' T8 25w/EL	trof acr 1' wide	1	1	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	13	0.0	0.0	22	2,240	2,240
88.1	Bristol Central HS	Bath Women	1	2L4' T8 32w/EL-8'	trof acr 1' wide	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	139	2,240	2,240
89.1	Bristol Central HS	Bath Women	1	1L4' T8 32w/EL	trof acr 1' wide	3	3	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	18	0.1	0.0	69	2,240	2,240
90.1	Bristol Central HS	Bath Women	1	1L2' T8 17w/EL	trof acr 1' wide	2	2	17	0.0	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	9	0.0	0.0	29	2,240	2,240
91.1	Bristol Central HS	Hall Near Gym	1	4L2' T8 17w/EL	box acrylic	8	8	62	0.5	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	8	29	0.2	0.3	551	3,200	3,200
92.1	Bristol Central HS	Office Ell	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	186	1,680	1,680
93.1	Bristol Central HS	Stair 6	stair	2L4' T8 32w/EL	wrap wall mt.	5	5	60	0.3	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	36	0.2	0.1	330	3,200	3,200
94.1	Bristol Central HS	Stair 6	stair	2L4' T8 32w/EL	wrap wall mt.	5	5	60	0.3	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	36	0.2	0.1	330	3,200	3,200
95.1	Bristol Central HS	Gym Main	1	4L4' T5 HO/EL	high bay	63	63	234	14.7	98 WATT LED/NEW	new LED hibay wg	63	103	6.5	8.3	20,921	2,980	2,086
96.1	Bristol Central HS	Locker Girls	1	2L4' T8 32w/EL	vapor tight	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	185	2,240	2,240
97.1	Bristol Central HS	Bath Girls	1	1L3' T8 25w/EL	trof acr 1' wide	1	1	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	13	0.0	0.0	22	2,240	2,240
98.1	Bristol Central HS	Bath Girls	1	1L2' T8 17w/EL	trof acr 1' wide	1	1	17	0.0	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	9	0.0	0.0	14	2,240	2,240
99.1	Bristol Central HS	Bath Girls	1	2L4' T8 32w/EL	vapor tight	7	7	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	7	36	0.2	0.2	324	2,240	2,240
100	Bristol Central HS	Bath Girls	1	2L4' T8 32w/EL	vapor tight	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	0.2	370	2,240	2,240
101	Bristol Central HS	Office 137B	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	93	1,680	1,680
102	Bristol Central HS	Storage Girls Locker	1	2L4' T8 32w/EL	vapor tight	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	7	350	350
103	Bristol Central HS	Storage Girls Locker	1	26W CF HARDWIRED	square surface mt.	1	1	28	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	350	350
104	Bristol Central HS	Bath Girls Locker	1	2L4' T8 32w/EL	vapor tight	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	139	2,240	2,240
105	Bristol Central HS	Bath Girls Locker	1	2L4' T8 32w/EL	vapor tight	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	0.2	370	2,240	2,240
106	Bristol Central HS	Locker Girls Locker	1	2L4' T8 32w/EL	vapor tight	5	5	60	0.3	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	36	0.2	0.1	231	2,240	2,240
107	Bristol Central HS	Storage Girls Locker	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	14	700	700
108	Bristol Central HS	Classroom 104	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	13	62	62
109	Bristol Central HS	Office 104	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	93	1,680	1,680
110	Bristol Central HS	Classroom Group Y	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	109	1,960	1,960
111	Bristol Central HS	Storage Group Y	1	2L4' T8 32w/EL	strip cage	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	7	350	350
112	Bristol Central HS	Classroom 103	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
113	Bristol Central HS	Classroom 102	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
114	Bristol Central HS	Classroom 101	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	229	1,104	1,104
115	Bristol Central HS	Storage Near Elevator	1	2L4' T8 32w/EL	strip cage	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	7	350	350
116	Bristol Central HS	Office 134	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	186	1,680	1,680
117	Bristol Central HS	Hall Boys Locker	1	4L2' T8 17w/EL	box acrylic	8	8	62	0.5	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	8	29	0.2	0.3	497	2,240	2,240
118	Bristol Central HS	Stair 5	stair	2L4' T8 32w/EL	wrap wall mt.	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	198	3,200	3,200
119	Bristol Central HS	Stair 5	stair	2L4' T8 32w/EL	wrap wall mt.	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	264	3,200	3,200
120	Bristol Central HS	Locker Boys	1	2L4' T8 32w/EL	vapor tight	13	13	60	0.8	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	13	36	0.5	0.3	859	3,200	3,200
121	Bristol Central HS	Storage Boys	1	2L4' T8 32w/EL	vapor tight	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	22	350	350
122	Bristol Central HS	Storage Boys	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	7	350	350
123	Bristol Central HS	Storage 135J	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	7	350	350
124	Bristol Central HS	Office Pe	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	93	1,680	1,680
125	Bristol Central HS	Bath Boys Locker	1	2L4' T8 32w/EL	vapor tight	5	5	60	0.3	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	36	0.2	0.1	231	2,240	2,240
126	Bristol Central HS	Bath Boys Locker	1	26W CF HARDWIRED	square surface mt.	1	1	28	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	30	3,200	3,200
127	Bristol Central HS	Storage Boys Locker	1	2L4' T8 32w/EL	vapor tight	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	29	350	350
128	Bristol Central HS	Storage 135C	1	2L4' T8 32w/EL	wrap	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	29	350	350
129	Bristol Central HS	Office 135B	1	2L4' T8 32w/EL	vapor tight	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	139	1,680	1,680
130	Bristol Central HS	Hall Near 135A	1	2L4' T8 32w/EL	vapor tight	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	93	2,240	2,240
131	Bristol Central HS	Office 135A	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	93	1,680	1,680
132	Bristol Central HS	Office 133	1	2x26W CF HARDWIRED/EL	can rec 8"	14	14	54	0.8	15 WATT LED/KIT	can kit LED Spectrum	14	16	0.2	0.5	765	1,680	1,680
133	Bristol Central HS	Office 133	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	186	1,680	1,680
134	Bristol Central HS	Medical 133 (6)	1	60W INCANDESCENT	decorative	6		60	0.4	NO RETRO	no change -specialized fixture		63	0.4			2,000	2,000
135	Bristol Central HS	Medical 133 (6)	1	2x26W CF HARDWIRED/EL	can rec 8"	6	6	54	0.3	15 WATT LED/KIT	can kit LED Spectrum	6	16	0.1	0.2	390	2,000	2,000
136	Bristol Central HS	Bath 133 (2)	1	1L3' T8 25w/EL	trof acr 1' wide	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	0.0	43	2,240	2,240
137	Bristol Central HS	Bath 133 (2)	1	1L2' T8 17w/EL	trof acr 1' wide	2	2	17	0.0	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	9	0.0	0.0	29	2,240	2,240
138	Bristol Central HS	Office 133	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	93	1,680	1,680
139	Bristol Central HS	Lounge Staff	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	178	1,610	1,610
140	Bristol Central HS	Office Guidance (5)	1	4L2' T8 17w/EL	trof parabolic	10	10	62	0.6	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	10	29	0.3	0.3	466	1,680	1,680
141	Bristol Central HS	Office Career	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	266	2,400	2,400
142	Bristol Central HS	Office Rossier	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	93	1,680	1,680
143	Bristol Central HS	Office 131A	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	186	1,680	1,680
144	Bristol Central HS	Office Open 131	1	2x26W CF HARDWIRED/EL	can rec 8"	4	4	54	0.2	15 WATT LED/KIT	can kit LED Spectrum	4	16	0.1	0.2	358	2,750	1,925
145	Bristol Central HS	Office Open 131	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	152	2,750	1,925
146	Bristol Central HS	Hall 131	1	2x26W CF HARDWIRED/EL	can rec 8"	13	13	54	0.7	15 WATT LED/KIT	can kit LED Spectrum	13	16	0.2	0.5	1,050	3,200	2,240

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
147	Bristol Central HS	Lounge 131	1	2x26W CF HARDWIRED/EL	can rec 8"	6	6	54	0.3	15 WATT LED/KIT	can kit LED Spectrum	6	16	0.1	0.2	449	2,300	1,610
148	Bristol Central HS	Office Open Main	1	4L2' T8 17w/EL	trof acr	6	6	62	0.4	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	6	29	0.2	0.2	393	2,366	2,366
149	Bristol Central HS	Office Open Main	1	4L2' T8 17w/EL	trof parabolic	8	8	62	0.5	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	8	29	0.2	0.3	610	2,750	2,750
150	Bristol Central HS	Office Open Main	1	50W INCANDESCENT	can rec 4"	4	4	50	0.2	8 WATT LED SI	screw in LED par20	4	8	0.0	0.2	389	2,750	2,750
151	Bristol Central HS	Office Police	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	47	1,680	1,680
152	Bristol Central HS	Hall Main Office	1	2x26W CF HARDWIRED/EL	can rec 8"	15	15	54	0.8	15 WATT LED/KIT	can kit LED Spectrum	15	16	0.2	0.6	1,212	3,200	3,200
153	Bristol Central HS	Office Vice Principal (2)	1	4L2' T8 17w/EL	trof parabolic	8	8	62	0.5	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	8	29	0.2	0.3	372	1,680	1,680
154	Bristol Central HS	Office Secretary	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	186	1,680	1,680
155	Bristol Central HS	Office Principal	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	186	1,680	1,680
156	Bristol Central HS	Office Principal	1	2x26W CF HARDWIRED/EL	can rec 8"	4	4	54	0.2	15 WATT LED/KIT	can kit LED Spectrum	4	16	0.1	0.2	218	1,680	1,680
157	Bristol Central HS	Conference Main Office	1	2L2' F36 BIAX/EL	indirect/direct	6	6	74	0.4	36 WATT LED/KIT	trof kit LED	6	38	0.2	0.2	310	1,680	1,680
158	Bristol Central HS	Conference Main Office	1	2x26W CF HARDWIRED/EL	can rec 8"	4	4	54	0.2	15 WATT LED/KIT	can kit LED Spectrum	4	16	0.1	0.2	218	1,680	1,680
159	Bristol Central HS	Storage Secure	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	7	350	350
160	Bristol Central HS	Bath Main Office (2)	1	1L3' T8 25w/EL	trof acr 1' wide	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	0.0	43	2,240	2,240
161	Bristol Central HS	Bath Main Office (2)	1	1L2' T8 17w/EL	trof acr 1' wide	2	2	17	0.0	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	9	0.0	0.0	29	2,240	2,240
162	Bristol Central HS	Office Copy	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	47	1,680	1,680
163	Bristol Central HS	Library Main	1	2L2' F36 BIAX/EL	indirect/direct	32	32	74	2.4	36 WATT LED/KIT	trof kit LED	32	38	1.2	1.2	2,166	2,200	2,200
164	Bristol Central HS	Library Main	1	60W INCANDESCENT	decorative	12		60	0.7	NO RETRO	no change -specialized fixture		63	0.7			2,200	2,200
165	Bristol Central HS	Library Main	1	4L4' T8 32w/EL	box acr 4x4	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	152	2,200	2,200
166	Bristol Central HS	Conference 130B	1	4L4' T8 32w/EL-8'	trof para dbl switch	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.2	232	1,680	1,680
167	Bristol Central HS	Conference 130B	1	50W INCANDESCENT	can rec 4"	4	4	50	0.2	8 WATT LED SI	screw in LED par20	4	8	0.0	0.2	238	1,680	1,680
168	Bristol Central HS	Conference 130B	1	2x26W CF HARDWIRED/EL	can rec 8"	2	2	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	2	16	0.0	0.1	156	2,400	2,400
169	Bristol Central HS	Conference 130B	1	2x26W CF HARDWIRED/EL	can rec 8"	44	44	54	2.4	15 WATT LED/KIT	can kit LED Spectrum	44	16	0.7	1.7	3,433	2,400	2,400
170	Bristol Central HS	Conference 130B	1	4L4' T8 32w/EL-8'	trof parabolic	34	34	112	3.8	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	34	71	2.4	1.4	2,816	2,400	2,400
171	Bristol Central HS	Storage Computers	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	78	700	700
172	Bristol Central HS	Storage Periodicals	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	78	700	700
173	Bristol Central HS	Bath Near Stair 1 (2)	1	1L3' T8 25w/EL	trof acr 1' wide	4	4	24	0.1	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	4	13	0.1	0.0	87	2,240	2,240
174	Bristol Central HS	Lobby Near Auditorium	1	2x26W CF HARDWIRED/EL	can rec 8"	26	26	54	1.4	15 WATT LED/KIT	can kit LED Spectrum	26	16	0.4	1.0	2,705	3,200	3,200
175	Bristol Central HS	Storage Aud Lobby	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	19	350	350
176	Bristol Central HS	Auditorium Main	1	15W INCANDESCENT	step light	16	16	15	0.2	3 WATT LED/KIT	aislelight kit LED	16	3	0.1	0.2	258	1,600	1,600
177	Bristol Central HS	Auditorium Main	1	500W INCANDESCENT	can rec 12"	93	93	500	46.5	46 WATT LED/KIT	can kit LED Spectrum	93	48	4.5	42.0	57,131	1,600	1,600
178	Bristol Central HS	Stage Main	1	2L4' T8 32w/EL	industrial	10	10	60	0.6	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	10	36	0.4	0.2	330	1,600	1,600
179	Bristol Central HS	Stage Main	1	2L4' T8 32w/EL	wrap	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	132	1,600	1,600
180	Bristol Central HS	Stage Main	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	89	1,600	1,600
181	Bristol Central HS	Storage Near Stair 1	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	10	500	350
182	Bristol Central HS	Bath Men	1	2L4' T8 32w/EL-8'	trof acr 1' wide	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	185	2,240	2,240
183	Bristol Central HS	Bath Men	1	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	23	2,240	2,240
184	Bristol Central HS	Bath Women	1	2L4' T8 32w/EL-8'	trof acr 1' wide	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	139	2,240	2,240
185	Bristol Central HS	Bath Women	1	1L4' T8 32w/EL	trof acr 1' wide	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	46	2,240	2,240
186	Bristol Central HS	Bath Women	1	1L2' T8 17w/EL	trof acr 1' wide	1	1	17	0.0	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	9	0.0	0.0	14	2,240	2,240
187	Bristol Central HS	Storage 129	1	2L4' T8 32w/EL	wrap	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	29	350	350
188	Bristol Central HS	Classroom 128	1	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	729	1,960	1,960
189	Bristol Central HS	Classroom 128	1	2x26W CF HARDWIRED/EL	can rec 8"	1	1	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	1	16	0.0	0.0	91	2,800	2,800
190	Bristol Central HS	Classroom 127	1	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	729	1,960	1,960
191	Bristol Central HS	Classroom 127	1	2x26W CF HARDWIRED/EL	can rec 8"	1	1	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	1	16	0.0	0.0	91	2,800	2,800
192	Bristol Central HS	Hall 125-126	1	4L2' T8 17w/EL	box acrylic	7	7	62	0.4	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	7	29	0.2	0.2	482	3,200	3,200
193	Bristol Central HS	Stair 7	stair	2L4' T8 32w/EL	wrap wall mt.	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	198	3,200	3,200
194	Bristol Central HS	Stair 7	stair	2L4' T8 32w/EL	wrap wall mt.	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	198	3,200	3,200
195	Bristol Central HS	Classroom 126	1	6L4' T8 32w/EL-12'	trof para dbl switch	10	10	180	1.8	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	10	107	1.1	0.7	1,215	1,960	1,960
196	Bristol Central HS	Classroom 126	1	4L4' T8 32w/EL-8'	trof para dbl switch	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	68	1,960	1,960
197	Bristol Central HS	Office 126A	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	93	1,680	1,680
198	Bristol Central HS	Storage 126B	1	4L2' T8 17w/EL	trof acr	6	6	62	0.4	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	6	29	0.2	0.2	116	700	700
199	Bristol Central HS	Classroom 126C	1	20W INCANDESCENT	decorative	4		20	0.1	NO RETRO	no change -specialized fixture		21	0.1			2,800	2,800
200	Bristol Central HS	Classroom 126C	1	2x15W INCANDESCENTS	decorative	4		30	0.1	NO RETRO	no change -specialized fixture		32	0.1			2,800	2,800
201	Bristol Central HS	Bath Men	1	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	23	2,240	2,240
202	Bristol Central HS	Bath Men	1	1L3' T8 25w/EL	trof acr 1' wide	1	1	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	13	0.0	0.0	22	2,240	2,240
203	Bristol Central HS	Bath Women	1	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	23	2,240	2,240
204	Bristol Central HS	Bath Women	1	1L3' T8 25w/EL	trof acr 1' wide	1	1	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	13	0.0	0.0	22	2,240	2,240
205	Bristol Central HS	Classroom 125	1	6L4' T8 32w/EL-12'	trof para dbl switch	9	9	180	1.6	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	107	1.0	0.7	1,093	1,960	1,960
206	Bristol Central HS	Office 125A	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	93	1,680	1,680
207	Bristol Central HS	Classroom 125B	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	54	1,960	1,960
208	Bristol Central HS	Storage 125C	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	39	700	700
209	Bristol Central HS	Storage Drama	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	19	350	350
210	Bristol Central HS	Storage Drama	1	2L4' T8 32w/EL	strip cage	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	21	500	500
211	Bristol Central HS	Storage 123	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	10	350	350
212	Bristol Central HS	Classroom 124	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
213	Bristol Central HS	Office 119	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	133	2,400	1,680
214	Bristol Central HS	Storage 119	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	14	500	350
215	Bristol Central HS	Classroom 122	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
216	Bristol Central HS	Classroom 117	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
217	Bristol Central HS	Classroom 120	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
218	Bristol Central HS	Classroom 118	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
219	Bristol Central HS	Classroom 115	1	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	251	675	675

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
220	Bristol Central HS	Classroom 116	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
221	Bristol Central HS	Classroom 113	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
222	Bristol Central HS	Classroom 111	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
223	Bristol Central HS	Classroom 114	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
224	Bristol Central HS	Classroom 112	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
225	Bristol Central HS	Office Open 109	1	4L2' T8 17w/EL	trof parabolic	3	3	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	3	29	0.1	0.1	160	1,925	1,925
226	Bristol Central HS	Office 109 (4)	1	4L2' T8 17w/EL	trof parabolic	12	12	62	0.7	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	12	29	0.4	0.4	559	1,680	1,680
227	Bristol Central HS	Conference 109A	1	4L2' T8 17w/EL	trof parabolic	3	3	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	3	29	0.1	0.1	140	1,680	1,680
228	Bristol Central HS	Classroom 110	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
229	Bristol Central HS	Classroom 107	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	64	307	307
230	Bristol Central HS	Classroom 108	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
231	Bristol Central HS	Office 105	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	186	1,680	1,680
232	Bristol Central HS	Storage 105	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	10	350	350
233	Bristol Central HS	Classroom 106	1	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
234	Bristol Central HS	Bath 106 (2)	1	1L3' T8 25w/EL	trof acr 1' wide	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	0.0	43	2,240	2,240
235	Bristol Central HS	Bath 106 (2)	1	1L2' T8 17w/EL	trof acr 1' wide	2	2	17	0.0	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	9	0.0	0.0	29	2,240	2,240
236	Bristol Central HS	Hall Trophy Display Case	1	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	15	750	750
237	Bristol Central HS	Hall Art Display Case	1	2L4' T12 34w EE/EEMAG-8'	strip	1	1	70	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	22	750	750
238	Bristol Central HS	Hall Art Display Case	1	1L4' T12 34w EE/EEMAG	strip	1	1	40	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	14	750	750
239	Bristol Central HS	Hall Art Display Case	1	1L2' T12 20w STD/STD	strip	1	1	32	0.0	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	9	0.0	0.0	14	750	750
240	Bristol Central HS	Hall 35-23	b	4L4' T8 32w/EL	box acr 4x4	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	171	3,200	3,200
241	Bristol Central HS	Hall 35-23	b	4L2' T8 17w/EL	box acrylic	20	20	62	1.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	20	29	0.6	0.7	1,377	3,200	3,200
242	Bristol Central HS	Hall 21-14	b	4L4' T8 32w/EL	box acr 4x4	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	171	3,200	3,200
243	Bristol Central HS	Hall 21-14	b	4L2' T8 17w/EL	box acrylic	14	14	62	0.9	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	14	29	0.4	0.5	964	3,200	3,200
244	Bristol Central HS	Hall 14-4	b	4L4' T8 32w/EL	box acr 4x4	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	171	3,200	3,200
245	Bristol Central HS	Hall 14-4	b	4L2' T8 17w/EL	box acrylic	20	20	62	1.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	20	29	0.6	0.7	1,377	3,200	3,200
246	Bristol Central HS	Hall 4-35	b	4L4' T8 32w/EL	box acr 4x4	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	171	3,200	3,200
247	Bristol Central HS	Hall 4-35	b	4L2' T8 17w/EL	box acrylic	13	13	62	0.8	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	13	29	0.4	0.4	895	3,200	3,200
248	Bristol Central HS	Office 36	b	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	93	1,680	1,680
249	Bristol Central HS	Office 34	b	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	93	1,680	1,680
250	Bristol Central HS	Classroom 35	b	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	729	1,960	1,960
251	Bristol Central HS	Lounge 30	b	4L2' T8 17w/EL	box acrylic	8	8	62	0.5	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	8	29	0.2	0.3	357	1,610	1,610
252	Bristol Central HS	Lounge 30	b	2x26W CF HARDWIRED/EL	can rec 8"	8	8	54	0.4	15 WATT LED/KIT	can kit LED Spectrum	8	16	0.1	0.3	419	1,610	1,610
253	Bristol Central HS	Storage 30	b	4L4' T8 32w/EL-8'	strip cage	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	24	350	350
254	Bristol Central HS	Classroom 33	b	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	254	1,227	1,227
255	Bristol Central HS	Storage 28	b	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	19	350	350
256	Bristol Central HS	Storage 26	b	4L4' T8 32w/EL-8'	strip cage	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.2	69	500	350
257	Bristol Central HS	Storage 26	b	4L4' T8 32w/EL-8'	strip cage	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	17	500	350
258	Bristol Central HS	Classroom 31	b	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	729	1,960	1,960
259	Bristol Central HS	Classroom 29	b	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
260	Bristol Central HS	Mechanical 24	b	4L4' T8 32w/EL-8'	strip cage	5	5	112	0.6	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	71	0.4	0.2	86	500	500
261	Bristol Central HS	Exercise 22	b	4L2' T8 17w/EL	box acrylic	11	11	62	0.7	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	11	29	0.3	0.4	636	2,086	2,086
262	Bristol Central HS	Exercise 22	b	2L4' T8 32w/EL	box acrylic	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	43	2,086	2,086
263	Bristol Central HS	Exercise 22	b	4L4' T8 32w/EL	box acr 4x4	10	10	112	1.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	10	71	0.7	0.4	720	2,086	2,086
264	Bristol Central HS	Classroom 27	b	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	76	369	369
265	Bristol Central HS	Classroom 25	b	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	729	1,960	1,960
266	Bristol Central HS	Classroom 23	b	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	292	1,411	1,411
267	Bristol Central HS	Bath Near Stair (2)	b	1L4' T8 32w/EL	trof acr 1' wide	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	46	2,240	2,240
268	Bristol Central HS	Bath Near Stair (2)	b	1L2' T8 17w/EL	trof acr 1' wide	2	2	17	0.0	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	9	0.0	0.0	29	2,240	2,240
269	Bristol Central HS	Storage Near Stair 1	b	2L4' T8 32w/EL	strip cage	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	31	500	500
270	Bristol Central HS	Storage 22B	b	2L4' T8 32w/EL	strip cage	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	7	350	350
271	Bristol Central HS	Storage Electric	b	2L4' T8 32w/EL	strip cage	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	7	350	350
272	Bristol Central HS	Storage Janitor	b	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	7	350	350
273	Bristol Central HS	Bath Men	b	2L4' T8 32w/EL-8'	trof acr 1' wide	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	185	2,240	2,240
274	Bristol Central HS	Bath Men	b	1L3' T8 25w/EL	trof acr 1' wide	1	1	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	13	0.0	0.0	22	2,240	2,240
275	Bristol Central HS	Bath Women	b	2L4' T8 32w/EL-8'	trof acr 1' wide	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	139	2,240	2,240
276	Bristol Central HS	Bath Women	b	1L4' T8 32w/EL	trof acr 1' wide	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	46	2,240	2,240
277	Bristol Central HS	Bath Women	b	1L2' T8 17w/EL	trof acr 1' wide	1	1	17	0.0	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	9	0.0	0.0	14	2,240	2,240
278	Bristol Central HS	Storage Chairs	b	4L2' T8 17w/EL	box acrylic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	28	500	500
279	Bristol Central HS	Classroom 21	b	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
280	Bristol Central HS	Classroom 20	b	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	729	1,960	1,960
281	Bristol Central HS	Storage Supplies	b	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	39	350	350
282	Bristol Central HS	Classroom 19	b	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
283	Bristol Central HS	Storage 19A	b	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	19	350	350
284	Bristol Central HS	Hall 15-18	b	4L2' T8 17w/EL	box acrylic	7	7	62	0.4	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	7	29	0.2	0.2	482	3,200	3,200
285	Bristol Central HS	Lab 18	b	4L4' T8 32w/EL-8'	vapor tight	20	20	112	2.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	20	71	1.4	0.8	1,864	2,700	1,890
286	Bristol Central HS	Storage 18	b	4L4' T8 32w/EL-8'	vapor tight	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	12	350	350
287	Bristol Central HS	Storage 18	b	4L4' T8 32w/EL-8'	vapor tight	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	12	350	350
288	Bristol Central HS	Office 18	b	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	266	2,400	1,680
289	Bristol Central HS	Lab 17	b	4L4' T8 32w/EL-8'	vapor tight	25	25	112	2.8	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	25	71	1.8	1.0	2,329	2,700	2,700
290	Bristol Central HS	Office 17	b	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	93	1,680	1,680
291	Bristol Central HS	Storage 17B	b	4L2' T8 17w/EL	box acrylic	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	14	500	350
292	Bristol Central HS	Storage 17C	b	4L2' T8 17w/EL	box acrylic	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	28	1,000	700

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
293	Bristol Central HS	Storage Clamps	b	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	111	1,000	700
294	Bristol Central HS	Classroom 16	b	4L4' T8 32w/EL-8'	vapor tight	16	16	112	1.8	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	16	71	1.1	0.6	1,546	2,800	2,800
295	Bristol Central HS	Classroom 16	b	4L2' T8 17w/EL	trof acr	3	3	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	3	29	0.1	0.1	233	2,800	1,960
296	Bristol Central HS	Classroom 16	b	4L4' T8 32w/EL-8'	vapor tight	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	97	2,800	2,800
297	Bristol Central HS	Storage 16	b	4L4' T8 32w/EL-8'	vapor tight	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	17	500	350
298	Bristol Central HS	Storage 16	b	4L2' T8 17w/EL	box acrylic	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	10	350	350
299	Bristol Central HS	Storage Near C19	b	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	19	350	350
300	Bristol Central HS	Office 19B	b	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	186	1,680	1,680
301	Bristol Central HS	Storage 13C	b	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	7	350	350
302	Bristol Central HS	Classroom 14	b	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	729	1,960	1,960
303	Bristol Central HS	Storage Across From C14	b	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	19	350	350
304	Bristol Central HS	Classroom 12	b	4L4' T8 32w/EL-8'	trof para dbl switch	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	135	1,960	1,960
305	Bristol Central HS	Classroom 13	b	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	729	1,960	1,960
306	Bristol Central HS	Storage 13A	b	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	39	700	700
307	Bristol Central HS	Classroom 11	b	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	729	1,960	1,960
308	Bristol Central HS	Classroom 10	b	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	729	1,960	1,960
309	Bristol Central HS	Classroom 10	b	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
310	Bristol Central HS	Classroom 9	b	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	729	1,960	1,960
311	Bristol Central HS	Classroom 8	b	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	729	1,960	1,960
312	Bristol Central HS	Classroom 8	b	4L4' T8 32w/EL-8'	trof para dbl switch	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.2	271	1,960	1,960
313	Bristol Central HS	Classroom 7	b	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	729	1,960	1,960
314	Bristol Central HS	Classroom 5	b	6L4' T8 32w/EL-12'	trof para dbl switch	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
315	Bristol Central HS	Classroom 5	b	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
316	Bristol Central HS	Classroom 6	b	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	729	1,960	1,960
317	Bristol Central HS	Classroom 6	b	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
318	Bristol Central HS	Office 6A	b	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	133	2,400	1,680
319	Bristol Central HS	Storage 6A	b	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	7	350	350
320	Bristol Central HS	Classroom 4	b	4L4' T8 32w/EL-8'	trof para dbl switch	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
321	Bristol Central HS	Bath Near Stair 4 (2)	b	1L3' T8 25w/EL	trof acr 1' wide	4	4	24	0.1	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	4	13	0.1	0.0	87	2,240	2,240
322	Bristol Central HS	Storage Janitor	b	2L4' T8 32w/EL	strip cage	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	7	350	350
323	Bristol Central HS	Bath Men	b	2L4' T8 32w/EL-8'	trof acr 1' wide	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	185	2,240	2,240
324	Bristol Central HS	Bath Men	b	1L4' T8 32w/EL	trof acr 1' wide	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	46	2,240	2,240
325	Bristol Central HS	Bath Woman	b	2L4' T8 32w/EL-8'	trof acr 1' wide	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	185	2,240	2,240
326	Bristol Central HS	Bath Woman	b	1L4' T8 32w/EL	trof acr 1' wide	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	46	2,240	2,240
327	Bristol Central HS	Bath Woman	b	1L2' T8 17w/EL	trof acr 1' wide	1	1	17	0.0	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	9	0.0	0.0	14	2,240	2,240
328	Bristol Central HS	Storage Lamps	b	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	28	500	500
329	Bristol Central HS	Classroom 3	b	4L4' T8 32w/EL-8'	trof para dbl switch	5	5	112	0.6	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	71	0.4	0.2	338	1,960	1,960
330	Bristol Central HS	Classroom 3	b	2x26W CF HARDWIRED/EL	can rec 8"	6	6	54	0.3	15 WATT LED/KIT	can kit LED Spectrum	6	16	0.1	0.2	382	1,960	1,960
331	Bristol Central HS	Storage 3A	b	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	29	700	700
332	Bristol Central HS	Storage 2	b	6L4' T8 32w/EL-12'	trof para dbl switch	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	130	700	700
333	Bristol Central HS	Storage 2	b	2x26W CF HARDWIRED/EL	can rec 8"	3	3	54	0.2	15 WATT LED/KIT	can kit LED Spectrum	3	16	0.0	0.1	68	700	700
334	Bristol Central HS	Cafeteria 43	b	4L2' T8 17w/EL	box acrylic	7	7	62	0.4	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	7	29	0.2	0.2	388	2,000	2,000
335	Bristol Central HS	Cafeteria 43	b	4L2' T8 17w/EL	trof acr	66	66	62	4.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	66	29	1.9	2.2	3,658	2,000	2,000
336	Bristol Central HS	Cafeteria 43	b	2x26W CF HARDWIRED/EL	can rec 8"	3	3	54	0.2	15 WATT LED/KIT	can kit LED Spectrum	3	16	0.0	0.1	195	2,000	2,000
337	Bristol Central HS	Cafeteria Senior	b	4L2' T8 17w/EL	trof acr	25	25	62	1.6	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	25	29	0.7	0.8	1,386	2,000	1,400
338	Bristol Central HS	Cafeteria Senior	b	2x26W CF HARDWIRED/EL	can rec 8"	5	5	54	0.3	15 WATT LED/KIT	can kit LED Spectrum	5	16	0.1	0.2	325	2,000	2,000
339	Bristol Central HS	Lounge 43D	b	4L2' T8 17w/EL	trof parabolic	6	6	62	0.4	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	6	29	0.2	0.2	268	1,610	1,610
340	Bristol Central HS	Retail School Store	b	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	124	1,120	1,120
341	Bristol Central HS	Kitchen 42	b	4L2' T8 17w/EL	trof acr	21	21	62	1.3	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	21	29	0.6	0.7	1,397	2,400	1,680
342	Bristol Central HS	Kitchen 42	b	4L2' T8 17w/EL	trof acr	36	36	62	2.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	36	29	1.1	1.2	2,394	2,400	1,680
343	Bristol Central HS	Office 42C	b	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	93	1,680	1,680
344	Bristol Central HS	Locker 42	b	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	46	2,240	2,240
345	Bristol Central HS	Locker 42	b	2x26W CF HARDWIRED/EL	can rec 8"	1	1	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	1	16	0.0	0.0	73	2,240	2,240
346	Bristol Central HS	Bath 42	b	1L3' T8 25w/EL	trof acr 1' wide	1	1	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	13	0.0	0.0	22	2,240	2,240
347	Bristol Central HS	Bath 42	b	1L2' T8 17w/EL	trof acr 1' wide	1	1	17	0.0	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	9	0.0	0.0	14	2,240	2,240
348	Bristol Central HS	Bath 42	b	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	140	3,200	3,200
349	Bristol Central HS	Hall 42	b	4L2' T8 17w/EL	box acrylic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	138	3,200	2,240
350	Bristol Central HS	Storage 42D	b	4L2' T8 17w/EL	trof acr	6	6	62	0.4	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	6	29	0.2	0.2	116	700	700
351	Bristol Central HS	Office 42E	b	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	186	1,680	1,680
352	Bristol Central HS	Freezer Walk-In	b	60W INCANDESCENT	jar cage	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	88	1,000	1,000
353	Bristol Central HS	Freezer Walk-In	b	60W INCANDESCENT	jar cage	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	44	1,000	1,000
354	Bristol Central HS	Kitchen 42	b	60W INCANDESCENT	range hood	8	8	60	0.5	8 WATT LED SI	screw in LED Alamp	8	8	0.1	0.4	842	2,400	2,400
355	Bristol Central HS	Storage Supplies	b	4L4' T8 32w/EL-8'	strip cage	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.2	138	1,000	700
356	Bristol Central HS	Storage Supplies	b	2L4' T8 32w/EL	strip reflector	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	29	700	700
357	Bristol Central HS	Storage 43	b	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	29	700	700
358	Bristol Central HS	Storage 42A	b	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	19	700	700
359	Bristol Central HS	Hall Custodian	b	4L4' T8 32w/EL-8'	strip cage	13	13	112	1.5	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	13	71	0.9	0.5	1,436	3,200	2,240
360	Bristol Central HS	Office 41A	b	4L2' T8 17w/EL	box acrylic	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	186	1,680	1,680
361	Bristol Central HS	Mechanical 41H	b	4L4' T8 32w/EL-8'	strip cage	22	22	112	2.5	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	22	71	1.6	0.9	380	500	500
362	Bristol Central HS	Storage Tunnel Area	b	2x26W CF HARDWIRED/EL	square surface mt.	8	8	54	0.4	16 WATT LED/NEW	new LED drum	8	17	0.1	0.3	190	750	750
363	Bristol Central HS	Locker Maint	b	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	66	3,200	3,200
364	Bristol Central HS	Bath Maint	b	2L3' T8 25w/EL-6'	trof acr 1' wide	1	1	47	0.0	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	25	0.0	0.0	42	2,240	2,240
365	Bristol Central HS	Storage 40	b	2L3' T8 25w/EL-6'	trof acr 1' wide			47		2L3' LED/ELEE LO/RLRB	rlrb LED 3'		25				500	500

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
366	Bristol Central HS	Classroom 1	b	6L4' T8 32w/EL-12'	trof para dbl switch	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	729	1,960	1,960
367	Bristol Central HS	Classroom 1	b	2x26W CF HARDWIRED/EL	can rec 8"	6	6	54	0.3	15 WATT LED/KIT	can kit LED Spectrum	6	16	0.1	0.2	382	1,960	1,960
368	Bristol Central HS	Office 1	b	4L2' T8 17w/EL	trof acr	3	3	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	3	29	0.1	0.1	200	2,400	1,680
369	Bristol Central HS	Office 1	b	1L4' T5 HO/EL	task strip	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,400	1,680
370	Bristol Central HS	Storage 39B	b	2L4' T8 32w/EL	wrap	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	58	700	700
371	Bristol Central HS	Storage Elevator	b	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	10	500	350
372	Bristol Central HS	Storage 38	b	4L2' T8 17w/EL	trof acr	5	5	62	0.3	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	5	29	0.1	0.2	139	1,000	700
373	Bristol Central HS	Locker 37K	b	2L4' T8 32w/EL	vapor tight	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	93	2,240	2,240
374	Bristol Central HS	Hall 37H	b	2L4' T8 32w/EL	vapor tight	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	46	2,240	2,240
375	Bristol Central HS	Locker 37G	b	2L4' T8 32w/EL	vapor tight	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	139	2,240	2,240
376	Bristol Central HS	Bath 37F	b	2L4' T8 32w/EL	vapor tight	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	93	2,240	2,240
377	Bristol Central HS	Bath 37F	b	2x26W CF HARDWIRED/EL	square recessed	4	4	54	0.2	16 WATT LED/NEW	new LED drum	4	17	0.1	0.1	283	2,240	2,240
378	Bristol Central HS	Office 37A	b	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	93	1,680	1,680
379	Bristol Central HS	Bath 37A	b	2L4' T8 32w/EL	vapor tight	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	66	3,200	2,240
380	Bristol Central HS	Bath 37A	b	2x26W CF HARDWIRED/EL	square recessed	1	1	54	0.1	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	101	3,200	2,240
381	Bristol Central HS	Bath Locker Room	b	2L4' T8 32w/EL	vapor tight	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	93	2,240	2,240
382	Bristol Central HS	Locker 37	b	2L4' T8 32w/EL	vapor tight	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	0.1	278	2,240	2,240
383	Bristol Central HS	Storage 37	b	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	19	350	350
384	Bristol Central HS	Locker Team Room	b	2L4' T8 32w/EL	vapor tight	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	185	2,240	2,240
385	Bristol Central HS	Bath Team Room	b	2L4' T8 32w/EL	vapor tight	5	5	60	0.3	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	36	0.2	0.1	231	2,240	2,240
386	Bristol Central HS	Locker Pads (3)	b	2L4' T8 32w/EL	vapor tight	12	12	60	0.7	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	36	0.4	0.3	555	2,240	2,240
387	Bristol Central HS	Office 37E	b	4L2' T8 17w/EL	trof parabolic	3	3	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	3	29	0.1	0.1	140	1,680	1,680
388	Bristol Central HS	Bath 37E	b	2L4' T8 32w/EL	vapor tight	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	93	2,240	2,240
389	Bristol Central HS	Bath 37E	b	2L4' T8 32w/EL-8'	trof acr 1' wide	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	139	2,240	2,240
390	Bristol Central HS	Bath 37E	b	2x26W CF HARDWIRED/EL	square recessed	2	2	54	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.1	202	3,200	3,200
391	Bristol Central HS	Storage 32	b	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	39	700	700
392	Bristol Central HS	Storage 32	b	2L4' T8 32w/EL	strip cage	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	83	1,000	700
398	South Side ES	Classroom 21	2	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	447	982	982
399	South Side ES	Classroom 21	2	1L4' T5 HO/EL	task strip	3		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200
400	South Side ES	Classroom 20	2	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	701	1,540	1,540
401	South Side ES	Classroom 20	2	1L4' T5 HO/EL	task strip	3		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200
402	South Side ES	Classroom 22	2	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	447	982	982
403	South Side ES	Classroom 22	2	1L4' T5 HO/EL	task strip	3		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200
404	South Side ES	Classroom 19	2	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	335	737	737
405	South Side ES	Classroom 19	2	1L4' T5 HO/EL	task strip	3		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200
406	South Side ES	Classroom 23	2	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	447	982	982
407	South Side ES	Classroom 23	2	1L4' T5 HO/EL	task strip	3		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200
408	South Side ES	Classroom 18	2	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	475	1,043	1,043
409	South Side ES	Classroom 18	2	1L4' T5 HO/EL	task strip	3		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200
410	South Side ES	Classroom 24	2	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	701	1,540	1,540
411	South Side ES	Classroom 24	2	1L4' T5 HO/EL	task strip	3		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200
412	South Side ES	Classroom 17	2	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	701	1,540	1,540
413	South Side ES	Classroom 17	2	1L4' T5 HO/EL	task strip	3		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200
414	South Side ES	Library Main	2	4L4' T8 32w/EL	trof acr	29	29	112	3.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	29	53	1.5	1.7	2,160	1,473	1,473
415	South Side ES	Office Library	2	4L4' T8 32w/EL-8'	box acrylic	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	138	2,000	1,400
416	South Side ES	Office Library	2	2L4' T8 32w/EL	box acrylic	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	83	2,000	1,400
417	South Side ES	Conference Room F	2	4L4' T8 32w/EL-8'	box acrylic	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	48	1,400	1,400
418	South Side ES	Storage A	2	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	21	1,000	700
419	South Side ES	Lobby Elevator	2	2L4' T8 32w U/EL	box acrylic	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	57	3,000	2,100
420	South Side ES	Office Conf Ijk	2	2L4' T8 32w/EL	box acrylic	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	83	2,000	1,400
421	South Side ES	Conference I	2	2L4' T8 32w/EL	box acrylic	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	58	1,400	1,400
422	South Side ES	Conference K	2	2L4' T8 32w/ELEE	box acrylic	4	4	53	0.2	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	4	40	0.2	0.1	62	1,400	1,400
423	South Side ES	Conference J	2	2L4' T8 32w/EL	box acrylic	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	58	1,400	1,400
424	South Side ES	Conference G	2	4L4' T8 32w/EL-8'	box acrylic	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	48	1,400	1,400
425	South Side ES	Hall Lib-Conf K	2	2L4' T8 32w U/EL	box acrylic	12	12	60	0.7	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	12	38	0.5	0.3	679	3,000	2,100
426	South Side ES	Hall 24-20	2	2L4' T8 U 32w/ELEE	box acrylic	12	12	53	0.6	2L4' LED/EL/RELAMP ONLY	relamp LEDho Ubent	12	40	0.5	0.2	401	3,000	2,100
427	South Side ES	Bath Near Storage C (2)	2	1L4' T8 32w/EL	wrap narrow	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	43	2,100	2,100
428	South Side ES	Bath Near Storage C (2)	2	2L4' T8 32w/EL	vanity	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	87	2,100	2,100
429	South Side ES	Storage Custodial	2	1L4' T8 32w/EL	strip	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	4	350	350
430	South Side ES	Storage Books	2	4L4' T8 32w/EL-8'	box acrylic	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	24	700	700
431	South Side ES	Storage Classroom	2	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	14	700	700
432	South Side ES	Hall 25-30	2	2L4' T8 32w U/EL	box acrylic	18	18	60	1.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	18	38	0.7	0.4	1,019	3,000	2,100
433	South Side ES	Conference Room H	2	4L4' T8 32w/EL-8'	box acrylic	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	138	2,000	1,400
434	South Side ES	Classroom 25	2	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	701	1,540	1,540
435	South Side ES	Classroom 25	2	1L4' T5 HO/EL	task strip	3		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200
436	South Side ES	Classroom 26	2	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	701	1,540	1,540
437	South Side ES	Classroom 26	2	1L4' T5 HO/EL	task strip	3		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200
438	South Side ES	Bath Boys	2	2L4' T8 32w/EL-8'	wrap narrow	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	124	3,000	2,100
439	South Side ES	Bath Boys	2	1L4' T8 32w/EL	wrap narrow	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	31	3,000	2,100
440	South Side ES	Bath Girls	2	2L4' T8 32w/EL-8'	wrap narrow	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	124	3,000	2,100
441	South Side ES	Bath Girls	2	1L4' T8 32w/EL	wrap narrow	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	31	3,000	2,100
442	South Side ES	Classroom 32	2	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	335	737	737
443	South Side ES	Classroom 32	2	1L4' T5 HO/EL	task strip	3		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
444	South Side ES	Classroom 27	2	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	701	1,540	1,540
445	South Side ES	Classroom 27	2	1L4' T5 HO/EL	task strip	3		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200
446	South Side ES	Classroom 28	2	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	701	1,540	1,540
447	South Side ES	Classroom 28	2	1L4' T5 HO/EL	task strip	3		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200
448	South Side ES	Classroom 31	2	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	701	1,540	1,540
449	South Side ES	Classroom 31	2	1L4' T5 HO/EL	task strip	3		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200
450	South Side ES	Classroom 29	2	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	701	1,540	1,540
451	South Side ES	Classroom 29	2	1L4' T5 HO/EL	task strip	3		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200
452	South Side ES	Classroom 30	2	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	701	1,540	1,540
453	South Side ES	Classroom 30	2	1L4' T5 HO/EL	task strip	3		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200
454	South Side ES	Stair North	stair	4L4' T8 32w/EL-8'	box acr 1' wide	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	311	3,000	3,000
455	South Side ES	Stair North	stair	2L4' T8 32w/EL	box acrylic	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	62	3,000	3,000
456	South Side ES	Hall 8-14	1	2L4' T8 32w U/EL	box acrylic	18	18	60	1.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	18	38	0.7	0.4	1,019	3,000	2,100
457	South Side ES	Hall 5-Conf D	1	2L4' T8 32w U/EL	box acrylic	19	19	60	1.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	19	38	0.7	0.4	1,076	3,000	2,100
458	South Side ES	Stair West	stair	4L4' T8 32w/EL-8'	box acr 1' wide	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	311	3,000	3,000
459	South Side ES	Stair West	stair	2L4' T8 32w U/EL	box acrylic	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	113	3,000	3,000
460	South Side ES	Lobby Main	1	2L4' T8 32w U/EL	box acrylic	4	4	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	4	38	0.2	0.1	226	3,000	2,100
461	South Side ES	Lobby Main	1	4L4' T8 32w/EL	trof opaque 4x4	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	207	3,000	2,100
462	South Side ES	Hall Caf-Gym	1	2L4' T8 32w U/EL	box acrylic	17	17	60	1.0	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	17	38	0.6	0.4	962	3,000	2,100
463	South Side ES	Lounge Faculty	1	2L4' T8 32w/EL	box acrylic	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	0.1	156	1,260	1,260
464	South Side ES	Office K	1	4L4' T8 32w/EL-8'	wrap	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	138	2,000	1,400
465	South Side ES	Kitchen Main	1	4L4' T8 32w/EL	box acrylic	18	18	112	2.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	18	53	0.9	1.1	1,730	1,900	1,900
466	South Side ES	Bath Kitchen	1	1L4' T8 32w/EL	wrap narrow	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	31	3,000	2,100
467	South Side ES	Bath Kitchen	1	60W INCANDESCENT	jar	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	132	3,000	2,100
468	South Side ES	Bath Kitchen	1	2L2' T8 17w/EL	wrap	1	1	33	0.0	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	19	0.0	0.0	36	3,000	2,100
469	South Side ES	Office Kitchen	1	4L4' T8 32w/EL-8'	strip	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	69	2,000	1,400
470	South Side ES	Office Kitchen	1	2L4' T8 32w/EL	strip	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	41	2,000	1,400
471	South Side ES	Storage Cups	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	10	500	350
472	South Side ES	Cafeteria Main	1	4L4' T8 32w/EL	trof opaque 4x4	13	13	112	1.5	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	13	71	0.9	0.5	763	1,700	1,190
473	South Side ES	Cafeteria Main	1	300W INCANDESCENT	can eyeball rec	6	6	300	1.8	17 WATT LED SI	screw in LED par38	6	18	0.1	1.7	2,446	1,700	1,700
474	South Side ES	Stage Cafeteria	1	3x13W CF HARDWIRED	drum	2	2	45	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.1	77	1,600	1,120
475	South Side ES	Stage Cafeteria	1	4L4' T8 32w/EL-8'	wrap	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	331	1,600	1,120
476	South Side ES	Office Music	1	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	41	2,000	1,400
477	South Side ES	Gym Main	1	4L4' T5 HO/EL	high bay	18	18	234	4.2	98 WATT LED/NEW	new LED hibay wg	18	103	1.9	2.4	4,012	2,000	1,400
478	South Side ES	Gym Main	1	2L4' T8 32w U/EL	box acrylic	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	75	2,000	2,000
479	South Side ES	Office Phys Ed	1	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	41	2,000	1,400
480	South Side ES	Bath Phys Ed	1	3x13W CF HARDWIRED	drum	2	2	45	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.1	144	3,000	2,100
481	South Side ES	Mechanical Air Handler	1	60W INCANDESCENT	jar	3	3	60	0.2	8 WATT LED SI	screw in LED Alamp	3	8	0.0	0.2	66	500	500
482	South Side ES	Bath Gym Area	1	1L4' T8 32w/EL	wrap narrow	3	3	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	18	0.1	0.0	93	3,000	3,000
483	South Side ES	Bath Gym Area	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	3,000
484	South Side ES	Storage Gym Area	1	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	14	700	700
485	South Side ES	Storage Book Room	1	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	10	500	350
486	South Side ES	Stair Central	stair	2L4' T8 32w/EL	box acr 1' wide	5	5	60	0.3	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	36	0.2	0.1	310	3,000	3,000
487	South Side ES	Stair Central	stair	1L4' T8 32w/EL	strip	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	31	3,000	3,000
488	South Side ES	Office Open Main	1	4L4' T8 32w/EL-8'	box acrylic	5	5	112	0.6	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	71	0.4	0.2	275	1,595	1,595
489	South Side ES	Office Open Main	1	4L4' T8 32w/EL	box acrylic	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	170	1,680	1,680
490	South Side ES	Hall Main Office	1	2L4' T8 32w/EL	box acrylic	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	174	2,100	2,100
491	South Side ES	Office Nurse	1	4L4' T8 32w/EL	box acrylic	7	7	112	0.8	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	7	53	0.4	0.4	708	2,000	1,400
492	South Side ES	Office Nurse	1	4L4' T8 32w/EL	box acrylic dbl switch	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	1	71	0.1	0.0	69	2,000	1,400
493	South Side ES	Conference A	1	4L4' T8 32w/EL-8'	box acrylic	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	97	1,400	1,400
494	South Side ES	Conference Main Office	1	2L4' T8 32w/EL	box acrylic	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	83	2,000	1,400
495	South Side ES	Bath Main Office	1	32W CIRCLELINE HARDWIRED	drum	1	1	34	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	44	3,000	2,100
496	South Side ES	Office Principal	1	4L4' T8 32w/EL	box acrylic	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	0.2	405	2,000	1,400
497	South Side ES	Bath Main Office	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	2,100
498	South Side ES	Storage Main Office	1	4L4' T8 32w/EL	box acrylic	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	101	1,000	700
499	South Side ES	Conference Room C	1	2L4' T8 32w/EL	box acrylic	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	41	2,000	1,400
500	South Side ES	Conference Room B	1	2L4' T8 32w/EL	box acrylic	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	41	2,000	1,400
501	South Side ES	Conference Room D	1	4L4' T8 32w/EL-8'	box acrylic	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	138	2,000	1,400
502	South Side ES	Storage Av	1	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	7	350	350
503	South Side ES	Bath Women	1	2L4' T8 32w/EL-8'	wrap narrow	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	62	3,000	2,100
504	South Side ES	Bath Women	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	62	3,000	2,100
505	South Side ES	Storage Women	1	100W INCANDESCENT	old drum	2	2	100	0.2	16 WATT LED/NEW	new LED drum	2	17	0.0	0.2	141	1,000	700
506	South Side ES	Bath Men	1	2L4' T8 32w/EL-8'	wrap narrow	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	62	3,000	2,100
507	South Side ES	Bath Men	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	62	3,000	2,100
508	South Side ES	Lobby Elevator	1	2L4' T8 32w U/EL	box acrylic	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	57	3,000	2,100
509	South Side ES	Classroom Art	1	4L4' T8 32w/EL	box acrylic	23	23	112	2.6	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	23	53	1.2	1.4	1,791	1,540	1,540
510	South Side ES	Classroom Art	1	2L4' T8 32w U/EL	box acrylic	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	29	1,540	1,540
511	South Side ES	Classroom Art	1	150W INCANDESCENT	track can	9	9	150	1.4	20 WATT LED/NEW	new LED track head	9	21	0.2	1.2	2,171	2,200	2,200
512	South Side ES	Classroom 1	1	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	701	1,540	1,540
513	South Side ES	Classroom 1	1	1L4' T5 HO/EL	task strip	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,200	2,200
514	South Side ES	Bath 1	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	2,100
515	South Side ES	Classroom 2	1	4L4' T8 32w/EL	box acrylic	12	12	112	1.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	12	53	0.6	0.7	935	1,540	1,540
516	South Side ES	Classroom 2	1	1L4' T5 HO/EL	task strip	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,200	2,200

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
517	South Side ES	Bath 2	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	2,100
518	South Side ES	Classroom 5	1	4L4' T8 32w/EL	box acrylic	12	12	112	1.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	12	53	0.6	0.7	935	1,540	1,540
519	South Side ES	Classroom 5	1	1L4' T5 HO/EL	task strip	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,200	2,200
520	South Side ES	Storage 5	1	1L4' T12 34w EE/EEMAG	strip	1	1	40	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	19	1,000	700
521	South Side ES	Bath 5	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	3,000
522	South Side ES	Classroom 6	1	4L4' T8 32w/EL	box acrylic	12	12	112	1.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	12	53	0.6	0.7	935	1,540	1,540
523	South Side ES	Classroom 6	1	1L4' T5 HO/EL	task strip	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,200	2,200
524	South Side ES	Bath 6	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	2,100
525	South Side ES	Storage 6	1	1L4' T8 32w/EL	strip	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	5	500	350
526	South Side ES	Classroom 3	1	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	701	1,540	1,540
527	South Side ES	Classroom 3	1	1L4' T5 HO/EL	task strip	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,200	2,200
528	South Side ES	Bath 3	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	2,100
529	South Side ES	Storage 3	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	10	500	350
530	South Side ES	Office Therapy	1	2L4' T8 32w/EL	box acrylic	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	83	2,000	1,400
531	South Side ES	Storage Therapy	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	21	1,000	700
532	South Side ES	Storage Therapy	1	2L4' T8 32w U/EL	box acrylic	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	19	1,000	700
533	South Side ES	Classroom 4	1	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	701	1,540	1,540
534	South Side ES	Classroom 4	1	1L4' T5 HO/EL	task strip	4		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,200	2,200
535	South Side ES	Bath 4	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	2,100
536	South Side ES	Storage 4	1	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	10	500	350
537	South Side ES	Classroom 7	1	4L4' T8 32w/EL	box acrylic	12	12	112	1.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	12	53	0.6	0.7	935	1,540	1,540
538	South Side ES	Classroom 7	1	1L4' T5 HO/EL	task strip	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,200	2,200
539	South Side ES	Bath 7	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	2,100
540	South Side ES	Storage 7	1	1L4' T8 32w/EL	strip	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	5	500	350
541	South Side ES	Storage Workroom	1	4L4' T8 32w/EL-8'	box acrylic	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	69	1,000	700
542	South Side ES	Office Custodian	1	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	41	2,000	1,400
543	South Side ES	Storage Custodian	1	1L4' T8 32w/EL	strip	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	10	1,000	700
544	South Side ES	Conference Room E	1	4L4' T8 32w/EL-8'	box acrylic	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	97	1,400	1,400
545	South Side ES	Classroom 8	1	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	419	920	920
546	South Side ES	Classroom 8	1	1L4' T5 HO/EL	task strip	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,200	2,200
547	South Side ES	Bath 8	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	2,100
548	South Side ES	Classroom 9	1	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	614	1,350	1,350
549	South Side ES	Classroom 9	1	1L4' T5 HO/EL	task strip	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,200	2,200
550	South Side ES	Bath 9	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	2,100
551	South Side ES	Classroom 10	1	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	701	1,540	1,540
552	South Side ES	Classroom 10	1	1L4' T5 HO/EL	task strip	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,200	2,200
553	South Side ES	Bath 10	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	2,100
554	South Side ES	Classroom 16	1	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	614	1,350	1,350
555	South Side ES	Classroom 16	1	1L4' T5 HO/EL	task strip	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,200	2,200
556	South Side ES	Bath 16	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	2,100
557	South Side ES	Classroom 11	1	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	701	1,540	1,540
558	South Side ES	Classroom 11	1	1L4' T5 HO/EL	task strip	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,200	2,200
559	South Side ES	Bath 11	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	2,100
560	South Side ES	Classroom 15	1	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	586	1,288	1,288
561	South Side ES	Classroom 15	1	1L4' T5 HO/EL	task strip	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,200	2,200
562	South Side ES	Bath 15	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	2,100
563	South Side ES	Classroom 12	1	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	701	1,540	1,540
564	South Side ES	Classroom 12	1	1L4' T5 HO/EL	task strip	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,200	2,200
565	South Side ES	Bath 12	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	2,100
566	South Side ES	Classroom 14	1	4L4' T8 32w/EL	box acrylic	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	701	1,540	1,540
567	South Side ES	Classroom 14	1	1L4' T5 HO/EL	task strip	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,200	2,200
568	South Side ES	Bath 14	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,000	2,100
569	South Side ES	Storage Hall	b	2L4' T8 32w/EL	box acr 1' wide	7	7	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	7	36	0.2	0.2	72	500	500
570	South Side ES	Lobby Elevator	b	1L4' T8 32w/EL	strip	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	31	3,000	3,000
571	South Side ES	Mechanical Boiler	b	2L4' T8 32w/EL	strip	12	12	60	0.7	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	36	0.4	0.3	124	500	500
572	South Side ES	Mechanical Elevator	b	2L4' T8 32w/EL	strip	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	10	500	500
573	South Side ES	Storage Electric	b	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	10	500	350
574	South Side ES	Storage Chairs Desks	b	2L4' T8 32w/EL-8'	strip	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	41	500	350
575	South Side ES	Storage Chairs Desks	b	4L4' T8 32w/EL-8'	strip	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	35	500	350
576	South Side ES	Storage Chairs Desks	b	2L4' T8 32w/EL	strip	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	10	500	350
586	Green-Hills K8 School	Mechanical 140	1	2L4' T8 32w/EL	trof acr 1' wide	12	12	60	0.7	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	36	0.4	0.3	146	500	350
587	Green-Hills K8 School	Mechanical 140B	1	2L4' T8 32w/EL	trof acr 1' wide	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	49	500	350
588	Green-Hills K8 School	Mechanical 140A	1	2L4' T8 32w/EL	trof acr 1' wide	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	36	500	350
589	Green-Hills K8 School	Storage 142	1	2L4' T8 32w/EL	trof acr 1' wide	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	24	1,000	700
590	Green-Hills K8 School	Classroom 139	1	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
591	Green-Hills K8 School	Classroom 139	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
592	Green-Hills K8 School	Classroom 139	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	55	1,960	1,960
593	Green-Hills K8 School	Bath 139	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
594	Green-Hills K8 School	Storage 134	1	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	39	700	700
595	Green-Hills K8 School	Classroom 133	1	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	111	1,960	1,960
596	Green-Hills K8 School	Storage 141	1	2L4' T8 32w/EL	troffer indirect	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	34	700	700
597	Green-Hills K8 School	Storage 141A	1	2L4' T8 32w/EL	trof acr 1' wide	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
598	Green-Hills K8 School	Classroom 132	1	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	111	1,960	1,960

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
599	Green-Hills K8 School	Classroom 131	1	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	111	1,960	1,960
600	Green-Hills K8 School	Classroom 143	1	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
601	Green-Hills K8 School	Classroom 143	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	85	1,960	1,960
602	Green-Hills K8 School	Bath 143	1	2L3' T8 25w/EL-6'	soffit	1	1	47	0.0	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	25	0.0	0.0	49	2,240	2,240
603	Green-Hills K8 School	Bath 143	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
604	Green-Hills K8 School	Office 143C	1	2L4' T8 32w/EL	trof acr 1' wide	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	41	1,680	1,680
605	Green-Hills K8 School	Storage 142C	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	10	350	350
606	Green-Hills K8 School	Storage 142B	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	10	350	350
607	Green-Hills K8 School	Storage 141B	1	2L4' T8 32w/EL	troffer indirect	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	68	700	700
608	Green-Hills K8 School	Classroom 135	1	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
609	Green-Hills K8 School	Classroom 135	1	2L4' T8 32w/EL	indirect/direct dim	3		60	0.2	NO RETRO	no change -dimming		63	0.2			1,960	1,960
610	Green-Hills K8 School	Classroom 135	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
611	Green-Hills K8 School	Classroom 135	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	55	1,960	1,960
612	Green-Hills K8 School	Bath 135	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
613	Green-Hills K8 School	Classroom 136	1	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
614	Green-Hills K8 School	Classroom 136	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
615	Green-Hills K8 School	Classroom 136	1	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	111	1,960	1,960
616	Green-Hills K8 School	Bath 136	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
617	Green-Hills K8 School	Classroom 137	1	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
618	Green-Hills K8 School	Classroom 137	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
619	Green-Hills K8 School	Classroom 137	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	55	1,960	1,960
620	Green-Hills K8 School	Bath 137	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
621	Green-Hills K8 School	Classroom 138	1	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
622	Green-Hills K8 School	Classroom 138	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
623	Green-Hills K8 School	Classroom 138	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	55	1,960	1,960
624	Green-Hills K8 School	Bath 138	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
625	Green-Hills K8 School	Hall 139-142C	1	2x26W CF HARDWIRED/EL	can rec	4	4	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	4	11	0.0	0.2	365	2,100	2,100
626	Green-Hills K8 School	Hall 139-142C	1	2L4' T5 HO/EL-8'	valance	28		117	3.3	NO RETRO	no change -specialized fixture		123	3.3			2,100	2,100
627	Green-Hills K8 School	Hall 139-142C	1	1L4' T5 HO/EL	valance	1		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,100	2,100
628	Green-Hills K8 School	Stair 4	S	1L4' T5 HO/EL	valance	6		59	0.4	NO RETRO	no change -specialized fixture		62	0.4			2,100	2,100
629	Green-Hills K8 School	Hall 142B-151	1	2L4' T5 HO/EL-8'	valance	26		117	3.0	NO RETRO	no change -specialized fixture		123	3.0			2,100	2,100
630	Green-Hills K8 School	Hall 142B-151	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	91	2,100	2,100
631	Green-Hills K8 School	Classroom 151	1	2L2' T8 17w/EL	troffer indirect	8	8	33	0.3	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	8	19	0.2	0.1	221	1,960	1,960
632	Green-Hills K8 School	Bath Boys	1	2L4' T8 32w/EL-8'	soffit	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
633	Green-Hills K8 School	Bath Boys	1	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	27	2,240	2,240
634	Green-Hills K8 School	Bath Boys	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
635	Green-Hills K8 School	Bath Girls	1	2L4' T8 32w/EL-8'	soffit	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
636	Green-Hills K8 School	Bath Girls	1	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	27	2,240	2,240
637	Green-Hills K8 School	Bath Girls	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
638	Green-Hills K8 School	Gym 148 (16)	1	70W CF HARDWIRED/EL	high bay dim	128		70	9.0	NO RETRO	no change -specialized fixture		74	9.0			2,000	2,000
639	Green-Hills K8 School	Gym 148	1	3 WATT LED	can rec	6		3	0.0	NO RETRO	no change		3	0.0			2,000	2,000
640	Green-Hills K8 School	Gym 148	1	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	174	2,000	2,000
641	Green-Hills K8 School	Storage 148A	1	2L4' T8 32w/EL	trof acr 1' wide	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	49	1,000	1,000
642	Green-Hills K8 School	Office 148E	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	47	1,680	1,680
643	Green-Hills K8 School	Locker 148D	1	2L2' T8 17w/EL	troffer indirect	6	6	33	0.2	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	6	19	0.1	0.1	190	2,240	2,240
644	Green-Hills K8 School	Locker 148D	1	1L4' T8 32w/EL	soffit	3	3	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	18	0.1	0.0	82	2,240	2,240
645	Green-Hills K8 School	Storage 148L	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	14	500	500
646	Green-Hills K8 School	Locker Boys	1	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	126	2,240	2,240
647	Green-Hills K8 School	Locker Boys	1	2L4' T8 32w/EL-8'	soffit	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
648	Green-Hills K8 School	Locker Boys	1	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	27	2,240	2,240
649	Green-Hills K8 School	Office 148C	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	47	1,680	1,680
650	Green-Hills K8 School	Stage 145F	1	4L4' T8 32w/EL-8'	trof acr 1' wide	12	12	112	1.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	71	0.9	0.5	780	1,600	1,600
651	Green-Hills K8 School	Storage 148G	1	2L4' T8 32w/EL	trof acr 1' wide	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	26	350	350
652	Green-Hills K8 School	Stair 7	S	1L4' T5 HO/EL	valance	4		59	0.2	NO RETRO	no change -specialized fixture		62	0.2			2,100	2,100
653	Green-Hills K8 School	Stair 7	S	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	183	2,100	2,100
654	Green-Hills K8 School	Storage 148H	1	2L4' T8 32w/EL	trof acr 1' wide	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	24	500	500
655	Green-Hills K8 School	Bath Boys	1	2L4' T8 32w/EL-8'	soffit	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
656	Green-Hills K8 School	Bath Boys	1	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	27	2,240	2,240
657	Green-Hills K8 School	Bath Boys	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
658	Green-Hills K8 School	Bath Girls	1	2L4' T8 32w/EL-8'	soffit	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
659	Green-Hills K8 School	Bath Girls	1	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	27	2,240	2,240
660	Green-Hills K8 School	Bath Girls	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
661	Green-Hills K8 School	Bath By 145	1	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	27	2,240	2,240
662	Green-Hills K8 School	Bath By 145	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
663	Green-Hills K8 School	Hall 145	1	2L2' T8 17w/EL	troffer indirect	8	8	33	0.3	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	8	19	0.2	0.1	237	2,100	2,100
664	Green-Hills K8 School	Office 148J	1	2L2' T8 17w/EL	troffer indirect	3	3	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	3	19	0.1	0.0	71	1,680	1,680
665	Green-Hills K8 School	Office 148K	1	2L2' T8 17w/EL	troffer indirect	1	1	33	0.0	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	19	0.0	0.0	24	1,680	1,680
666	Green-Hills K8 School	Classroom 146	1	2L4' T8 32w/EL	troffer indirect	10	10	60	0.6	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	10	36	0.4	0.2	476	1,960	1,960
667	Green-Hills K8 School	Storage 145A	1	2L4' T8 32w/EL	troffer indirect	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	51	700	700
668	Green-Hills K8 School	Classroom 144	1	4L4' T8 32w/EL-8'	indirect/direct dim	7		112	0.8	NO RETRO	no change -dimming		118	0.8			1,960	1,960
669	Green-Hills K8 School	Classroom 144	1	2L4' T8 32w/EL	indirect/direct dim	1		60	0.1	NO RETRO	no change -dimming		63	0.1			1,960	1,960
670	Green-Hills K8 School	Hall Stair Atrium	1	2x26W CF HARDWIRED/EL	can rec	11	11	54	0.6	10 WATT LED/KIT	can kit LED Spectrum	11	11	0.1	0.5	1,005	2,100	2,100
671	Green-Hills K8 School	Hall 130-119	1	2L4' T5 HO/EL-8'	valance	26		117	3.0	NO RETRO	no change -specialized fixture		123	3.0			2,100	2,100

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
672	Green-Hills K8 School	Hall 130-119	1	2L4' T5 HO/EL-8'	valance	1		117	0.1	NO RETRO	no change -specialized fixture		123	0.1			2,100	2,100
673	Green-Hills K8 School	Hall 130-119	1	2x26W CF HARDWIRED/EL	can rec	7	7	54	0.4	10 WATT LED/KIT	can kit LED Spectrum	7	11	0.1	0.3	639	2,100	2,100
674	Green-Hills K8 School	Classroom 130	1	2L2' T8 17w/EL	troffer indirect	6	6	33	0.2	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	6	19	0.1	0.1	166	1,960	1,960
675	Green-Hills K8 School	Bath Men	1	2L4' T8 32w/EL-8'	soffit	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
676	Green-Hills K8 School	Bath Women	1	2L4' T8 32w/EL-8'	soffit	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
677	Green-Hills K8 School	Storage 128A	1	2L4' T8 32w/EL	trof acr 1' wide	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
678	Green-Hills K8 School	Storage 128	1	2L4' T8 32w/EL	trof acr 1' wide	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	17	350	350
679	Green-Hills K8 School	Classroom 127	1	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
680	Green-Hills K8 School	Classroom 127	1	2L4' T8 32w/EL	indirect/direct dim	3		60	0.2	NO RETRO	no change -dimming		63	0.2			1,960	1,960
681	Green-Hills K8 School	Classroom 127	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
682	Green-Hills K8 School	Classroom 127	1	2L2' T8 17w/EL	troffer indirect	3	3	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	3	19	0.1	0.0	83	1,960	1,960
683	Green-Hills K8 School	Bath 127	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
684	Green-Hills K8 School	Storage 127A	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	10	350	350
685	Green-Hills K8 School	Classroom 126	1	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
686	Green-Hills K8 School	Classroom 126	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
687	Green-Hills K8 School	Classroom 126	1	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	111	1,960	1,960
688	Green-Hills K8 School	Bath 126	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
689	Green-Hills K8 School	Classroom 125	1	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
690	Green-Hills K8 School	Classroom 125	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
691	Green-Hills K8 School	Classroom 125	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	55	1,960	1,960
692	Green-Hills K8 School	Bath 125	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
693	Green-Hills K8 School	Storage 125A	1	2L2' T8 17w/EL	troffer indirect	1	1	33	0.0	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	19	0.0	0.0	5	350	350
694	Green-Hills K8 School	Classroom 124	1	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
695	Green-Hills K8 School	Classroom 124	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
696	Green-Hills K8 School	Classroom 124	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	55	1,960	1,960
697	Green-Hills K8 School	Bath 124	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
698	Green-Hills K8 School	Classroom 123	1	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
699	Green-Hills K8 School	Classroom 123	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
700	Green-Hills K8 School	Classroom 123	1	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	111	1,960	1,960
701	Green-Hills K8 School	Bath 123	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
702	Green-Hills K8 School	Classroom 121	1	4L4' T8 32w/EL-8'	indirect/direct dim	8		112	0.9	NO RETRO	no change -dimming		118	0.9			1,960	1,960
703	Green-Hills K8 School	Classroom 121	1	2L4' T8 32w/EL	indirect/direct dim	2		60	0.1	NO RETRO	no change -dimming		63	0.1			1,960	1,960
704	Green-Hills K8 School	Classroom 121	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
705	Green-Hills K8 School	Storage 121B	1	2L2' T8 17w/EL	troffer indirect	1	1	33	0.0	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	19	0.0	0.0	5	350	350
706	Green-Hills K8 School	Storage 121A	1	2L2' T8 17w/EL	troffer indirect	1	1	33	0.0	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	19	0.0	0.0	5	350	350
707	Green-Hills K8 School	Bath Boys	1	2L4' T8 32w/EL-8'	soffit	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	109	2,240	2,240
708	Green-Hills K8 School	Bath Boys	1	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	27	2,240	2,240
709	Green-Hills K8 School	Bath Girls	1	2L4' T8 32w/EL-8'	soffit	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	109	2,240	2,240
710	Green-Hills K8 School	Bath Girls	1	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	27	2,240	2,240
711	Green-Hills K8 School	Office Open 119	1	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	109	1,925	1,925
712	Green-Hills K8 School	Office Open 119A	1	2L2' T8 17w/EL	troffer indirect	6	6	33	0.2	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	6	19	0.1	0.1	163	1,925	1,925
713	Green-Hills K8 School	Stair 2	S	2x26W CF HARDWIRED/EL	can rec	5	5	54	0.3	10 WATT LED/KIT	can kit LED Spectrum	5	11	0.1	0.2	457	2,100	2,100
714	Green-Hills K8 School	Stair 2	S	1L4' T5 HO/EL	valance	8		59	0.5	NO RETRO	no change -specialized fixture		62	0.5			2,100	2,100
715	Green-Hills K8 School	Hall 117-162	1	32W CF SCREWIN	cylinder wall mt.	10		34	0.3	NO RETRO	no change		36	0.3			2,100	2,100
716	Green-Hills K8 School	Hall 117-162 (6)	1	150W METAL HALIDE	cylinder indirect/direct wall mt.	12	12	190	2.3	17 WATT LED SI	screw in LED par38	12	18	0.2	2.1	4,338	2,100	2,100
717	Green-Hills K8 School	Hall 117-162	1	100W METAL HALIDE	indirect	8	8	120	1.0	20 WATT LED/NEW	new LED indirect	8	21	0.2	0.8	1,663	2,100	2,100
718	Green-Hills K8 School	Hall 117-162	1	2x26W CF HARDWIRED/EL	can rec	9	9	54	0.5	10 WATT LED/KIT	can kit LED Spectrum	9	11	0.1	0.4	822	2,100	2,100
719	Green-Hills K8 School	Classroom 117	1	2L4' T8 32w/EL-8'	indirect/direct dim	6		60	0.4	NO RETRO	no change -dimming		63	0.4			1,960	1,960
720	Green-Hills K8 School	Classroom 117	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
721	Green-Hills K8 School	Classroom 116B	1	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	111	1,960	1,960
722	Green-Hills K8 School	Classroom 116A	1	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	111	1,960	1,960
723	Green-Hills K8 School	Library 100	1	100W METAL HALIDE	indirect	6	6	120	0.7	20 WATT LED/NEW	new LED indirect	6	21	0.1	0.6	915	1,540	1,540
724	Green-Hills K8 School	Library 100 (2)	1	150W METAL HALIDE	cylinder indirect/direct wall mt.	4	4	190	0.8	17 WATT LED SI	screw in LED par38	4	18	0.1	0.7	1,060	1,540	1,540
725	Green-Hills K8 School	Library 100	1	2x26W CF HARDWIRED/EL	can rec	38	38	54	2.1	10 WATT LED/KIT	can kit LED Spectrum	38	11	0.4	1.7	2,546	1,540	1,540
726	Green-Hills K8 School	Library 100	1	2L4' T5/EL-8'	direct/indirect	14		63	0.9	NO RETRO	no change -specialized fixture		66	0.9			1,540	1,540
727	Green-Hills K8 School	Library 100	1	1L4' T5/EL	direct/indirect	4		32	0.1	NO RETRO	no change -specialized fixture		34	0.1			1,540	1,540
728	Green-Hills K8 School	Library 100	1	2L3' T5/EL-6'	direct/indirect	6		52	0.3	NO RETRO	no change -specialized fixture		55	0.3			1,540	1,540
729	Green-Hills K8 School	Library 100	1	70W CF HARDWIRED/EL	decorative	4		70	0.3	NO RETRO	no change -specialized fixture		74	0.3			1,540	1,540
730	Green-Hills K8 School	Storage 100C	1	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	20	350	350
731	Green-Hills K8 School	Office 167	1	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	95	1,680	1,680
732	Green-Hills K8 School	Office 166	1	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	95	1,680	1,680
733	Green-Hills K8 School	Office 164	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	47	1,680	1,680
734	Green-Hills K8 School	Office Open 106	1	2L2' T8 17w/EL	troffer indirect	15	15	33	0.5	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	15	19	0.3	0.2	407	1,925	1,925
735	Green-Hills K8 School	Office Open 106	1	2x26W CF HARDWIRED/EL	can rec	3	3	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	0.1	251	1,925	1,925
736	Green-Hills K8 School	Office Open 106	1	2L4' T8 32w/EL	troffer indirect	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	47	1,925	1,925
737	Green-Hills K8 School	Conference 108	1	4L4' T5/EL-8'	indirect/direct	1		126	0.1	NO RETRO	no change -specialized fixture		132	0.1			1,680	1,680
738	Green-Hills K8 School	Conference 108	1	2x26W CF HARDWIRED/EL	can rec	4	4	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	4	11	0.0	0.2	292	1,680	1,680
739	Green-Hills K8 School	Office 109	1	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	95	1,680	1,680
740	Green-Hills K8 School	Office 111	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	47	1,680	1,680
741	Green-Hills K8 School	Office 112	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	47	1,680	1,680
742	Green-Hills K8 School	Storage 114	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	20	700	700
743	Green-Hills K8 School	Bath Z	1	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	27	2,240	2,240
744	Green-Hills K8 School	Bath Z	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
745	Green-Hills K8 School	Storage 115	1	2L4' T8 32w/EL	trof acr 1' wide	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
746	Green-Hills K8 School	Office Open 101	1	2L2' T8 17w/EL	troffer indirect	5	5	33	0.2	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	5	19	0.1	0.1	136	1,925	1,925
747	Green-Hills K8 School	Office 105	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	47	1,680	1,680
748	Green-Hills K8 School	Office 104	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	47	1,680	1,680
749	Green-Hills K8 School	Conference 102	1	4L4' T5/EL-8'	indirect/direct	1		126	0.1	NO RETRO	no change -specialized fixture		132	0.1			1,680	1,680
750	Green-Hills K8 School	Conference 102	1	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	146	1,680	1,680
751	Green-Hills K8 School	Office 103	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	47	1,680	1,680
752	Green-Hills K8 School	Office Open 162A	1	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	109	1,925	1,925
753	Green-Hills K8 School	Office Open 162	1	2L2' T8 17w/EL	troffer indirect	3	3	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	3	19	0.1	0.0	81	1,925	1,925
754	Green-Hills K8 School	Office Open 162	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	54	1,925	1,925
755	Green-Hills K8 School	Office Open 162	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	54	1,925	1,925
756	Green-Hills K8 School	Office 163E	1	2L4' T8 32w/EL	troffer indirect	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	41	1,680	1,680
757	Green-Hills K8 School	Office 163F	1	2L4' T8 32w/EL	troffer indirect	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	41	1,680	1,680
758	Green-Hills K8 School	Office 163G	1	2L4' T8 32w/EL	troffer indirect	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	41	1,680	1,680
759	Green-Hills K8 School	Bath 162	1	2L3' T8 25w/EL-6'	soffit	1	1	47	0.0	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	25	0.0	0.0	49	2,240	2,240
760	Green-Hills K8 School	Bath 162	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
761	Green-Hills K8 School	Hall Stair1-5	1	2L4' T5 HO/EL-8'	valance	14		117	1.6	NO RETRO	no change -specialized fixture		123	1.6			2,100	2,100
762	Green-Hills K8 School	Hall Stair1-5	1	1L4' T5 HO/EL	valance	5		59	0.3	NO RETRO	no change -specialized fixture		62	0.3			2,100	2,100
763	Green-Hills K8 School	Hall Stair1-5	1	1L3' T5/EL	valance	1		27	0.0	NO RETRO	no change -specialized fixture		28	0.0			2,100	2,100
764	Green-Hills K8 School	Hall Stair1-5	1	2x26W CF HARDWIRED/EL	can rec	9	9	54	0.5	10 WATT LED/KIT	can kit LED Spectrum	9	11	0.1	0.4	822	2,100	2,100
765	Green-Hills K8 School	Stair 1	S	1L4' T5 HO/EL	valance	13		59	0.8	NO RETRO	no change -specialized fixture		62	0.8			2,100	2,100
766	Green-Hills K8 School	Classroom 161	1	4L4' T8 32w/EL-8'	indirect/direct dim	4		112	0.4	NO RETRO	no change -dimming		118	0.4			1,960	1,960
767	Green-Hills K8 School	Classroom 161	1	2L4' T8 32w/EL	indirect/direct dim	2		60	0.1	NO RETRO	no change -dimming		63	0.1			1,960	1,960
768	Green-Hills K8 School	Classroom 161	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
769	Green-Hills K8 School	Classroom 160	1	4L4' T8 32w/EL-8'	indirect/direct dim	4		112	0.4	NO RETRO	no change -dimming		118	0.4			1,960	1,960
770	Green-Hills K8 School	Classroom 160	1	2L4' T8 32w/EL	indirect/direct dim	2		60	0.1	NO RETRO	no change -dimming		63	0.1			1,960	1,960
771	Green-Hills K8 School	Classroom 160	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
772	Green-Hills K8 School	Storage 160A	1	2L4' T8 32w/EL	troffer indirect	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
773	Green-Hills K8 School	Classroom 158	1	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
774	Green-Hills K8 School	Classroom 158	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
775	Green-Hills K8 School	Storage 156	1	2L4' T8 32w/EL	troffer indirect	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	34	700	700
776	Green-Hills K8 School	Classroom 157	1	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
777	Green-Hills K8 School	Bath Girls	1	2L4' T8 32w/EL-8'	soffit	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
778	Green-Hills K8 School	Bath Girls	1	1L4' T8 32w/EL	soffit	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	54	2,240	2,240
779	Green-Hills K8 School	Classroom 154	1	4L4' T8 32w/EL-8'	indirect/direct dim	4		112	0.4	NO RETRO	no change -dimming		118	0.4			1,960	1,960
780	Green-Hills K8 School	Classroom 154	1	2L4' T8 32w/EL	indirect/direct dim	2		60	0.1	NO RETRO	no change -dimming		63	0.1			1,960	1,960
781	Green-Hills K8 School	Classroom 154	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
782	Green-Hills K8 School	Classroom 153	1	4L4' T8 32w/EL-8'	indirect/direct dim	4		112	0.4	NO RETRO	no change -dimming		118	0.4			1,960	1,960
783	Green-Hills K8 School	Classroom 153	1	2L4' T8 32w/EL	indirect/direct dim	2		60	0.1	NO RETRO	no change -dimming		63	0.1			1,960	1,960
784	Green-Hills K8 School	Classroom 153	1	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
785	Green-Hills K8 School	Bath Boys	1	2L4' T8 32w/EL-8'	soffit	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	109	2,240	2,240
786	Green-Hills K8 School	Bath Boys	1	2L2' T8 17w/EL	soffit	1	1	33	0.0	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	19	0.0	0.0	32	2,240	2,240
787	Green-Hills K8 School	Bath Boys	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
788	Green-Hills K8 School	Stair 5	S	1L4' T5 HO/EL	valance	12		59	0.7	NO RETRO	no change -specialized fixture		62	0.7			2,100	2,100
789	Green-Hills K8 School	Hall 2Nd	2	2L4' T5 HO/EL-8'	valance	91		117	10.6	NO RETRO	no change -specialized fixture		123	10.6			2,100	2,100
790	Green-Hills K8 School	Hall 2Nd	2	1L4' T5 HO/EL	valance	6		59	0.4	NO RETRO	no change -specialized fixture		62	0.4			2,100	2,100
791	Green-Hills K8 School	Hall 2Nd	2	2L3' T5/EL-6'	valance	3		52	0.2	NO RETRO	no change -specialized fixture		55	0.2			2,100	2,100
792	Green-Hills K8 School	Hall 2Nd	2	2x26W CF HARDWIRED/EL	can rec	55	55	54	3.0	10 WATT LED/KIT	can kit LED Spectrum	55	11	0.6	2.4	5,024	2,100	2,100
793	Green-Hills K8 School	Hall 2Nd	2	100W METAL HALIDE	indirect	8	8	120	1.0	20 WATT LED/NEW	new LED indirect	8	21	0.2	0.8	1,663	2,100	2,100
794	Green-Hills K8 School	Classroom 250	2	4L4' T8 32w/EL-8'	indirect/direct dim	4		112	0.4	NO RETRO	no change -dimming		118	0.4			1,960	1,960
795	Green-Hills K8 School	Classroom 250	2	2L4' T8 32w/EL	indirect/direct dim	2		60	0.1	NO RETRO	no change -dimming		63	0.1			1,960	1,960
796	Green-Hills K8 School	Classroom 250	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
797	Green-Hills K8 School	Classroom 248	2	4L4' T8 32w/EL-8'	indirect/direct dim	4		112	0.4	NO RETRO	no change -dimming		118	0.4			1,960	1,960
798	Green-Hills K8 School	Classroom 248	2	2L4' T8 32w/EL	indirect/direct dim	2		60	0.1	NO RETRO	no change -dimming		63	0.1			1,960	1,960
799	Green-Hills K8 School	Classroom 248	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
800	Green-Hills K8 School	Office Open 249	2	2L2' T8 17w/EL	troffer indirect	3	3	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	3	19	0.1	0.0	81	1,925	1,925
801	Green-Hills K8 School	Storage 247	2	2L4' T8 32w/EL	troffer indirect	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	17	350	350
802	Green-Hills K8 School	Classroom 246	2	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
803	Green-Hills K8 School	Classroom 246	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
804	Green-Hills K8 School	Storage 244	2	2L4' T8 32w/EL	troffer indirect	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	17	350	350
805	Green-Hills K8 School	Classroom 245	2	4L4' T8 32w/EL-8'	indirect/direct dim	8		112	0.9	NO RETRO	no change -dimming		118	0.9			1,960	1,960
806	Green-Hills K8 School	Classroom 245	2	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	171	1,960	1,960
807	Green-Hills K8 School	Storage 245B	2	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	61	700	700
808	Green-Hills K8 School	Storage 245A	2	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	39	700	700
809	Green-Hills K8 School	Bath Girls	2	2L4' T8 32w/EL-8'	soffit	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
810	Green-Hills K8 School	Bath Girls	2	1L4' T8 32w/EL	soffit	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	54	2,240	2,240
811	Green-Hills K8 School	Classroom 241	2	4L4' T8 32w/EL-8'	indirect/direct dim	4		112	0.4	NO RETRO	no change -dimming		118	0.4			1,960	1,960
812	Green-Hills K8 School	Classroom 241	2	2L4' T8 32w/EL	indirect/direct dim	2		60	0.1	NO RETRO	no change -dimming		63	0.1			1,960	1,960
813	Green-Hills K8 School	Classroom 241	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
814	Green-Hills K8 School	Classroom 240	2	4L4' T8 32w/EL-8'	indirect/direct dim	4		112	0.4	NO RETRO	no change -dimming		118	0.4			1,960	1,960
815	Green-Hills K8 School	Classroom 240	2	2L4' T8 32w/EL	indirect/direct dim	2		60	0.1	NO RETRO	no change -dimming		63	0.1			1,960	1,960
816	Green-Hills K8 School	Classroom 240	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
817	Green-Hills K8 School	Bath Boys	2	1L4' T8 32w/EL	soffit	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	54	2,240	2,240

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
818	Green-Hills K8 School	Bath Boys	2	1L2' T8 17w/EL	soffit	1	1	17	0.0	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	9	0.0	0.0	17	2,240	2,240
819	Green-Hills K8 School	Bath Boys	2	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
820	Green-Hills K8 School	Classroom 238	2	4L4' T8 32w/EL-8'	indirect/direct dim	7		112	0.8	NO RETRO	no change -dimming		118	0.8			1,960	1,960
821	Green-Hills K8 School	Classroom 238A	2	4L4' T8 32w/EL-8'	indirect/direct dim	8		112	0.9	NO RETRO	no change -dimming		118	0.9			1,960	1,960
822	Green-Hills K8 School	Mechanical 238B	2	2L4' T8 32w/EL	trof acr 1' wide	12	12	60	0.7	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	36	0.4	0.3	146	500	350
823	Green-Hills K8 School	Bath Women	2	2L4' T8 32w/EL-8'	soffit	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
824	Green-Hills K8 School	Bath Women	2	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	27	2,240	2,240
825	Green-Hills K8 School	Bath Women	2	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	195	2,240	2,240
826	Green-Hills K8 School	Bath Men	2	2L4' T8 32w/EL-8'	soffit	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
827	Green-Hills K8 School	Bath Men	2	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	27	2,240	2,240
828	Green-Hills K8 School	Bath Men	2	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	195	2,240	2,240
829	Green-Hills K8 School	Storage 235	2	2L4' T8 32w/EL	trof acr 1' wide	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	0.2	136	700	700
830	Green-Hills K8 School	Storage 235C	2	2L4' T8 32w/EL	troffer indirect	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	17	350	350
831	Green-Hills K8 School	Storage 235E	2	2L4' T8 32w/EL	trof acr 1' wide	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	17	700	700
832	Green-Hills K8 School	Storage 235F	2	2L4' T8 32w/EL	trof acr 1' wide	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	51	700	700
833	Green-Hills K8 School	Storage 235I	2	2L4' T8 32w/EL	trof acr 1' wide	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	34	350	350
834	Green-Hills K8 School	Hall 232	2	2L4' T5 HO/EL-8'	valance	3		117	0.4	NO RETRO	no change -specialized fixture		123	0.4			2,100	2,100
835	Green-Hills K8 School	Kitchen 234	2	3L4' T8 32w/EL	trof acr	28	28	88	2.5	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	28	54	1.5	1.0	1,621	1,680	1,680
836	Green-Hills K8 School	Kitchen 234	2	2x26W CF HARDWIRED/EL	can rec	18	18	54	1.0	10 WATT LED/KIT	can kit LED Spectrum	18	11	0.2	0.8	1,315	1,680	1,680
837	Green-Hills K8 School	Kitchen 234	2	3 WATT LED	range hood	6		3	0.0	NO RETRO	no change		3	0.0			2,400	2,400
838	Green-Hills K8 School	Office 234A	2	2L4' T8 32w/EL	troffer indirect	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	82	1,680	1,680
839	Green-Hills K8 School	Cafeteria 232	2	3x42W CF HARDWIRED/EL	decorative	24		129	3.1	NO RETRO	no change -specialized fixture		135	3.1			1,400	1,400
840	Green-Hills K8 School	Classroom 251	2	2L4' T8 32w/EL	troffer indirect	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	95	1,960	1,960
841	Green-Hills K8 School	Classroom 252	2	2L4' T8 32w/EL	troffer indirect	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	95	1,960	1,960
842	Green-Hills K8 School	Classroom 253	2	2L4' T8 32w/EL	troffer indirect	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	95	1,960	1,960
843	Green-Hills K8 School	Classroom 254	2	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
844	Green-Hills K8 School	Classroom 254	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
845	Green-Hills K8 School	Classroom 254	2	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	171	1,960	1,960
846	Green-Hills K8 School	Classroom 201	2	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
847	Green-Hills K8 School	Classroom 201	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
848	Green-Hills K8 School	Bath Men	2	1L4' T8 32w/EL	soffit	3	3	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	18	0.1	0.0	82	2,240	2,240
849	Green-Hills K8 School	Bath Men	2	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
850	Green-Hills K8 School	Bath Women	2	1L4' T8 32w/EL	soffit	3	3	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	18	0.1	0.0	82	2,240	2,240
851	Green-Hills K8 School	Bath Women	2	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
852	Green-Hills K8 School	Classroom 204	2	2L2' T8 17w/EL	troffer indirect	6	6	33	0.2	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	6	19	0.1	0.1	166	1,960	1,960
853	Green-Hills K8 School	Storage 206	2	2L4' T8 32w/EL	trof acr 1' wide	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
854	Green-Hills K8 School	Classroom 207	2	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
855	Green-Hills K8 School	Classroom 207	2	2L4' T8 32w/EL	indirect/direct dim	3		60	0.2	NO RETRO	no change -dimming		63	0.2			1,960	1,960
856	Green-Hills K8 School	Classroom 207	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
857	Green-Hills K8 School	Mechanical 207A	2	2L4' T8 32w/EL	trof acr 1' wide	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	0.1	73	500	350
858	Green-Hills K8 School	Bath Girls	2	2L4' T8 32w/EL-8'	soffit	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	109	2,240	2,240
859	Green-Hills K8 School	Bath Girls	2	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	27	2,240	2,240
860	Green-Hills K8 School	Bath Girls	2	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
861	Green-Hills K8 School	Bath Boys	2	2L4' T8 32w/EL-8'	soffit	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	109	2,240	2,240
862	Green-Hills K8 School	Bath Boys	2	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	27	2,240	2,240
863	Green-Hills K8 School	Bath Boys	2	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
864	Green-Hills K8 School	Classroom 209	2	4L4' T8 32w/EL-8'	indirect/direct dim	8		112	0.9	NO RETRO	no change -dimming		118	0.9			1,960	1,960
865	Green-Hills K8 School	Classroom 209	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
866	Green-Hills K8 School	Classroom 211	2	4L4' T8 32w/EL-8'	indirect/direct dim	8		112	0.9	NO RETRO	no change -dimming		118	0.9			1,960	1,960
867	Green-Hills K8 School	Classroom 211	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
868	Green-Hills K8 School	Classroom 212	2	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
869	Green-Hills K8 School	Classroom 212	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
870	Green-Hills K8 School	Classroom 213	2	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
871	Green-Hills K8 School	Classroom 213	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
872	Green-Hills K8 School	Classroom 214	2	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
873	Green-Hills K8 School	Classroom 214	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
874	Green-Hills K8 School	Classroom 215	2	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
875	Green-Hills K8 School	Classroom 215	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
876	Green-Hills K8 School	Classroom 216	2	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
877	Green-Hills K8 School	Classroom 216	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
878	Green-Hills K8 School	Classroom 217	2	4L4' T8 32w/EL-8'	indirect/direct dim	8		112	0.9	NO RETRO	no change -dimming		118	0.9			1,960	1,960
879	Green-Hills K8 School	Classroom 217	2	2L4' T8 32w/EL	indirect/direct dim	1		60	0.1	NO RETRO	no change -dimming		63	0.1			1,960	1,960
880	Green-Hills K8 School	Classroom 217	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
881	Green-Hills K8 School	Classroom 218	2	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
882	Green-Hills K8 School	Classroom 218	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
883	Green-Hills K8 School	Storage 218	2	2L4' T8 32w/EL	trof acr 1' wide	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	17	350	350
884	Green-Hills K8 School	Storage 230A	2	2L4' T8 32w/EL	trof acr 1' wide	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	17	350	350
885	Green-Hills K8 School	Bath Girls	2	2L4' T8 32w/EL-8'	soffit	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	109	2,240	2,240
886	Green-Hills K8 School	Bath Girls	2	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	27	2,240	2,240
887	Green-Hills K8 School	Bath Girls	2	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
888	Green-Hills K8 School	Bath Boys	2	2L4' T8 32w/EL-8'	soffit	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	109	2,240	2,240
889	Green-Hills K8 School	Bath Boys	2	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	27	2,240	2,240
890	Green-Hills K8 School	Bath Boys	2	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
891	Green-Hills K8 School	Classroom 221	2	4L4' T8 32w/EL-8'	indirect/direct dim	8		112	0.9	NO RETRO	no change -dimming		118	0.9			1,960	1,960
892	Green-Hills K8 School	Classroom 221	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
893	Green-Hills K8 School	Classroom 223	2	4L4' T8 32w/EL-8'	indirect/direct dim	8		112	0.9	NO RETRO	no change -dimming		118	0.9			1,960	1,960
894	Green-Hills K8 School	Classroom 223	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
895	Green-Hills K8 School	Classroom 224	2	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
896	Green-Hills K8 School	Classroom 224	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
897	Green-Hills K8 School	Classroom 225	2	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
898	Green-Hills K8 School	Classroom 225	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
899	Green-Hills K8 School	Classroom 226	2	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
900	Green-Hills K8 School	Classroom 226	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
901	Green-Hills K8 School	Classroom 227	2	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
902	Green-Hills K8 School	Classroom 227	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
903	Green-Hills K8 School	Classroom 228	2	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
904	Green-Hills K8 School	Classroom 228	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
905	Green-Hills K8 School	Classroom 229	2	4L4' T8 32w/EL-8'	indirect/direct dim	8		112	0.9	NO RETRO	no change -dimming		118	0.9			1,960	1,960
906	Green-Hills K8 School	Classroom 229	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
907	Green-Hills K8 School	Classroom 231	2	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
908	Green-Hills K8 School	Classroom 231	2	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
909	Green-Hills K8 School	Storage 230	2	2L4' T8 32w/EL	trof acr 1' wide	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	17	350	350
910	Green-Hills K8 School	Lounge 233	2	4L4' T8 32w/EL-8'	indirect/direct dim	4		112	0.4	NO RETRO	no change -dimming		118	0.4			1,890	1,890
911	Green-Hills K8 School	Lounge 233	2	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	164	1,890	1,890
912	Green-Hills K8 School	Hall 3Rd	3	2L4' T5 HO/EL-8'	valance	16		117	1.9	NO RETRO	no change -specialized fixture		123	1.9			2,100	2,100
913	Green-Hills K8 School	Hall 3Rd	3	1L4' T5 HO/EL	valance	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1			2,100	2,100
914	Green-Hills K8 School	Hall 3Rd	3	2L3' T5/EL-6'	valance	1		52	0.1	NO RETRO	no change -specialized fixture		55	0.1			2,100	2,100
915	Green-Hills K8 School	Hall 3Rd	3	2x26W CF HARDWIRED/EL	can rec	8	8	54	0.4	10 WATT LED/KIT	can kit LED Spectrum	8	11	0.1	0.3	731	2,100	2,100
916	Green-Hills K8 School	Classroom 309	3	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
917	Green-Hills K8 School	Classroom 309	3	2L4' T8 32w/EL	indirect/direct dim	3		60	0.2	NO RETRO	no change -dimming		63	0.2			1,960	1,960
918	Green-Hills K8 School	Classroom 309	3	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
919	Green-Hills K8 School	Classroom 308	3	4L4' T8 32w/EL-8'	indirect/direct dim	6		112	0.7	NO RETRO	no change -dimming		118	0.7			1,960	1,960
920	Green-Hills K8 School	Classroom 308	3	2L4' T8 32w/EL	indirect/direct dim	3		60	0.2	NO RETRO	no change -dimming		63	0.2			1,960	1,960
921	Green-Hills K8 School	Classroom 308	3	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
922	Green-Hills K8 School	Storage 310	3	2L4' T8 32w/EL	troffer indirect	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
923	Green-Hills K8 School	Bath Staff	3	2L4' T8 32w/EL-8'	soffit	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
924	Green-Hills K8 School	Classroom 306	3	4L4' T8 32w/EL-8'	indirect/direct dim	8		112	0.9	NO RETRO	no change -dimming		118	0.9			1,960	1,960
925	Green-Hills K8 School	Classroom 306	3	2L4' T8 32w/EL	indirect/direct dim	3		60	0.2	NO RETRO	no change -dimming		63	0.2			1,960	1,960
926	Green-Hills K8 School	Classroom 306	3	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
927	Green-Hills K8 School	Storage 305	3	2L4' T8 32w/EL	troffer indirect	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	17	350	350
928	Green-Hills K8 School	Bath Girls	3	2L4' T8 32w/EL-8'	soffit	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
929	Green-Hills K8 School	Bath Girls	3	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	27	2,240	2,240
930	Green-Hills K8 School	Bath Girls	3	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
931	Green-Hills K8 School	Classroom 303	3	4L4' T8 32w/EL-8'	indirect/direct dim	4		112	0.4	NO RETRO	no change -dimming		118	0.4			1,960	1,960
932	Green-Hills K8 School	Classroom 303	3	2L4' T8 32w/EL	indirect/direct dim	2		60	0.1	NO RETRO	no change -dimming		63	0.1			1,960	1,960
933	Green-Hills K8 School	Classroom 303	3	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
934	Green-Hills K8 School	Classroom 302	3	4L4' T8 32w/EL-8'	indirect/direct dim	4		112	0.4	NO RETRO	no change -dimming		118	0.4			1,960	1,960
935	Green-Hills K8 School	Classroom 302	3	2L4' T8 32w/EL	indirect/direct dim	2		60	0.1	NO RETRO	no change -dimming		63	0.1			1,960	1,960
936	Green-Hills K8 School	Classroom 302	3	1L2' 24W T5HO/EL	wallwash	2		29	0.1	NO RETRO	no change -specialized fixture		30	0.1			1,960	1,960
937	Green-Hills K8 School	Storage 302A	3	2L4' T8 32w/EL	troffer indirect	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
938	Green-Hills K8 School	Bath Boys	3	1L4' T8 32w/EL	soffit	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	54	2,240	2,240
939	Green-Hills K8 School	Bath Boys	3	1L2' T8 17w/EL	soffit	1	1	17	0.0	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	9	0.0	0.0	17	2,240	2,240
940	Green-Hills K8 School	Bath Boys	3	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	97	2,240	2,240
944	Chippens Hill MS	Classroom 311	3	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
945	Chippens Hill MS	Classroom 312	3	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
946	Chippens Hill MS	Classroom 313	3	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
947	Chippens Hill MS	Classroom Resource	3	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	0.2	578	2,700	1,890
948	Chippens Hill MS	Storage Science	3	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	31	500	350
949	Chippens Hill MS	Storage Electric	3	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	16	500	350
950	Chippens Hill MS	Office Faculty Workroom	3	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	298	2,400	1,680
951	Chippens Hill MS	Classroom 314	3	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
952	Chippens Hill MS	Classroom 315	3	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
953	Chippens Hill MS	Hall 311-315	3	2L4' T8 32w/EL	trof para 1' wide	15	15	60	0.9	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	15	36	0.5	0.4	1,050	3,200	2,240
954	Chippens Hill MS	Hall 311-315	3	2x13W CF HARDWIRED	can rec 8"	9	9	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	9	11	0.1	0.2	505	3,200	2,240
955	Chippens Hill MS	Hall To Stair 4	3	2L4' T8 32w/EL	trof para 1' wide	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	280	3,200	3,200
956	Chippens Hill MS	Hall To Stair 4	3	2x13W CF HARDWIRED	can rec 8"	8	8	30	0.2	10 WATT LED/KIT	can kit LED Spectrum	8	11	0.1	0.2	449	3,200	3,200
957	Chippens Hill MS	Hall Elevator	3	2L4' T8 32w/EL	trof para 1' wide	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	210	3,200	3,200
958	Chippens Hill MS	Bath Boys (2)	3	3L4' T8 32w/EL	industrial	24	24	88	2.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	24	54	1.3	0.8	2,084	2,800	1,960
959	Chippens Hill MS	Classroom 320	3	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
960	Chippens Hill MS	Classroom 321	3	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
961	Chippens Hill MS	Office Faculty Workroom	3	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	0.2	514	2,400	1,680
962	Chippens Hill MS	Office Multi Purpose Room	3	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	298	2,400	1,680
963	Chippens Hill MS	Classroom 322	3	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
964	Chippens Hill MS	Classroom 323	3	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
965	Chippens Hill MS	Classroom 324	3	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	314	1,288	1,288
966	Chippens Hill MS	Classroom 325	3	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
967	Chippens Hill MS	Storage Custodian	3	3L4' T8 32w/EL	industrial cage	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	16	500	350
968	Chippens Hill MS	Storage Science	3	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	31	500	350
969	Chippens Hill MS	Storage Janitor Supplies	3	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	16	500	350
970	Chippens Hill MS	Bath Men (2)	3	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	347	2,800	1,960
971	Chippens Hill MS	Hall 320-325	3	2L4' T8 32w/EL	trof parabolic	18	18	60	1.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	18	36	0.6	0.4	1,260	3,200	2,240
972	Chippens Hill MS	Hall 320-325	3	2x13W CF HARDWIRED	can rec 8"	14	14	30	0.4	10 WATT LED/KIT	can kit LED Spectrum	14	11	0.1	0.3	786	3,200	3,200
973	Chippens Hill MS	Hall To Stair 6	3	2L4' T8 32w/EL	trof parabolic	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	280	3,200	3,200
974	Chippens Hill MS	Hall To Stair 6	3	2x13W CF HARDWIRED	can rec 8"	10	10	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	10	11	0.1	0.2	562	3,200	3,200
975	Chippens Hill MS	Bath Boys (2)	3	3L4' T8 32w/EL	industrial	24	24	88	2.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	24	54	1.3	0.8	2,084	2,800	1,960
976	Chippens Hill MS	Classroom 331	3	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
977	Chippens Hill MS	Classroom 332	3	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	344	1,411	1,411
978	Chippens Hill MS	Classroom 333	3	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
979	Chippens Hill MS	Classroom 334	3	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
980	Chippens Hill MS	Classroom 335	3	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
981	Chippens Hill MS	Office Resource Room	3	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	298	2,400	1,680
982	Chippens Hill MS	Storage Electric	3	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	16	500	350
983	Chippens Hill MS	Storage Science	3	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	31	500	350
984	Chippens Hill MS	Office Faculty Work Room	3	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	0.2	514	2,400	1,680
985	Chippens Hill MS	Hall 331-335	3	2L4' T8 32w/EL	trof parabolic	15	15	60	0.9	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	15	36	0.5	0.4	1,050	3,200	2,240
986	Chippens Hill MS	Hall 331-335	3	2x13W CF HARDWIRED	can rec 8"	9	9	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	9	11	0.1	0.2	505	3,200	2,240
987	Chippens Hill MS	Stair 2,7 (2)	stair	2L4' T8 32w/EL	trof parabolic	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	0.1	420	3,200	3,200
988	Chippens Hill MS	Stair 2,7 (2)	stair	3L4' T8 32w/EL	indirect/direct	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	198	3,200	3,200
989	Chippens Hill MS	Stair 2,7 (2)	stair	2L4' T8 32w/EL	strip cage	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	0.1	420	3,200	3,200
990	Chippens Hill MS	Classroom 211	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
991	Chippens Hill MS	Classroom 212	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
992	Chippens Hill MS	Classroom 213	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
993	Chippens Hill MS	Classroom 214	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
994	Chippens Hill MS	Classroom 215	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
995	Chippens Hill MS	Office Resource Room	2	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	0.2	514	2,400	1,680
996	Chippens Hill MS	Storage Science	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	31	500	350
997	Chippens Hill MS	Storage Ladder	2	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	16	500	350
998	Chippens Hill MS	Office Faculty Workroom	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	298	2,400	1,680
999	Chippens Hill MS	Bath Boys (2)	2	3L4' T8 32w/EL	industrial	24	24	88	2.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	24	54	1.3	0.8	2,084	2,800	1,960
1000	Chippens Hill MS	Hall 211-215	2	2L4' T8 32w/EL	trof parabolic	15	15	60	0.9	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	15	36	0.5	0.4	1,050	3,200	2,240
1001	Chippens Hill MS	Hall 211-215	2	2x13W CF HARDWIRED	can rec 8"	9	9	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	9	11	0.1	0.2	505	3,200	3,200
1002	Chippens Hill MS	Hall To Stair 4	2	2L4' T8 32w/EL	trof parabolic	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	280	3,200	2,240
1003	Chippens Hill MS	Hall To Stair 4	2	2x13W CF HARDWIRED	can rec 8"	10	10	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	10	11	0.1	0.2	562	3,200	2,240
1004	Chippens Hill MS	Hall Elevator Lobby	2	2x13W CF HARDWIRED	can rec 8"	6	6	30	0.2	10 WATT LED/KIT	can kit LED Spectrum	6	11	0.1	0.1	337	3,200	2,240
1005	Chippens Hill MS	Hall Elev-Stair 3	2	2L4' T8 32w/EL	trof parabolic	5	5	60	0.3	44 WATT LED/KIT	trof kit LED	5	46	0.2	0.1	199	3,200	3,200
1006	Chippens Hill MS	Classroom 220	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
1007	Chippens Hill MS	Classroom 221	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
1008	Chippens Hill MS	Classroom 222	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
1009	Chippens Hill MS	Classroom 223	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
1010	Chippens Hill MS	Classroom 224	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
1011	Chippens Hill MS	Classroom 225	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	269	1,104	1,104
1012	Chippens Hill MS	Office Faculty Work Room	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	298	2,400	1,680
1013	Chippens Hill MS	Office Multi Purpose	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	298	2,400	1,680
1014	Chippens Hill MS	Storage Custodian	2	3L4' T8 32w/EL	industrial cage	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	16	500	350
1015	Chippens Hill MS	Storage Science	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	31	500	350
1016	Chippens Hill MS	Office Resource	2	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	0.2	514	2,400	1,680
1017	Chippens Hill MS	Storage File	2	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	16	500	350
1018	Chippens Hill MS	Hall 220-225	2	2L4' T8 32w/EL	trof para 1' wide	18	18	60	1.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	18	36	0.6	0.4	1,260	3,200	2,240
1019	Chippens Hill MS	Hall 220-225	2	2x13W CF HARDWIRED	can rec 6"	14	14	30	0.4	10 WATT LED/KIT	can kit LED Spectrum	14	11	0.1	0.3	786	3,200	2,240
1020	Chippens Hill MS	Hall To Stair 6	2	2L4' T8 32w/EL	trof para 1' wide	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	280	3,200	3,200
1021	Chippens Hill MS	Hall To Stair 6	2	2x13W CF HARDWIRED	can rec 6"	10	10	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	10	11	0.1	0.2	562	3,200	3,200
1022	Chippens Hill MS	Bath Boys (2)	2	3L4' T8 32w/EL	industrial	24	24	88	2.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	24	54	1.3	0.8	2,084	2,800	1,960
1023	Chippens Hill MS	Classroom 231	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
1024	Chippens Hill MS	Classroom 232	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
1025	Chippens Hill MS	Classroom 233	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	254	1,043	1,043
1026	Chippens Hill MS	Classroom 234	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
1027	Chippens Hill MS	Classroom 235	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	284	1,166	1,166
1028	Chippens Hill MS	Storage Science	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	31	500	350
1029	Chippens Hill MS	Office Faculty Room	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	0.2	386	2,400	1,680
1030	Chippens Hill MS	Hall 231-235	2	2L4' T8 32w/EL	trof para 1' wide	15	15	60	0.9	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	15	36	0.5	0.4	1,050	3,200	2,240
1031	Chippens Hill MS	Hall 231-235	2	2x13W CF HARDWIRED	can rec 6"	10	10	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	10	11	0.1	0.2	562	3,200	2,240
1032	Chippens Hill MS	Auditorium Main	2	120W INCANDESCENT	cylinder surf mt.	51	51	120	6.1	25 WATT LED/KIT	can kit LED Spectrum	51	26	1.3	4.8	6,885	1,600	1,600
1033	Chippens Hill MS	Stage Aud	2	3L4' T8 32w/EL	wrap wide	30	30	88	2.6	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	30	54	1.6	1.0	1,488	1,600	1,600
1034	Chippens Hill MS	Hall Stage	2	2L4' T8 32w/EL	trof parabolic	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	140	3,200	3,200
1035	Chippens Hill MS	Storage Stage	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	31	500	350
1036	Chippens Hill MS	Lobby Aud	2	100W MERCURY VAPOR	can rec 8"	19	19	120	2.3	25 WATT LED/KIT	can kit LED Spectrum	19	26	0.5	1.8	5,130	3,200	2,240
1037	Chippens Hill MS	Lobby Aud	2	2x13W CF HARDWIRED	can rec 8"	8	8	30	0.2	10 WATT LED/KIT	can kit LED Spectrum	8	11	0.1	0.2	449	3,200	2,240
1038	Chippens Hill MS	Storage Mechanical Room	2	3L4' T8 32w/EL	industrial cage	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	16	500	350
1039	Chippens Hill MS	Bath Woman	2	3L4' T8 32w/EL	industrial	10	10	88	0.9	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	10	54	0.5	0.3	675	1,960	1,960

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
1040	Chippens Hill MS	Bath Men	2	3L4' T8 32w/EL	industrial	7	7	88	0.6	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	7	54	0.4	0.2	473	1,960	1,960
1041	Chippens Hill MS	Lobby Main	2	3L4' T8 32w/EL	trof acr	6	6	88	0.5	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	54	0.3	0.2	595	3,200	3,200
1042	Chippens Hill MS	Lobby Main	2	4L4' T8 32w/EL-8'	indirect	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	117	3,200	3,200
1043	Chippens Hill MS	Lobby Main	2	2L4' T8 32w/EL-8'	drum	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	70	3,200	3,200
1044	Chippens Hill MS	Lobby Main	2	2x13W CF HARDWIRED	can rec 8"	2	2	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.0	112	3,200	3,200
1045	Chippens Hill MS	Office Open Guidance	2	3L4' T8 32w/EL	trof acr	6	6	88	0.5	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	54	0.3	0.2	512	2,750	1,925
1046	Chippens Hill MS	Hall Guidance	2	2x13W CF HARDWIRED	can rec 8"	6	6	30	0.2	10 WATT LED/KIT	can kit LED Spectrum	6	11	0.1	0.1	337	3,200	3,200
1047	Chippens Hill MS	Office Kids In The Middle	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	149	2,400	1,680
1048	Chippens Hill MS	Office A	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	149	2,400	1,680
1049	Chippens Hill MS	Office B	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	149	2,400	1,680
1050	Chippens Hill MS	Office C	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	149	2,400	1,680
1051	Chippens Hill MS	Office Social Worker	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	149	2,400	1,680
1052	Chippens Hill MS	Office Psych	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	149	2,400	1,680
1053	Chippens Hill MS	Office File	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	149	2,400	1,680
1054	Chippens Hill MS	Conference Guidance	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	298	2,400	1,680
1055	Chippens Hill MS	Foyer Main	2	2x13W CF HARDWIRED	can rec 8"	4	4	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	4	11	0.0	0.1	225	3,200	3,200
1056	Chippens Hill MS	Office Open Main	2	3L4' T8 32w/EL	trof acr	9	9	88	0.8	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	54	0.5	0.3	684	2,453	1,717
1057	Chippens Hill MS	Hall Main Office	2	2x26W CF HARDWIRED/EL	can rec 6"	12	12	54	0.6	15 WATT LED/KIT	can kit LED Spectrum	12	16	0.2	0.5	1,322	3,200	2,240
1058	Chippens Hill MS	Office Asst Principal (2)	2	3L4' T8 32w/EL	trof acr	8	8	88	0.7	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	54	0.4	0.3	595	2,400	1,680
1059	Chippens Hill MS	Office Principal	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	298	2,400	1,680
1060	Chippens Hill MS	Office Open Workroom	2	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	6	53	0.3	0.4	884	2,750	1,925
1061	Chippens Hill MS	Hall Main Lobby - Nurse	2	4L4' T8 32w/EL-8'	indirect	5	5	112	0.6	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	71	0.4	0.2	585	3,200	3,200
1062	Chippens Hill MS	Hall Main Lobby - Nurse	2	2L4' T8 32w/EL-8'	drum	5	5	60	0.3	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	36	0.2	0.1	350	3,200	3,200
1063	Chippens Hill MS	Hall Main Lobby - Nurse	2	2x13W CF HARDWIRED	can rec 8"	4	4	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	4	11	0.0	0.1	225	3,200	3,200
1064	Chippens Hill MS	Hall Main Lobby - Nurse	2	2x26W CF HARDWIRED/EL	can rec 8"	5	5	54	0.3	15 WATT LED/KIT	can kit LED Spectrum	5	16	0.1	0.2	551	3,200	3,200
1065	Chippens Hill MS	Classroom Music	2	4L4' T8 32w/EL-8'	trof para 1' wide	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	691	1,890	1,890
1066	Chippens Hill MS	Classroom Music	2	2L4' T8 32w/EL	trof para 1' wide	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	46	1,890	1,890
1067	Chippens Hill MS	Storage Music	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	31	500	350
1068	Chippens Hill MS	Office Music	2	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	74	2,400	1,680
1069	Chippens Hill MS	Storage Percussion	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	62	1,000	700
1070	Chippens Hill MS	Storage Practice A	2	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	16	500	350
1071	Chippens Hill MS	Classroom Choral Room	2	4L4' T8 32w/EL-8'	trof parabolic	8	8	112	0.9	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	71	0.6	0.3	614	1,890	1,890
1072	Chippens Hill MS	Hall Music	2	2x13W CF HARDWIRED	can rec 8"	3	3	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	0.1	168	3,200	2,240
1073	Chippens Hill MS	Office Open Nurse	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	341	2,750	1,925
1074	Chippens Hill MS	Office Open Nurse	2	3L4' T8 32w/EL	trof acr	3	3	88	0.3	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	54	0.2	0.1	256	2,750	2,750
1075	Chippens Hill MS	Office Nurse	2	3L4' T8 32w/EL	trof acr	3	3	88	0.3	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	54	0.2	0.1	223	2,400	1,680
1076	Chippens Hill MS	Bath Nurse	2	2L4' T8 32w/EL	trof para 1' wide	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	61	2,800	1,960
1077	Chippens Hill MS	Hall Stair 5-Stair 3	2	4L4' T8 32w/EL-8'	indirect	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	702	3,200	3,200
1078	Chippens Hill MS	Hall Stair 5-Stair 3	2	2L4' T8 32w/EL-8'	drum	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	0.1	420	3,200	3,200
1079	Chippens Hill MS	Hall Stair 5-Stair 3	2	2x13W CF HARDWIRED	can rec 8"	12	12	30	0.4	10 WATT LED/KIT	can kit LED Spectrum	12	11	0.1	0.2	674	3,200	3,200
1080	Chippens Hill MS	Hall Stair 5-Stair 3	2	2x26W CF HARDWIRED/EL	can rec 8"	6	6	54	0.3	15 WATT LED/KIT	can kit LED Spectrum	6	16	0.1	0.2	661	3,200	3,200
1081	Chippens Hill MS	Classroom Art C	2	4L4' T8 32w/EL-8'	indirect/direct	8	8	112	0.9	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	71	0.6	0.3	614	1,890	1,890
1082	Chippens Hill MS	Storage Art C	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	62	1,000	700
1083	Chippens Hill MS	Storage Kiln	2	3L4' T8 32w/EL	trof minicube	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	16	500	350
1084	Chippens Hill MS	Classroom Art B	2	4L4' T8 32w/EL-8'	indirect/direct	8	8	112	0.9	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	71	0.6	0.3	614	1,890	1,890
1085	Chippens Hill MS	Classroom Art B	2	2L4' T8 32w/EL	indirect/direct	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	59	2,700	1,890
1086	Chippens Hill MS	Classroom Art B	2	2L4' T8 32w/EL-8'	indirect/direct	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	59	2,700	1,890
1087	Chippens Hill MS	Storage Art B	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	62	1,000	700
1088	Chippens Hill MS	Storage Kiln	2	3L4' T8 32w/EL	trof minicube	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	16	500	350
1089	Chippens Hill MS	Classroom Art A	2	4L4' T8 32w/EL-8'	indirect/direct	8	8	112	0.9	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	71	0.6	0.3	614	1,890	1,890
1090	Chippens Hill MS	Classroom Art A	2	2L4' T8 32w/EL	indirect/direct	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	59	2,700	1,890
1091	Chippens Hill MS	Classroom Art A	2	2L4' T8 32w/EL	indirect/direct	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	59	2,700	1,890
1092	Chippens Hill MS	Storage Art A	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	62	1,000	700
1093	Chippens Hill MS	Storage Near Art A	2	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	31	1,000	700
1094	Chippens Hill MS	Classroom 205	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
1095	Chippens Hill MS	Hall Elev-Stair 3	2	2L4' T8 32w/EL	trof parabolic	5	5	60	0.3	44 WATT LED/KIT	trof kit LED	5	46	0.2	0.1	199	3,200	3,200
1096	Chippens Hill MS	Storage Computer	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	107	1,000	700
1097	Chippens Hill MS	Storage Drama	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	54	500	350
1098	Chippens Hill MS	Hall Drama	2	2x13W CF HARDWIRED	can rec 8"	10	10	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	10	11	0.1	0.2	562	3,200	3,200
1099	Chippens Hill MS	Hall Drama	2	2L4' T8 32w/EL	trof para 1' wide	19	19	60	1.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	19	36	0.7	0.5	1,330	3,200	3,200
1100	Chippens Hill MS	Lobby Library	2	2x13W CF HARDWIRED	can rec 8"	6	6	30	0.2	10 WATT LED/KIT	can kit LED Spectrum	6	11	0.1	0.1	337	3,200	3,200
1101	Chippens Hill MS	Lobby Library	2	2x13W CF HARDWIRED	can rec 8"	2	2	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.0	112	3,200	3,200
1102	Chippens Hill MS	Library Main	2	400W METAL HALIDE	indirect	8	8	455	3.6	137 WATT LED/NEW	new LED flood	8	144	1.2	2.5	4,929	2,200	2,200
1103	Chippens Hill MS	Library Main	2	2x13W CF HARDWIRED	can rec 8"	71	71	30	2.1	10 WATT LED/KIT	can kit LED Spectrum	71	11	0.7	1.4	2,741	2,200	2,200
1104	Chippens Hill MS	Library Main	2	4L4' T8 32w/EL-8'	indirect/direct	18	18	112	2.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	18	71	1.3	0.7	1,447	2,200	2,200
1105	Chippens Hill MS	Lab B Food	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
1106	Chippens Hill MS	Classroom Capitani	2	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
1107	Chippens Hill MS	Storage Capitani	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	62	1,000	700
1108	Chippens Hill MS	Storage Av	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	107	1,000	700
1109	Chippens Hill MS	Storage Av	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	124	1,000	700
1110	Chippens Hill MS	Office Home Ec	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	298	2,400	1,680
1111	Chippens Hill MS	Lab Sewing B	2	4L4' T8 32w/EL-8'	indirect/direct	8	8	112	0.9	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	71	0.6	0.3	614	1,890	1,890
1112	Chippens Hill MS	Lab Computer B	2	4L4' T8 32w/EL-8'	indirect	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
1113	Chippens Hill MS	Lab Computer A	2	4L4' T8 32w/EL-8'	indirect	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
1114	Chippens Hill MS	Lab Sewing	2	4L4' T8 32w/EL-8'	indirect/direct	8	8	112	0.9	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	71	0.6	0.3	614	1,890	1,890
1115	Chippens Hill MS	Stair 1	stair	3L4' T8 32w/EL	indirect/direct	12	12	88	1.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	54	0.6	0.4	1,191	3,200	2,240
1116	Chippens Hill MS	Stair 1	stair	4L4' T8 32w/EL-8'	strip cage	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	117	3,200	3,200
1117	Chippens Hill MS	Hall Stair 1-Caf	1	2L4' T8 32w/EL	trof para 1' wide	19	19	60	1.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	19	36	0.7	0.5	1,330	3,200	3,200
1118	Chippens Hill MS	Hall Stair 1-Caf	1	2x13W CF HARDWIRED	can rec 8"	9	9	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	9	11	0.1	0.2	505	3,200	3,200
1119	Chippens Hill MS	Classroom Computer	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	230	1,890	1,890
1120	Chippens Hill MS	Classroom Computer	1	2L4' T8 32w/EL	indirect/direct	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	92	1,890	1,890
1121	Chippens Hill MS	Exercise Life Skills A	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	508	2,086	2,086
1122	Chippens Hill MS	Exercise Life Skills B	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	508	2,086	2,086
1123	Chippens Hill MS	Hall Maintenance	1	4L4' T8 32w/EL	industrial cage	10	10	112	1.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	10	71	0.7	0.4	1,169	3,200	3,200
1124	Chippens Hill MS	Storage Garage	1	3L4' T8 32w/EL	industrial cage	6	6	88	0.5	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	54	0.3	0.2	186	1,000	700
1125	Chippens Hill MS	Mechanical Boiler	1	3L4' T8 32w/EL	industrial cage	11	11	88	1.0	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	11	54	0.6	0.4	171	500	500
1126	Chippens Hill MS	Storage Electric	1	3L4' T8 32w/EL	industrial cage	10	10	88	0.9	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	10	54	0.5	0.3	310	1,000	700
1127	Chippens Hill MS	Office Bldg Super	1	4L4' T8 32w/EL	industrial cage	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	88	2,400	1,680
1128	Chippens Hill MS	Locker Men/Women (2)	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	174	2,800	1,960
1129	Chippens Hill MS	Locker Men/Women (2)	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	174	2,800	1,960
1130	Chippens Hill MS	Locker Men/Women (2)	1	22W & 32W CIRCLELINE HARDWIRED	drum	4	4	58	0.2	16 WATT LED/NEW	new LED drum	4	17	0.1	0.2	415	2,800	1,960
1131	Chippens Hill MS	Hall Locker Room	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	198	3,200	2,240
1132	Chippens Hill MS	Kitchen Disposal	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	105	1,700	1,190
1133	Chippens Hill MS	Kitchen Main	1	3L4' T8 32w/EL	trof acr	26	26	88	2.3	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	26	54	1.4	0.9	1,370	1,700	1,190
1134	Chippens Hill MS	Kitchen Main	1	2x26W CF HARDWIRED/EL	can rec 8"	19	19	54	1.0	15 WATT LED/KIT	can kit LED Spectrum	19	16	0.3	0.7	1,112	1,700	1,190
1135	Chippens Hill MS	Kitchen Hood	1	60W INCANDESCENT	range hood	12	12	60	0.7	8 WATT LED SI	screw in LED Alamp	12	8	0.1	0.6	947	1,700	1,700
1136	Chippens Hill MS	Office Main Kitchen	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	149	2,400	1,680
1137	Chippens Hill MS	Storage Main Kitchen	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	62	1,000	700
1138	Chippens Hill MS	Storage Cans	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	62	1,000	700
1139	Chippens Hill MS	Storage Garage	1	3L4' T8 32w/EL	industrial cage	6	6	88	0.5	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	54	0.3	0.2	186	1,000	700
1140	Chippens Hill MS	Storage Can Wash	1	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	31	1,000	700
1141	Chippens Hill MS	Freezer Kitchen (2)	1	60W INCANDESCENT	jar	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	93	1,000	1,000
1142	Chippens Hill MS	Cafeteria Main (2)	1	4L4' T8 32w/EL-8'	indirect/direct	70	70	112	7.8	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	70	71	5.0	2.8	4,860	1,900	1,900
1143	Chippens Hill MS	Cafeteria Main (2)	1	2L4' T8 32w/EL	indirect/direct	66	66	60	4.0	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	66	36	2.4	1.6	2,742	1,900	1,900
1144	Chippens Hill MS	Bath Men (2)	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	347	2,800	1,960
1145	Chippens Hill MS	Lounge Faculty	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
1146	Chippens Hill MS	Hall Gym-Caf	1	2L4' T8 32w/EL	trof para 1' wide	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	0.2	560	3,200	2,240
1147	Chippens Hill MS	Gym Main	1	4L4' T5 HO/EL	high bay	74	74	234	17.3	98 WATT LED/NEW	new LED hibay wg	74	103	7.6	9.7	26,019	2,980	2,086
1148	Chippens Hill MS	Storage Janitor	1	3L4' T8 32w/EL	industrial cage	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	16	500	350
1149	Chippens Hill MS	Storage Balls	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	54	500	350
1150	Chippens Hill MS	Storage Elevator	1	3L4' T8 32w/EL	industrial cage	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	16	500	350
1151	Chippens Hill MS	Hall Gym-Stair 5	1	2L4' T8 32w/EL	trof para 1' wide	19	19	60	1.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	19	36	0.7	0.5	1,330	3,200	2,240
1152	Chippens Hill MS	Hall Gym-Stair 5	1	2x13W CF HARDWIRED	can rec 8"	10	10	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	10	11	0.1	0.2	562	3,200	2,240
1153	Chippens Hill MS	Classroom Tech A	1	4L4' T8 32w/EL-8'	indirect/direct	12	12	112	1.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	71	0.9	0.5	921	1,890	1,890
1154	Chippens Hill MS	Storage Tech A	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	124	1,000	700
1155	Chippens Hill MS	Storage Tech A	1	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	16	500	350
1156	Chippens Hill MS	Storage Custodian	1	3L4' T8 32w/EL	industrial cage	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	16	500	350
1157	Chippens Hill MS	Classroom Tech B	1	3L4' T8 32w/EL	trof acr	24	24	88	2.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	24	54	1.3	0.8	1,563	1,890	1,890
1158	Chippens Hill MS	Storage Tech B	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	124	1,000	700
1159	Chippens Hill MS	Storage Tech B	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	31	500	350
1160	Chippens Hill MS	Classroom Tech C	1	3L4' T8 32w/EL	trof acr	27	27	88	2.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	27	54	1.4	0.9	1,758	1,890	1,890
1161	Chippens Hill MS	Hall Display	1	2x13W CF HARDWIRED	can rec 8"	6	6	30	0.2	10 WATT LED/KIT	can kit LED Spectrum	6	11	0.1	0.1	337	3,200	3,200
1162	Chippens Hill MS	Hall Boys Locker-Girls Locker	1	2L4' T8 32w/EL	trof para 1' wide	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	0.2	560	3,200	3,200
1163	Chippens Hill MS	Hall Boys Locker-Girls Locker	1	2x13W CF HARDWIRED	can rec 8"	6	6	30	0.2	10 WATT LED/KIT	can kit LED Spectrum	6	11	0.1	0.1	337	3,200	2,240
1164	Chippens Hill MS	Locker Boys (2)	1	3L4' T8 32w/EL	trof acr	36	36	88	3.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	36	54	1.9	1.2	3,125	2,800	1,960
1165	Chippens Hill MS	Locker Boys (2)	1	22W & 32W CIRCLELINE HARDWIRED	drum	14	14	58	0.8	16 WATT LED/NEW	new LED drum	14	17	0.2	0.6	1,454	2,800	1,960
1166	Chippens Hill MS	Locker Boys (2)	1	22W & 32W CIRCLELINE HARDWIRED	drum	8	8	58	0.5	16 WATT LED/NEW	new LED drum	8	17	0.1	0.3	831	2,800	2,800
1167	Chippens Hill MS	Locker Boys (2)	1	2x13W CF HARDWIRED	square recessed	2	2	30	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.0	67	2,800	1,960
1168	Chippens Hill MS	Locker Boys (2)	1	2x13W CF HARDWIRED	can rec 8"	10	10	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	10	11	0.1	0.2	491	2,800	1,960
1169	Chippens Hill MS	Storage Locker (2)	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	124	1,000	700
1170	Chippens Hill MS	Office Trainer (2)	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	298	2,400	1,680
1171	Chippens Hill MS	Bath Trainer (2)	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	174	2,800	1,960
1172	Chippens Hill MS	Bath Trainer (2)	1	22W & 32W CIRCLELINE HARDWIRED	drum	2	2	58	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.1	208	2,800	1,960
1173	Chippens Hill MS	Office Pe (2)	1	3L4' T8 32w/EL	trof acr	6	6	88	0.5	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	54	0.3	0.2	446	2,400	1,680
1174	Chippens Hill MS	Classroom 135	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
1175	Chippens Hill MS	Classroom 134	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
1176	Chippens Hill MS	Classroom 133	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	299	1,227	1,227
1177	Chippens Hill MS	Classroom 132	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
1178	Chippens Hill MS	Classroom 131	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
1179	Chippens Hill MS	Office Faculty Work Room	1	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	0.2	386	2,400	1,680
1180	Chippens Hill MS	Storage Science	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	31	500	350
1181	Chippens Hill MS	Storage Band	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	0.1	27	500	350
1182	Chippens Hill MS	Office Resource	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	298	2,400	1,680
1183	Chippens Hill MS	Hall 135-131	1	2L4' T8 32w/EL	trof para 1' wide	15	15	60	0.9	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	15	36	0.5	0.4	1,050	3,200	2,240
1184	Chippens Hill MS	Hall 135-131	1	2x13W CF HARDWIRED	can rec 8"	9	9	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	9	11	0.1	0.2	505	3,200	2,240
1185	Chippens Hill MS	Hall Stair 6-B	1	2L4' T8 32w/EL	trof para 1' wide	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	210	3,200	2,240

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
1186	Chippens Hill MS	Hall Stair 6-B	1	2x13W CF HARDWIRED	can rec 8"	10	10	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	10	11	0.1	0.2	562	3,200	2,240
1187	Chippens Hill MS	Bath Boys (2)	1	3L4' T8 32w/EL	industrial	24	24	88	2.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	24	54	1.3	0.8	1,621	1,960	1,960
1188	Chippens Hill MS	Stair 6	stair	2L4' T8 32w/EL	trof para 1' wide	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	0.1	420	3,200	3,200
1189	Chippens Hill MS	Stair 6 (2)	stair	6L4' T8 32w/EL-12'	indirect/direct	4	4	180	0.7	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	107	0.4	0.3	840	3,200	2,240
1190	Chippens Hill MS	Stair 6 (2)	stair	4L4' T8 32w/EL-8'	indirect/direct	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.2	468	3,200	2,240
1191	Chippens Hill MS	Stair 6	stair	4L4' T8 32w/EL-8'	strip cage	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	234	3,200	2,240
1192	Chippens Hill MS	Classroom 125	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
1193	Chippens Hill MS	Classroom 124	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
1194	Chippens Hill MS	Classroom 123	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	329	1,350	1,350
1195	Chippens Hill MS	Classroom 122	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	359	1,473	1,473
1196	Chippens Hill MS	Classroom 121	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
1197	Chippens Hill MS	Classroom 120	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
1198	Chippens Hill MS	Hall 125-120	1	2L4' T8 32w/EL	trof para 1' wide	18	18	60	1.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	18	36	0.6	0.4	1,260	3,200	2,240
1199	Chippens Hill MS	Storage Janitor	1	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	16	500	350
1200	Chippens Hill MS	Storage Science	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	31	500	350
1201	Chippens Hill MS	Storage Custodian	1	3L4' T8 32w/EL	industrial cage	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	16	500	350
1202	Chippens Hill MS	Office Multipurpose	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	298	2,400	1,680
1203	Chippens Hill MS	Office Faculty Workroom	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	298	2,400	1,680
1204	Chippens Hill MS	Hall Stair 4-B	1	3L4' T8 32w/EL	trof acr	3	3	88	0.3	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	54	0.2	0.1	298	3,200	3,200
1205	Chippens Hill MS	Hall Stair 4-B	1	2L4' T8 32w/EL	trof para 1' wide	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	210	3,200	2,240
1206	Chippens Hill MS	Hall Stair 4-B	1	2x13W CF HARDWIRED	can rec 8"	10	10	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	10	11	0.1	0.2	562	3,200	2,240
1207	Chippens Hill MS	Bath Boys	1	3L4' T8 32w/EL	industrial	12	12	88	1.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	54	0.6	0.4	810	1,960	1,960
1208	Chippens Hill MS	Stair 4	stair	2L4' T8 32w/EL	trof para 1' wide	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	0.1	420	3,200	3,200
1209	Chippens Hill MS	Stair 4	stair	6L4' T8 32w/EL-12'	indirect/direct	2	2	180	0.4	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	107	0.2	0.1	420	3,200	2,240
1210	Chippens Hill MS	Stair 4	stair	4L4' T8 32w/EL-8'	indirect/direct	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	234	3,200	2,240
1211	Chippens Hill MS	Stair 4	stair	4L4' T8 32w/EL-8'	strip cage	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	234	3,200	2,240
1212	Chippens Hill MS	Classroom 115	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
1213	Chippens Hill MS	Classroom 114	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	344	1,411	1,411
1214	Chippens Hill MS	Classroom 113	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
1215	Chippens Hill MS	Classroom 112	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	299	1,227	1,227
1216	Chippens Hill MS	Classroom 111	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	460	1,890	1,890
1217	Chippens Hill MS	Office Faculty Workroom	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	298	2,400	1,680
1218	Chippens Hill MS	Storage Cleaning Supplies	1	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	16	500	350
1219	Chippens Hill MS	Storage Science	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	31	500	350
1220	Chippens Hill MS	Office Resources	1	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	0.2	514	2,400	1,680
1221	Chippens Hill MS	Stair 3	stair	70W METAL HALIDE	can rec 8"	10	10	95	1.0	15 WATT LED/KIT	can kit LED Spectrum	10	16	0.2	0.8	2,282	3,200	2,240
1222	Chippens Hill MS	Stair 3	stair	2x13W CF HARDWIRED	can rec 8"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	56	3,200	2,240
1223	Chippens Hill MS	Stair 5	stair	4L4' T8 32w/EL-8'	strip cage	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	117	3,200	3,200
1224	Chippens Hill MS	Stair 5	stair	2x13W CF HARDWIRED	can rec 8"	2	2	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.0	112	3,200	3,200
1225	Chippens Hill MS	Stair 5	stair	70W METAL HALIDE	can rec 8"	3	3	95	0.3	15 WATT LED/KIT	can kit LED Spectrum	3	16	0.0	0.2	685	3,200	3,200
1226	Chippens Hill MS	Storage Paper	1	3L4' T8 32w/EL	industrial cage	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	62	1,000	700
1227	Chippens Hill MS	Storage Wood Shop	1	3L4' T8 32w/EL	industrial cage	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	124	1,000	700
1228	Chippens Hill MS	Storage Garage	1	3L4' T8 32w/EL	industrial cage	16	16	88	1.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	16	54	0.9	0.6	496	1,000	700
1229	Chippens Hill MS	Storage Garage	1	2L4' T8 32w/EL	strip reflector	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	22	1,000	1,000
1239	Bristol Eastern HS	Classroom 200	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
1240	Bristol Eastern HS	Office 200A	1	4L4' T8 32w/EL	trof parabolic	6	6	112	0.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	6	53	0.3	0.4	510	1,680	1,680
1241	Bristol Eastern HS	Storage 200B	1	4L2' T8 17w/EL	trof acr	3	3	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	3	29	0.1	0.1	42	500	350
1242	Bristol Eastern HS	Storage Janitor	1	2L4' T8 32w/EL-8'	trof acr 1' wide	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	29	350	350
1243	Bristol Eastern HS	Storage Janitor	1	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	4	350	350
1244	Bristol Eastern HS	Storage Janitor	1	2x26W CF HARDWIRED/EL	can rec 8"	1	1	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	1	16	0.0	0.0	11	350	350
1245	Bristol Eastern HS	Bath Men	1	2L4' T8 32w/EL-8'	trof acr 1' wide	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	46	2,240	2,240
1246	Bristol Eastern HS	Bath Men	1	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	23	2,240	2,240
1247	Bristol Eastern HS	Storage 224B	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	14	500	350
1248	Bristol Eastern HS	Bath Woman	1	2L4' T8 32w/EL-8'	trof acr 1' wide	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	185	2,240	2,240
1249	Bristol Eastern HS	Bath Woman	1	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	23	2,240	2,240
1250	Bristol Eastern HS	Bath Woman	1	2x26W CF HARDWIRED/EL	can rec 8"	1	1	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	1	16	0.0	0.0	73	2,240	2,240
1251	Bristol Eastern HS	Bath Women	1	2L4' T8 32w/EL-8'	trof acr 1' wide	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	46	2,240	2,240
1252	Bristol Eastern HS	Bath Women	1	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	23	2,240	2,240
1253	Bristol Eastern HS	Classroom 201	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1254	Bristol Eastern HS	Classroom 201	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1255	Bristol Eastern HS	Classroom 202	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1256	Bristol Eastern HS	Classroom 202	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1257	Bristol Eastern HS	Classroom 203	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
1258	Bristol Eastern HS	Classroom 204	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1259	Bristol Eastern HS	Classroom 204	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1260	Bristol Eastern HS	Classroom 205	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
1261	Bristol Eastern HS	Office 205A	1	4L2' T8 17w/EL	trof parabolic	6	6	62	0.4	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	6	29	0.2	0.2	279	1,680	1,680
1262	Bristol Eastern HS	Classroom 206	1	4L2' T8 17w/EL	trof parabolic	6	6	62	0.4	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	6	29	0.2	0.2	466	2,800	2,800
1263	Bristol Eastern HS	Classroom 207	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1264	Bristol Eastern HS	Classroom 207	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1265	Bristol Eastern HS	Classroom 208	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1266	Bristol Eastern HS	Classroom 208	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1267	Bristol Eastern HS	Classroom 209	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
1268	Bristol Eastern HS	Classroom 209	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1269	Bristol Eastern HS	Classroom 210	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1270	Bristol Eastern HS	Classroom 210	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1271	Bristol Eastern HS	Classroom 211	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1272	Bristol Eastern HS	Classroom 211	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1273	Bristol Eastern HS	Classroom 212	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1274	Bristol Eastern HS	Classroom 212	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1275	Bristol Eastern HS	Classroom 213	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1276	Bristol Eastern HS	Classroom 213	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
1277	Bristol Eastern HS	Classroom 214	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1278	Bristol Eastern HS	Classroom 214	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1279	Bristol Eastern HS	Bath Woman	1	1L2' T8 17w/EL	trof acr 1' wide	2	2	17	0.0	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	9	0.0	0.0	29	2,240	2,240
1280	Bristol Eastern HS	Bath Woman	1	1L3' T8 25w/EL	trof acr 1' wide	1	1	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	13	0.0	0.0	22	2,240	2,240
1281	Bristol Eastern HS	Bath Men	1	1L2' T8 17w/EL	trof acr 1' wide	1	1	17	0.0	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	9	0.0	0.0	14	2,240	2,240
1282	Bristol Eastern HS	Bath Men	1	1L3' T8 25w/EL	trof acr 1' wide	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	0.0	43	2,240	2,240
1283	Bristol Eastern HS	Bath Men (2)	1	1L3' T8 25w/EL	trof acr 1' wide	12	12	24	0.3	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	12	13	0.2	0.1	260	2,240	2,240
1284	Bristol Eastern HS	Bath Men (2)	1	1L4' T8 32w/EL	trof acr 1' wide	6	6	30	0.2	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	18	0.1	0.1	139	2,240	2,240
1285	Bristol Eastern HS	Classroom 215	1	6L4' T8 32w/EL-12'	indirect/direct	7	7	180	1.3	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	7	107	0.7	0.5	850	1,960	1,960
1286	Bristol Eastern HS	Classroom 215	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1287	Bristol Eastern HS	Classroom 216	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
1288	Bristol Eastern HS	Storage Electric	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	10	500	350
1289	Bristol Eastern HS	Office Open Guidance	1	4L2' T8 17w/EL	trof parabolic	6	6	62	0.4	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	6	29	0.2	0.2	457	2,750	2,750
1290	Bristol Eastern HS	Hall Guidance	1	4L2' T8 17w/EL	trof parabolic	8	8	62	0.5	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	8	29	0.2	0.3	709	3,200	3,200
1291	Bristol Eastern HS	Office Wininger	1	4L2' T8 17w/EL	trof parabolic	6	6	62	0.4	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	6	29	0.2	0.2	399	2,400	2,400
1292	Bristol Eastern HS	Office Kalfayan	1	4L4' T8 32w/EL-8'	indirect/direct	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	166	2,400	1,680
1293	Bristol Eastern HS	Office Kalfayan	1	2x26W CF HARDWIRED/EL	can rec 8"	6	6	54	0.3	15 WATT LED/KIT	can kit LED Spectrum	6	16	0.1	0.2	468	2,400	1,680
1294	Bristol Eastern HS	Office Russo	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	186	1,680	1,680
1295	Bristol Eastern HS	Office Lombardo	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	186	1,680	1,680
1296	Bristol Eastern HS	Office Lefrancois	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	266	2,400	1,680
1297	Bristol Eastern HS	Office Tullacro	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	186	1,680	1,680
1298	Bristol Eastern HS	Lounge Staff	1	4L4' T8 32w/EL-8'	indirect/direct	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	111	1,610	1,610
1299	Bristol Eastern HS	Lounge Staff	1	2x26W CF HARDWIRED/EL	can rec 8"	5	5	54	0.3	15 WATT LED/KIT	can kit LED Spectrum	5	16	0.1	0.2	262	1,610	1,610
1300	Bristol Eastern HS	Office Work Room	1	4L2' T8 17w/EL	trof parabolic	6	6	62	0.4	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	6	29	0.2	0.2	279	1,680	1,680
1301	Bristol Eastern HS	Office Work Room	1	2x26W CF HARDWIRED/EL	can rec 8"	5	5	54	0.3	15 WATT LED/KIT	can kit LED Spectrum	5	16	0.1	0.2	273	1,680	1,680
1302	Bristol Eastern HS	Office Near Lounge	1	4L2' T8 17w/EL	trof parabolic	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	47	1,680	1,680
1303	Bristol Eastern HS	Classroom 218	1	6L4' T8 32w/EL-12'	indirect/direct	8	8	180	1.4	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	107	0.9	0.6	972	1,960	1,960
1304	Bristol Eastern HS	Classroom 219	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
1305	Bristol Eastern HS	Classroom 229	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
1306	Bristol Eastern HS	Classroom 230	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
1307	Bristol Eastern HS	Classroom 231	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
1308	Bristol Eastern HS	Classroom 232	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
1309	Bristol Eastern HS	Classroom 234	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
1310	Bristol Eastern HS	Classroom 233	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
1311	Bristol Eastern HS	Classroom 236	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
1312	Bristol Eastern HS	Classroom 235	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
1313	Bristol Eastern HS	Classroom 237	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
1314	Bristol Eastern HS	Classroom 239	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1315	Bristol Eastern HS	Classroom 239	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1316	Bristol Eastern HS	Bath Male	1	1L4' T8 32w/EL	trof acr 1' wide	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	46	2,240	2,240
1317	Bristol Eastern HS	Bath Men (2)	1	2L4' T8 32w/EL-8'	trof acr 1' wide	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	93	2,240	2,240
1318	Bristol Eastern HS	Bath Men (2)	1	1L4' T8 32w/EL	trof acr 1' wide	6	6	30	0.2	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	18	0.1	0.1	139	2,240	2,240
1319	Bristol Eastern HS	Bath Men (2)	1	1L3' T8 25w/EL	trof acr 1' wide	4	4	24	0.1	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	4	13	0.1	0.0	87	2,240	2,240
1320	Bristol Eastern HS	Classroom 241	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1321	Bristol Eastern HS	Classroom 241	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1322	Bristol Eastern HS	Classroom 240	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1323	Bristol Eastern HS	Classroom 240	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1324	Bristol Eastern HS	Classroom 243	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1325	Bristol Eastern HS	Classroom 243	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1326	Bristol Eastern HS	Classroom 242	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
1327	Bristol Eastern HS	Classroom 245	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
1328	Bristol Eastern HS	Classroom 244	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
1329	Bristol Eastern HS	Classroom 247	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
1330	Bristol Eastern HS	Classroom 246	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
1331	Bristol Eastern HS	Classroom 249	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1332	Bristol Eastern HS	Classroom 249	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1333	Bristol Eastern HS	Storage 246A	1	2L4' T8 32w/EL	strip	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	21	500	350
1334	Bristol Eastern HS	Office Open 251	1	4L2' T8 17w/EL	trof acr	3	3	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	3	29	0.1	0.1	160	1,925	1,925
1335	Bristol Eastern HS	Classroom 251A	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
1336	Bristol Eastern HS	Storage 251C	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	78	700	700
1337	Bristol Eastern HS	Office Near 251C	1	4L2' T8 17w/EL	trof parabolic	5	5	62	0.3	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	5	29	0.1	0.2	233	1,680	1,680
1338	Bristol Eastern HS	Mechanical 251F	1	2L4' T8 32w/EL	strip	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	31	500	500
1339	Bristol Eastern HS	Storage 250	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	78	700	700
1340	Bristol Eastern HS	Classroom 225	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
1341	Bristol Eastern HS	Classroom 225	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1342	Bristol Eastern HS	Classroom 224	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1343	Bristol Eastern HS	Classroom 224	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1344	Bristol Eastern HS	Classroom 226	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1345	Bristol Eastern HS	Classroom 226	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1346	Bristol Eastern HS	Classroom 223	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1347	Bristol Eastern HS	Classroom 223	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1348	Bristol Eastern HS	Classroom 227	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1349	Bristol Eastern HS	Classroom 227	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1350	Bristol Eastern HS	Classroom 222	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1351	Bristol Eastern HS	Classroom 222	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1352	Bristol Eastern HS	Classroom 228	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1353	Bristol Eastern HS	Classroom 228	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1354	Bristol Eastern HS	Classroom 221	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1355	Bristol Eastern HS	Classroom 221	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1356	Bristol Eastern HS	Office Open 220A	1	4L4' T8 32w/EL	trof parabolic	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	0.1	139	2,750	2,750
1357	Bristol Eastern HS	Office Open 220A	1	2x26W CF HARDWIRED/EL	can rec 8"	2	2	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	2	16	0.0	0.1	179	2,750	2,750
1358	Bristol Eastern HS	Office Copy	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	93	1,680	1,680
1359	Bristol Eastern HS	Office Printer	1	4L2' T8 17w/EL	trof parabolic	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	47	1,680	1,680
1360	Bristol Eastern HS	Office 220A	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	93	1,680	1,680
1361	Bristol Eastern HS	Storage 220A	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	19	350	350
1362	Bristol Eastern HS	Storage 220A Elect	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	7	350	350
1363	Bristol Eastern HS	Classroom 220	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
1364	Bristol Eastern HS	Hall Stair 3-2	1	4L2' T8 17w/EL	box acrylic	16	16	62	1.0	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	16	29	0.5	0.5	1,419	3,200	3,200
1365	Bristol Eastern HS	Hall Stair 3-2	1	4L4' T8 32w/EL	box acr 4x4	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.2	442	3,200	3,200
1366	Bristol Eastern HS	Hall Display	1	50W INCANDESCENT	can rec 6"	6	6	50	0.3	8 WATT LED SI	screw in LED par20	6	8	0.1	0.2	679	3,200	3,200
1367	Bristol Eastern HS	Stair 2	stair	2L4' T8 32w/EL	wrap wall mt.	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	264	3,200	3,200
1368	Bristol Eastern HS	Stair 2	stair	2L4' T8 32w/EL	wrap wall mt.	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	66	3,200	3,200
1369	Bristol Eastern HS	Hall Stair2-Stair 1	1	4L2' T8 17w/EL	box acrylic	12	12	62	0.7	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	12	29	0.4	0.4	1,064	3,200	2,240
1370	Bristol Eastern HS	Hall Display	1	50W INCANDESCENT	can rec 6"	3	3	50	0.2	8 WATT LED SI	screw in LED par20	3	8	0.0	0.1	339	3,200	3,200
1371	Bristol Eastern HS	Stair 1	stair	2L4' T8 32w/EL	wrap wall mt.	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	66	3,200	3,200
1372	Bristol Eastern HS	Stair 1	stair	2L4' T8 32w/EL	wrap wall mt.	7	7	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	7	36	0.2	0.2	463	3,200	3,200
1373	Bristol Eastern HS	Stair 1	stair	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	66	3,200	3,200
1374	Bristol Eastern HS	Hall Stair 1-C200	1	4L4' T8 32w/EL	box acr 4x4	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.2	442	3,200	3,200
1375	Bristol Eastern HS	Hall Stair 1-C200	1	4L2' T8 17w/EL	box acrylic	18	18	62	1.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	18	29	0.5	0.6	1,596	3,200	2,240
1376	Bristol Eastern HS	Hall Stair 1-C200	1	2x26W CF HARDWIRED/EL	can rec 8"	2	2	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	2	16	0.0	0.1	208	3,200	2,240
1377	Bristol Eastern HS	Hall Display	1	50W INCANDESCENT	can rec 6"	3	3	50	0.2	8 WATT LED SI	screw in LED par20	3	8	0.0	0.1	339	3,200	3,200
1378	Bristol Eastern HS	Hall 200-Stair 5	1	4L2' T8 17w/EL	box acrylic	14	14	62	0.9	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	14	29	0.4	0.5	1,241	3,200	2,240
1379	Bristol Eastern HS	Hall 200-Stair 5	1	4L4' T8 32w/EL	box acr 4x4	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	221	3,200	2,240
1380	Bristol Eastern HS	Stair 5	stair	2L4' T8 32w/EL	wrap wall mt.	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	198	3,200	3,200
1381	Bristol Eastern HS	Stair 5	stair	2L4' T8 32w/EL	wrap wall mt.	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	264	3,200	3,200
1382	Bristol Eastern HS	Hall Stair 5-C241	1	4L2' T8 17w/EL	box acrylic	12	12	62	0.7	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	12	29	0.4	0.4	1,064	3,200	2,240
1383	Bristol Eastern HS	Hall Stair 5-C241	1	2x26W CF HARDWIRED/EL	can rec 8"	1	1	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	1	16	0.0	0.0	104	3,200	3,200
1384	Bristol Eastern HS	Stair 4	stair	2L4' T8 32w/EL	wrap wall mt.	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	198	3,200	3,200
1385	Bristol Eastern HS	Stair 4	stair	2L4' T8 32w/EL	wrap wall mt.	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	198	3,200	3,200
1386	Bristol Eastern HS	Hall Stair 4-C230	1	4L2' T8 17w/EL	box acrylic	12	12	62	0.7	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	12	29	0.4	0.4	1,064	3,200	3,200
1387	Bristol Eastern HS	Hall Stair 4-C230	1	4L4' T8 32w/EL	box acr 4x4	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	221	3,200	3,200
1388	Bristol Eastern HS	Hall Stair 4-C230	1	2x26W CF HARDWIRED/EL	can rec 8"	1	1	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	1	16	0.0	0.0	104	3,200	3,200
1389	Bristol Eastern HS	Stair 3	stair	2L4' T8 32w/EL	wrap wall mt.	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	264	3,200	3,200
1390	Bristol Eastern HS	Stair 3	stair	2L4' T8 32w/EL	wrap wall mt.	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	198	3,200	3,200
1391	Bristol Eastern HS	Hall C220-C225	1	4L2' T8 17w/EL	box acrylic	11	11	62	0.7	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	11	29	0.3	0.4	975	3,200	2,240
1392	Bristol Eastern HS	Classroom 141	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1393	Bristol Eastern HS	Classroom 141	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1394	Bristol Eastern HS	Storage 140	1	2L4' T8 32w/EL	strip	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	10	500	350
1395	Bristol Eastern HS	Classroom 138	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1396	Bristol Eastern HS	Classroom 138	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1397	Bristol Eastern HS	Classroom 139	1	4L4' T8 32w/EL-8'	indirect/direct	12	12	112	1.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	71	0.9	0.5	812	1,960	1,960
1398	Bristol Eastern HS	Classroom 136	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
1399	Bristol Eastern HS	Classroom 134	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
1400	Bristol Eastern HS	Classroom 135	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
1401	Bristol Eastern HS	Classroom 132	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1402	Bristol Eastern HS	Classroom 132	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1403	Bristol Eastern HS	Classroom 133	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1404	Bristol Eastern HS	Classroom 133A	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1405	Bristol Eastern HS	Bath Men (2)	1	2L4' T8 32w/EL-8'	trof acr 1' wide	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	0.1	278	2,240	2,240
1406	Bristol Eastern HS	Bath Men (2)	1	1L4' T8 32w/EL	trof acr 1' wide	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	46	2,240	2,240
1407	Bristol Eastern HS	Bath Men (2)	1	1L4' T8 32w/EL	trof acr 1' wide	4	4	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	18	0.1	0.0	93	2,240	2,240
1408	Bristol Eastern HS	Hall 133-141	1	4L2' T8 17w/EL	box acrylic	11	11	62	0.7	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	11	29	0.3	0.4	975	3,200	2,240
1409	Bristol Eastern HS	Hall 133-141	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	89	3,200	2,240
1410	Bristol Eastern HS	Classroom 131	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1411	Bristol Eastern HS	Classroom 131	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1412	Bristol Eastern HS	Storage 131A	1	4L2' T8 17w/EL	box acrylic	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	14	500	350
1413	Bristol Eastern HS	Storage 131A	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	10	500	350

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
1414	Bristol Eastern HS	Classroom 129	1	6L4' T8 32w/EL-12'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	729	1,960	1,960
1415	Bristol Eastern HS	Classroom 128	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1416	Bristol Eastern HS	Classroom 128	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1417	Bristol Eastern HS	Classroom 127	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
1418	Bristol Eastern HS	Classroom 126	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1419	Bristol Eastern HS	Classroom 126	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1420	Bristol Eastern HS	Classroom 125	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
1421	Bristol Eastern HS	Lab 124	1	6L4' T8 32w/EL-12'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	703	1,890	1,890
1422	Bristol Eastern HS	Storage 124	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	39	700	700
1423	Bristol Eastern HS	Classroom 123	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
1424	Bristol Eastern HS	Hall C124-C131	1	4L2' T8 17w/EL	box acrylic	11	11	62	0.7	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	11	29	0.3	0.4	975	3,200	2,240
1425	Bristol Eastern HS	Hall C124-C131	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	89	3,200	2,240
1426	Bristol Eastern HS	Hall C124-C131	1	4L4' T8 32w/EL	box acr 4x4	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	221	3,200	2,240
1427	Bristol Eastern HS	Classroom 113	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
1428	Bristol Eastern HS	Lab 112	1	6L4' T8 32w/EL-12'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	703	1,890	1,890
1429	Bristol Eastern HS	Storage 112	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	78	700	700
1430	Bristol Eastern HS	Lab 111	1	6L4' T8 32w/EL-12'	indirect/direct	8	8	180	1.4	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	107	0.9	0.6	937	1,890	1,890
1431	Bristol Eastern HS	Storage 111	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	78	700	700
1432	Bristol Eastern HS	Lab 110	1	6L4' T8 32w/EL-12'	indirect/direct	4	4	180	0.7	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	107	0.4	0.3	468	1,890	1,890
1433	Bristol Eastern HS	Lab 110	1	4L4' T8 32w/EL-8'	indirect/direct	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.2	261	1,890	1,890
1434	Bristol Eastern HS	Storage 110	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	19	700	700
1435	Bristol Eastern HS	Storage 110	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	39	700	700
1436	Bristol Eastern HS	Classroom 109	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1437	Bristol Eastern HS	Classroom 109	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1438	Bristol Eastern HS	Hall C109-C113	1	4L2' T8 17w/EL	box acrylic	15	15	62	0.9	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	15	29	0.4	0.5	1,330	3,200	2,240
1439	Bristol Eastern HS	Hall C109-C113	1	4L4' T8 32w/EL	box acr 4x4	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.2	442	3,200	2,240
1440	Bristol Eastern HS	Bath Men	1	2L4' T8 32w/EL-8'	trof acr 1' wide	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	139	2,240	2,240
1441	Bristol Eastern HS	Bath Men	1	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	23	2,240	2,240
1442	Bristol Eastern HS	Bath Men	1	1L2' T8 17w/EL	trof acr 1' wide	2	2	17	0.0	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	9	0.0	0.0	29	2,240	2,240
1443	Bristol Eastern HS	Bath Male (2)	1	1L4' T8 32w/EL	trof acr 1' wide	4	4	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	18	0.1	0.0	93	2,240	2,240
1444	Bristol Eastern HS	Bath Male (2)	1	1L2' T8 17w/EL	trof acr 1' wide	2	2	17	0.0	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	9	0.0	0.0	29	2,240	2,240
1445	Bristol Eastern HS	Storage Custodian	1	2L4' T8 32w/EL-8'	trof acr 1' wide	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	43	700	700
1446	Bristol Eastern HS	Storage Custodian	1	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	7	700	700
1447	Bristol Eastern HS	Storage Custodian	1	2x26W CF HARDWIRED/EL	can rec 8"	1	1	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	1	16	0.0	0.0	23	700	700
1448	Bristol Eastern HS	Classroom 105	1	6L4' T8 32w/EL-12'	indirect/direct	18	18	180	3.2	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	18	107	1.9	1.3	2,186	1,960	1,960
1449	Bristol Eastern HS	Classroom 105	1	2x26W CF HARDWIRED/EL	can rec 8"	5	5	54	0.3	15 WATT LED/KIT	can kit LED Spectrum	5	16	0.1	0.2	319	1,960	1,960
1450	Bristol Eastern HS	Classroom 105	1	50W INCANDESCENT	track head	12	12	50	0.6	8 WATT LED SI	screw in LED par20	12	8	0.1	0.5	832	1,960	1,960
1451	Bristol Eastern HS	Storage 105A	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	10	350	350
1452	Bristol Eastern HS	Classroom 106	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
1453	Bristol Eastern HS	Classroom 106	1	2x26W CF HARDWIRED/EL	can rec 8"	7	7	54	0.4	15 WATT LED/KIT	can kit LED Spectrum	7	16	0.1	0.3	446	1,960	1,960
1454	Bristol Eastern HS	Classroom 103	1	6L4' T8 32w/EL-12'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	1,041	2,800	2,800
1455	Bristol Eastern HS	Classroom 103	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	290	2,800	2,800
1456	Bristol Eastern HS	Classroom 103	1	2x26W CF HARDWIRED/EL	can rec 8"	2	2	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	2	16	0.0	0.1	182	2,800	2,800
1457	Bristol Eastern HS	Classroom 103	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	310	2,800	2,800
1458	Bristol Eastern HS	Classroom 103	1	50W INCANDESCENT	track head	12	12	50	0.6	8 WATT LED SI	screw in LED par20	12	8	0.1	0.5	1,188	2,800	2,800
1459	Bristol Eastern HS	Office 103B	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	186	1,680	1,680
1460	Bristol Eastern HS	Classroom 102	1	6L4' T8 32w/EL-12'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	729	1,960	1,960
1461	Bristol Eastern HS	Hall C105-C102	1	4L2' T8 17w/EL	box acrylic	15	15	62	0.9	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	15	29	0.4	0.5	1,330	3,200	2,240
1462	Bristol Eastern HS	Hall C105-C102	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	177	3,200	2,240
1463	Bristol Eastern HS	Hall C105-C102	1	4L4' T8 32w/EL	box acr 4x4	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.2	442	3,200	2,240
1464	Bristol Eastern HS	Retail 100A	1	4L2' T8 17w/EL	trof parabolic	6	6	62	0.4	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	6	29	0.2	0.2	186	1,120	1,120
1465	Bristol Eastern HS	Office 100A	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	186	1,680	1,680
1466	Bristol Eastern HS	Bath Male	1	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	23	2,240	2,240
1467	Bristol Eastern HS	Bath Male	1	1L3' T8 25w/EL	trof acr 1' wide	1	1	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	13	0.0	0.0	22	2,240	2,240
1468	Bristol Eastern HS	Bath Woman	1	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	23	2,240	2,240
1469	Bristol Eastern HS	Bath Woman	1	1L3' T8 25w/EL	trof acr 1' wide	1	1	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	13	0.0	0.0	22	2,240	2,240
1470	Bristol Eastern HS	Lounge 100C	1	4L2' T8 17w/EL	trof parabolic	11	11	62	0.7	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	11	29	0.3	0.4	701	2,300	1,610
1471	Bristol Eastern HS	Cafeteria Main	1	3L4' T8 32w/EL	trof parabolic	48	48	88	4.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	48	54	2.6	1.7	2,811	2,000	1,400
1472	Bristol Eastern HS	Kitchen Main	1	3L4' T8 32w/EL	trof acr	23	23	88	2.0	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	23	54	1.2	0.8	1,616	2,400	2,400
1473	Bristol Eastern HS	Kitchen Main	1	60W INCANDESCENT	range hood	6	6	60	0.4	8 WATT LED SI	screw in LED Alamp	6	8	0.1	0.3	632	2,400	2,400
1474	Bristol Eastern HS	Office K1	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	93	1,680	1,680
1475	Bristol Eastern HS	Storage Near K1	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	78	700	700
1476	Bristol Eastern HS	Storage Paper	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	39	700	700
1477	Bristol Eastern HS	Hall Bath	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	89	3,200	3,200
1478	Bristol Eastern HS	Bath Woman	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	93	2,240	2,240
1479	Bristol Eastern HS	Storage Elect	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	7	350	350
1480	Bristol Eastern HS	Kitchen Emulsifier	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	93	1,680	1,680
1481	Bristol Eastern HS	Cooler Walk In (2)	1	60W INCANDESCENT	jar	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	88	1,000	1,000
1482	Bristol Eastern HS	Classroom 100	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1483	Bristol Eastern HS	Classroom 100	1	4L4' T8 32w/EL-8'	jar	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1484	Bristol Eastern HS	Classroom 100	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	217	1,960	1,960
1485	Bristol Eastern HS	Storage 100	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	78	700	700
1486	Bristol Eastern HS	Office Open Administration	1	4L2' T8 17w/EL	trof parabolic	19	19	62	1.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	19	29	0.6	0.6	1,013	1,925	1,925

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
1487	Bristol Eastern HS	Office Wathen	1	4L2' T8 17w/EL	trof parabolic	3	3	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	3	29	0.1	0.1	200	2,400	2,400
1488	Bristol Eastern HS	Office Janick	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	186	1,680	1,680
1489	Bristol Eastern HS	Office Asst Principal	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	186	1,680	1,680
1490	Bristol Eastern HS	Office Tager	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	186	1,680	1,680
1491	Bristol Eastern HS	Office Fortin	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	186	1,680	1,680
1492	Bristol Eastern HS	Conference Admin	1	6L4' T8 32w/EL-12'	indirect/direct	1	1	180	0.2	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	107	0.1	0.1	104	1,680	1,680
1493	Bristol Eastern HS	Conference Admin	1	2x26W CF HARDWIRED/EL	can rec 8"	4	4	54	0.2	15 WATT LED/KIT	can kit LED Spectrum	4	16	0.1	0.2	218	1,680	1,680
1494	Bristol Eastern HS	Storage Conf	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	14	500	350
1495	Bristol Eastern HS	Hall Caf-Gym	1	4L2' T8 17w/EL	box acrylic	13	13	62	0.8	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	13	29	0.4	0.4	1,153	3,200	2,240
1496	Bristol Eastern HS	Hall Caf-Gym	1	4L4' T8 32w/EL	box acr 4x4	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	663	3,200	2,240
1497	Bristol Eastern HS	Hall Caf-Gym	1	2x26W CF HARDWIRED/EL	can rec 8"	1	1	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	1	16	0.0	0.0	104	3,200	2,240
1498	Bristol Eastern HS	Bath Men (2)	1	2L4' T8 32w/EL-8'	trof acr 1' wide	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	0.2	370	2,240	2,240
1499	Bristol Eastern HS	Bath Male (2)	1	2L4' T8 32w/EL-8'	trof acr 1' wide	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	93	2,240	2,240
1500	Bristol Eastern HS	Bath Male (2)	1	1L4' T8 32w/EL	trof acr 1' wide	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	46	2,240	2,240
1501	Bristol Eastern HS	Office Security	1	4L2' T8 17w/EL	trof acr	6	6	62	0.4	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	6	29	0.2	0.2	279	1,680	1,680
1502	Bristol Eastern HS	Hall C113-C119	1	4L2' T8 17w/EL	box acrylic	13	13	62	0.8	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	13	29	0.4	0.4	1,153	3,200	3,200
1503	Bristol Eastern HS	Hall C113-C119	1	4L4' T8 32w/EL	box acr 4x4	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	221	3,200	3,200
1504	Bristol Eastern HS	Office Science	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	93	1,680	1,680
1505	Bristol Eastern HS	Hall Science	1	2x26W CF HARDWIRED/EL	can rec 8"	3	3	54	0.2	15 WATT LED/KIT	can kit LED Spectrum	3	16	0.0	0.1	218	2,240	2,240
1506	Bristol Eastern HS	Storage Science	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	7	350	350
1507	Bristol Eastern HS	Office It	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	93	1,680	1,680
1508	Bristol Eastern HS	Storage Files	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	19	350	350
1509	Bristol Eastern HS	Office Flowers	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	93	1,680	1,680
1510	Bristol Eastern HS	Classroom 114	1	4L4' T8 32w/EL-8'	indirect/direct	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	406	1,960	1,960
1511	Bristol Eastern HS	Lab 115	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	351	1,890	1,890
1512	Bristol Eastern HS	Lab 115	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	196	1,890	1,890
1513	Bristol Eastern HS	Classroom 122	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1514	Bristol Eastern HS	Classroom 122	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1515	Bristol Eastern HS	Lab 116	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	351	1,890	1,890
1516	Bristol Eastern HS	Lab 116	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	196	1,890	1,890
1517	Bristol Eastern HS	Classroom 121	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1518	Bristol Eastern HS	Classroom 121	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1519	Bristol Eastern HS	Classroom 117	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1520	Bristol Eastern HS	Classroom 117	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1521	Bristol Eastern HS	Classroom 120	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	364	1,960	1,960
1522	Bristol Eastern HS	Classroom 120	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1523	Bristol Eastern HS	Classroom 118	1	6L4' T8 32w/EL-12'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	729	1,960	1,960
1524	Bristol Eastern HS	Lab 119	1	6L4' T8 32w/EL-12'	indirect/direct	3	3	180	0.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	107	0.3	0.2	351	1,890	1,890
1525	Bristol Eastern HS	Lab 119	1	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	196	1,890	1,890
1526	Bristol Eastern HS	Hall C119-C141	1	4L2' T8 17w/EL	box acrylic	15	15	62	0.9	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	15	29	0.4	0.5	1,330	3,200	2,240
1527	Bristol Eastern HS	Hall Gymnasium	1	4L2' T8 17w/EL	box acrylic	9	9	62	0.6	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	9	29	0.3	0.3	798	3,200	2,240
1528	Bristol Eastern HS	Storage Trainer	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	28	500	350
1529	Bristol Eastern HS	Office Trainer	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	186	1,680	1,680
1530	Bristol Eastern HS	Locker Woman	1	2L4' T8 32w/EL	vapor tight	13	13	60	0.8	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	13	36	0.5	0.3	601	2,240	2,240
1531	Bristol Eastern HS	Locker Woman	1	2L4' T8 32w/EL-8'	vanity	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	132	3,200	3,200
1532	Bristol Eastern HS	Locker Woman	1	2x26W CF HARDWIRED/EL	square recessed	11	11	54	0.6	16 WATT LED/NEW	new LED drum	11	17	0.2	0.4	1,113	3,200	3,200
1533	Bristol Eastern HS	Locker Woman	1	2L4' T8 32w/EL	vapor tight	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	66	3,200	3,200
1534	Bristol Eastern HS	Storage Snack	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	19	350	350
1535	Bristol Eastern HS	Storage 147B	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	21	500	500
1536	Bristol Eastern HS	Gym 2	1	4L4' T5 HO/EL	high bay	24	24	234	5.6	98 WATT LED/NEW	new LED hibay wg	24	103	2.5	3.1	7,970	2,980	2,086
1537	Bristol Eastern HS	Exercise 2	1	4L4' T5 HO/EL	high bay	6	6	234	1.4	98 WATT LED/NEW	new LED hibay wg	6	103	0.6	0.8	1,992	2,980	2,980
1538	Bristol Eastern HS	Storage 143E	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	39	700	700
1539	Bristol Eastern HS	Gym Main	1	4L4' T5 HO/EL	high bay	48	48	234	11.2	98 WATT LED/NEW	new LED hibay wg	48	103	4.9	6.3	15,940	2,980	2,086
1540	Bristol Eastern HS	Storage Main	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	14	700	700
1541	Bristol Eastern HS	Hall Between Gym 1-2	1	2x26W CF HARDWIRED/EL	can rec 8"	2	2	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	2	16	0.0	0.1	146	2,240	2,240
1542	Bristol Eastern HS	Hall Near Boys Locker	1	4L2' T8 17w/EL	trof acr	8	8	62	0.5	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	8	29	0.2	0.3	709	3,200	2,240
1543	Bristol Eastern HS	Locker Boys (2)	1	2L4' T8 32w/EL	vapor tight	12	12	60	0.7	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	36	0.4	0.3	555	2,240	2,240
1544	Bristol Eastern HS	Locker 148C (2)	1	2L4' T8 32w/EL	vapor tight	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	0.2	370	2,240	2,240
1545	Bristol Eastern HS	Office Op 148C	1	4L2' T8 17w/EL	trof acr	3	3	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	3	29	0.1	0.1	140	1,680	1,680
1546	Bristol Eastern HS	Bath Locker Room	1	2L4' T8 32w/EL	vapor tight	5	5	60	0.3	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	36	0.2	0.1	231	2,240	2,240
1547	Bristol Eastern HS	Locker Men	1	2L4' T8 32w/EL	vapor tight	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	0.2	370	2,240	2,240
1548	Bristol Eastern HS	Locker 148G	1	2L4' T8 32w/EL	vapor tight	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	93	2,240	2,240
1549	Bristol Eastern HS	Exercise Weights	1	4L2' T8 17w/EL	trof acr	20	20	62	1.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	20	29	0.6	0.7	1,156	2,086	2,086
1550	Bristol Eastern HS	Office Main Gym	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	93	1,680	1,680
1551	Bristol Eastern HS	Office Athletic Coordinator	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	93	1,680	1,680
1552	Bristol Eastern HS	Storage Custodian	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	7	350	350
1553	Bristol Eastern HS	Office Blue Wall	1	4L2' T8 17w/EL	trof acr	6	6	62	0.4	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	6	29	0.2	0.2	279	1,680	1,680
1554	Bristol Eastern HS	Locker 144 Woman	1	2L4' T8 32w/EL	vapor tight	14	14	60	0.8	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	14	36	0.5	0.3	648	2,240	2,240
1555	Bristol Eastern HS	Bath 144 Woman	1	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	23	2,240	2,240
1556	Bristol Eastern HS	Bath 144 Woman	1	1L3' T8 25w/EL	trof acr 1' wide	1	1	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	13	0.0	0.0	22	2,240	2,240
1557	Bristol Eastern HS	Bath 144 Woman	1	2x26W CF HARDWIRED/EL	square recessed	4	4	54	0.2	16 WATT LED/NEW	new LED drum	4	17	0.1	0.1	283	2,240	2,240
1558	Bristol Eastern HS	Storage 144A	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	7	350	350
1559	Bristol Eastern HS	Storage 144B	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	7	350	350

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
1560	Bristol Eastern HS	Exercise 143	1	4L2' T8 17w/EL	box acrylic	12	12	62	0.7	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	12	29	0.4	0.4	694	2,086	2,086
1561	Bristol Eastern HS	Hall 143	1	2L4' T8 32w/EL	vapor tight	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	46	2,240	2,240
1562	Bristol Eastern HS	Hall Gym-Lib	1	4L2' T8 17w/EL	box acrylic	13	13	62	0.8	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	13	29	0.4	0.4	1,153	3,200	2,240
1563	Bristol Eastern HS	Hall Gym-Lib	1	4L4' T8 32w/EL	box acr 4x4	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.2	442	3,200	2,240
1564	Bristol Eastern HS	Storage 151G	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	7	350	350
1565	Bristol Eastern HS	Bath M/F	1	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	23	2,240	2,240
1566	Bristol Eastern HS	Bath M/F	1	1L3' T8 25w/EL	trof acr 1' wide	1	1	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	13	0.0	0.0	22	2,240	2,240
1567	Bristol Eastern HS	Office Open Nurse	1	4L2' T8 17w/EL	trof acr	10	10	62	0.6	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	10	29	0.3	0.3	533	1,925	1,925
1568	Bristol Eastern HS	Office Open Nurse	1	2x26W CF HARDWIRED/EL	can rec 8"	4	4	54	0.2	15 WATT LED/KIT	can kit LED Spectrum	4	16	0.1	0.2	250	1,925	1,925
1569	Bristol Eastern HS	Bath Nurse (2)	1	1L4' T8 32w/EL	trof acr 1' wide	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	46	2,240	2,240
1570	Bristol Eastern HS	Office Nurse	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	186	1,680	1,680
1571	Bristol Eastern HS	Office Open Front	1	4L2' T8 17w/EL	trof parabolic	12	12	62	0.7	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	12	29	0.4	0.4	640	1,925	1,925
1572	Bristol Eastern HS	Office Open Front	1	2x26W CF HARDWIRED/EL	can rec 8"	10	10	54	0.5	15 WATT LED/KIT	can kit LED Spectrum	10	16	0.2	0.4	626	1,925	1,925
1573	Bristol Eastern HS	Storage Supply	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	39	700	700
1574	Bristol Eastern HS	Conference Front Office	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	186	1,680	1,680
1575	Bristol Eastern HS	Conference Front Office	1	2x26W CF HARDWIRED/EL	can rec 8"	3	3	54	0.2	15 WATT LED/KIT	can kit LED Spectrum	3	16	0.0	0.1	164	1,680	1,680
1576	Bristol Eastern HS	Storage Records	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	39	700	700
1577	Bristol Eastern HS	Foyer Front Office Entrance	1	2x26W CF HARDWIRED/EL	can rec 8"	4	4	54	0.2	15 WATT LED/KIT	can kit LED Spectrum	4	16	0.1	0.2	416	3,200	3,200
1578	Bristol Eastern HS	Library Main	1	2L2' F40 BIAX/EL	indirect/direct	26	26	72	1.9	36 WATT LED/KIT	trof kit LED	26	38	1.0	0.9	1,663	2,200	1,540
1579	Bristol Eastern HS	Library Main	1	28W CF HARDWIRED	decorative	8		30	0.2	NO RETRO	no change -specialized fixture		32	0.2			2,200	1,540
1580	Bristol Eastern HS	Library Main	1	4L4' T8 32w/EL-8'	indirect/direct	21	21	112	2.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	21	71	1.5	0.9	1,594	2,200	1,540
1581	Bristol Eastern HS	Library Main	1	2x18W CF HARDWIRED/EL	square recessed	40	40	38	1.5	16 WATT LED/NEW	new LED drum	40	17	0.7	0.8	1,586	2,200	1,540
1582	Bristol Eastern HS	Conference Library	1	2L2' F40 BIAX/EL	indirect/direct	6	6	72	0.4	36 WATT LED/KIT	trof kit LED	6	38	0.2	0.2	293	1,680	1,680
1583	Bristol Eastern HS	Office Library	1	2L2' F40 BIAX/EL	indirect/direct	4	4	72	0.3	36 WATT LED/KIT	trof kit LED	4	38	0.2	0.1	195	1,680	1,680
1584	Bristol Eastern HS	Storage Mdf	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	39	700	700
1585	Bristol Eastern HS	Storage Mech	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	7	350	350
1586	Bristol Eastern HS	Classroom Library	1	2L2' F40 BIAX/EL	indirect/direct	12	12	72	0.9	36 WATT LED/KIT	trof kit LED	12	38	0.5	0.4	684	1,960	1,960
1587	Bristol Eastern HS	Hall Aud-Lib	1	4L2' T8 17w/EL	box acrylic	8	8	62	0.5	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	8	29	0.2	0.3	709	3,200	3,200
1588	Bristol Eastern HS	Hall Aud-Lib	1	2x26W CF HARDWIRED/EL	can rec 8"	8	8	54	0.4	15 WATT LED/KIT	can kit LED Spectrum	8	16	0.1	0.3	832	3,200	3,200
1589	Bristol Eastern HS	Hall Between Caf Courtyard	1	4L2' T8 17w/EL	trof parabolic	8	8	62	0.5	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	8	29	0.2	0.3	709	3,200	3,200
1590	Bristol Eastern HS	Hall Between Caf Courtyard	1	4L4' T8 32w/EL	box acr 4x4	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	221	3,200	3,200
1591	Bristol Eastern HS	Hall Caf To Aud	1	4L2' T8 17w/EL	box acrylic	13	13	62	0.8	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	13	29	0.4	0.4	1,153	3,200	2,240
1592	Bristol Eastern HS	Hall Caf To Aud	1	4L4' T8 32w/EL	box acr 4x4	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	221	3,200	2,240
1593	Bristol Eastern HS	Hall Caf To Aud	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	187	3,200	2,240
1594	Bristol Eastern HS	Classroom 11	1	3L4' T8 32w/EL	indirect/direct	40	40	88	3.5	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	40	54	2.1	1.4	2,296	1,960	1,960
1595	Bristol Eastern HS	Classroom 11	1	4L2' T8 17w/EL	box acrylic	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	54	1,960	1,960
1596	Bristol Eastern HS	Storage 11A	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	39	700	700
1597	Bristol Eastern HS	Storage 11B	1	4L2' T8 17w/EL	box acrylic	3	3	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	3	29	0.1	0.1	83	1,000	700
1598	Bristol Eastern HS	Storage 11C	1	4L2' T8 17w/EL	box acrylic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	55	1,000	700
1599	Bristol Eastern HS	Office 11D	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	186	1,680	1,680
1600	Bristol Eastern HS	Classroom 12	1	3L4' T8 32w/EL	indirect/direct	40	40	88	3.5	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	40	54	2.1	1.4	2,296	1,960	1,960
1601	Bristol Eastern HS	Classroom 12	1	4L2' T8 17w/EL	box acrylic	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	54	1,960	1,960
1602	Bristol Eastern HS	Office 10A	1	4L2' T8 17w/EL	trof parabolic	5	5	62	0.3	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	5	29	0.1	0.2	233	1,680	1,680
1603	Bristol Eastern HS	Storage 10B	1	4L2' T8 17w/EL	trof acr	6	6	62	0.4	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	6	29	0.2	0.2	116	700	700
1604	Bristol Eastern HS	Storage 10C	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	10	350	350
1605	Bristol Eastern HS	Hall To Stage	1	4L2' T8 17w/EL	box acrylic	3	3	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	3	29	0.1	0.1	186	2,240	2,240
1606	Bristol Eastern HS	Hall To Stage	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	124	2,240	2,240
1607	Bristol Eastern HS	Hall Mez	mezz	4L2' T8 17w/EL	box acrylic	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	62	2,240	2,240
1608	Bristol Eastern HS	Storage Mez	mezz	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	7	350	350
1609	Bristol Eastern HS	Storage Mez	mezz	2L4' T8 32w/EL	wrap wide	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	21	500	350
1610	Bristol Eastern HS	Storage Drama	mezz	4L2' T8 17w/EL	trof acr	8	8	62	0.5	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	8	29	0.2	0.3	155	700	700
1611	Bristol Eastern HS	Stage Main	mezz	2L4' T8 32w/EL	industrial cage	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	0.2	264	1,600	1,600
1612	Bristol Eastern HS	Stage Main	mezz	4L4' T8 32w/EL-8'	strip cage	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	166	1,600	1,600
1613	Bristol Eastern HS	Auditorium Main	mezz	60W INCANDESCENT	can rec 8"	44	44	60	2.6	8 WATT LED SI	screw in LED par20	44	8	0.4	2.3	3,088	1,600	1,600
1614	Bristol Eastern HS	Auditorium Main	mezz	30W INCANDESCENT	can rec 6"	6	6	30	0.2	8 WATT LED SI	screw in LED par20	6	8	0.1	0.1	176	1,600	1,600
1615	Bristol Eastern HS	Auditorium Main	mezz	30W INCANDESCENT	track can	7	7	30	0.2	8 WATT LED SI	screw in LED par20	7	8	0.1	0.2	206	1,600	1,600
1616	Bristol Eastern HS	Hall By K6	mezz	4L2' T8 17w/EL	trof acr	3	3	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	3	29	0.1	0.1	186	2,240	2,240
1617	Bristol Eastern HS	Storage Washer	mezz	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	21	1,000	700
1618	Bristol Eastern HS	Office K6	mezz	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	133	2,400	1,680
1619	Bristol Eastern HS	Storage Across Aud	mezz	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	39	700	700
1620	Bristol Eastern HS	Hall Stair 2-D&E	mezz	4L2' T8 17w/EL	box acrylic	5	5	62	0.3	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	5	29	0.1	0.2	443	3,200	2,240
1621	Bristol Eastern HS	Hall To C1	mezz	4L2' T8 17w/EL	box acrylic	5	5	62	0.3	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	5	29	0.1	0.2	443	3,200	2,240
1622	Bristol Eastern HS	Classroom 1	mezz	6L4' T8 32w/EL-12'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	729	1,960	1,960
1623	Bristol Eastern HS	Classroom 1	mezz	4L4' T8 32w/EL-8'	indirect/direct	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	203	1,960	1,960
1624	Bristol Eastern HS	Hall C2-3	mezz	4L2' T8 17w/EL	box acrylic	3	3	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	3	29	0.1	0.1	266	3,200	2,240
1625	Bristol Eastern HS	Classroom 2	mezz	4L4' T8 32w/EL-8'	vapor tight	12	12	112	1.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	71	0.9	0.5	812	1,960	1,960
1626	Bristol Eastern HS	Storage 2	mezz	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	14	700	700
1627	Bristol Eastern HS	Storage It	mezz	2L4' T8 32w/EL	strip cage	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	7	350	350
1628	Bristol Eastern HS	Classroom 3	mezz	4L4' T8 32w/EL-8'	vapor tight	16	16	112	1.8	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	16	71	1.1	0.6	1,082	1,960	1,960
1629	Bristol Eastern HS	Lab 4	mezz	6L4' T8 32w/EL-12'	indirect/direct	8	8	180	1.4	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	107	0.9	0.6	937	1,890	1,890
1630	Bristol Eastern HS	Lab 4	mezz	4L4' T8 32w/EL-8'	indirect/direct	8	8	112	0.9	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	71	0.6	0.3	522	1,890	1,890
1631	Bristol Eastern HS	Office 4A	mezz	4L2' T8 17w/EL	trof parabolic	6	6	62	0.4	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	6	29	0.2	0.2	279	1,680	1,680
1632	Bristol Eastern HS	Hall C5-C7	mezz	4L2' T8 17w/EL	box acrylic	13	13	62	0.8	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	13	29	0.4	0.4	1,153	3,200	2,240

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
1633	Bristol Eastern HS	Classroom 7	mezz	4L4' T8 32w/EL	trof acr	12	12	112	1.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	12	53	0.6	0.7	1,699	2,800	1,960
1634	Bristol Eastern HS	Classroom 7 Small	mezz	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	6	53	0.3	0.4	850	2,800	1,960
1635	Bristol Eastern HS	Classroom 7 Small	mezz	4L4' T8 32w/EL	trof acr	5	5	112	0.6	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	5	53	0.3	0.3	708	2,800	1,960
1636	Bristol Eastern HS	Office C7	mezz	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	243	2,400	1,680
1637	Bristol Eastern HS	Storage C7	mezz	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	0.1	51	1,000	700
1638	Bristol Eastern HS	Bath C7 (2)	mezz	1L4' T8 32w/EL	trof acr 1' wide	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	46	2,240	2,240
1639	Bristol Eastern HS	Bath C7 (2)	mezz	1L2' T8 17w/EL	trof acr 1' wide	2	2	17	0.0	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	9	0.0	0.0	29	2,240	2,240
1640	Bristol Eastern HS	Bath Near C6	mezz	1L3' T8 25w/EL	trof acr 1' wide	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	0.0	43	2,240	2,240
1641	Bristol Eastern HS	Shop 6	mezz	4L4' T8 32w/EL-8'	vapor tight	28	28	112	3.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	28	71	2.0	1.1	2,609	2,700	1,890
1642	Bristol Eastern HS	Storage 6B	mezz	4L4' T8 32w/EL-8'	vapor tight	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	48	700	700
1643	Bristol Eastern HS	Storage 6C	mezz	2L4' T8 32w/EL	strip cage	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	21	500	350
1644	Bristol Eastern HS	Storage 6A	mezz	4L4' T8 32w/EL-8'	vapor tight	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	104	1,000	700
1645	Bristol Eastern HS	Lounge 8	mezz	4L4' T8 32w/EL	trof acr	7	7	112	0.8	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	7	53	0.4	0.4	814	2,300	2,300
1646	Bristol Eastern HS	Lounge 8	mezz	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	43	2,300	1,610
1647	Bristol Eastern HS	Storage Timeout	mezz	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	9	500	500
1648	Bristol Eastern HS	Classroom 8	mezz	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	6	53	0.3	0.4	850	2,800	1,960
1649	Bristol Eastern HS	Classroom 8	mezz	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	0.2	566	2,800	2,800
1650	Bristol Eastern HS	Bath 8	mezz	1L3' T8 25w/EL	trof acr 1' wide	1	1	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	13	0.0	0.0	22	2,240	2,240
1651	Bristol Eastern HS	Bath 8	mezz	1L2' T8 17w/EL	trof acr 1' wide	1	1	17	0.0	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	9	0.0	0.0	14	2,240	2,240
1652	Bristol Eastern HS	Office 8	mezz	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	0.2	486	2,400	1,680
1653	Bristol Eastern HS	Classroom 9 Asep2	mezz	4L4' T8 32w/EL-8'	industrial	12	12	112	1.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	71	0.9	0.5	1,160	2,800	1,960
1654	Bristol Eastern HS	Office 9 Asep2	mezz	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	98	1,680	1,680
1655	Bristol Eastern HS	Classroom 5	mezz	4L2' T8 17w/EL	trof acr	6	6	62	0.4	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	6	29	0.2	0.2	466	2,800	1,960
1666	West Bristol K8 School	Hall 2Nd	2	2x26W CF HARDWIRED/EL	can rec	26	26	54	1.4	10 WATT LED/KIT	can kit LED Spectrum	26	11	0.3	1.1	2,375	2,100	2,100
1667	West Bristol K8 School	Hall 2Nd	2	2L2' T8 17w/EL	troffer indirect	56	56	33	1.8	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	56	19	1.1	0.8	1,658	2,100	2,100
1668	West Bristol K8 School	Hall 2Nd	2	26W CF HARDWIRED	decorative	6		28	0.2	NO RETRO	no change -specialized fixture		29	0.2			2,100	2,100
1669	West Bristol K8 School	Hall 2Nd	2	2L4' T8 32w/EL	decorative	12		60	0.7	NO RETRO	no change -specialized fixture		63	0.7			2,100	2,100
1670	West Bristol K8 School	Hall 2Nd	2	100W METAL HALIDE	indirect	6	6	120	0.7	17 WATT LED SI	screw in LED par38	6	18	0.1	0.6	1,287	2,100	2,100
1671	West Bristol K8 School	Office A203	2	2L4' T8 32w/EL	troffer indirect bi-level	4	4	60	0.2	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	4	40	0.2	0.1	135	1,680	1,680
1672	West Bristol K8 School	Stair 2	S	2L4' T8 32w/EL-8'	valance	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	219	3,000	3,000
1673	West Bristol K8 School	Stair 2	S	1L4' T8 32w/EL	valance	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	73	3,000	3,000
1674	West Bristol K8 School	Stair 2	S	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	261	3,000	3,000
1675	West Bristol K8 School	Stair 2	S	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	73	3,000	3,000
1676	West Bristol K8 School	Stair 2	S	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	169	3,000	3,000
1677	West Bristol K8 School	Storage A206	2	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
1678	West Bristol K8 School	Classroom A208	2	2L4' T8 32w/EL	troffer indirect bi-level	4	4	60	0.2	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	4	40	0.2	0.1	158	1,960	1,960
1679	West Bristol K8 School	Storage A207	2	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
1680	West Bristol K8 School	Classroom A204	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1681	West Bristol K8 School	Bath Boys	2	4L4' T8 32w/EL-8'	valance	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	182	2,240	2,240
1682	West Bristol K8 School	Bath Boys	2	2x26W CF HARDWIRED/EL	can rec	3	3	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	0.1	292	2,240	2,240
1683	West Bristol K8 School	Storage Idf	2	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
1684	West Bristol K8 School	Bath Men	2	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
1685	West Bristol K8 School	Bath Women	2	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
1686	West Bristol K8 School	Storage Clean	2	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
1687	West Bristol K8 School	Bath Girls	2	4L4' T8 32w/EL-8'	valance	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	182	2,240	2,240
1688	West Bristol K8 School	Bath Girls	2	2x26W CF HARDWIRED/EL	can rec	3	3	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	0.1	292	2,240	2,240
1689	West Bristol K8 School	Classroom A215	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1690	West Bristol K8 School	Classroom A217	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1691	West Bristol K8 School	Storage A216	2	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
1692	West Bristol K8 School	Classroom A219	2	6L4' T8 32w/EL-8'	indirect/direct	9	9	180	1.6	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	107	1.0	0.7	1,286	1,960	1,960
1693	West Bristol K8 School	Storage A220	2	2L4' T8 32w/EL	trof acr	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	51	700	700
1694	West Bristol K8 School	Classroom A218	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1695	West Bristol K8 School	Classroom A221	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1696	West Bristol K8 School	Classroom A221	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1697	West Bristol K8 School	Stair 1	S	1L4' T8 32w/EL	valance	4	4	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	18	0.1	0.0	146	3,000	3,000
1698	West Bristol K8 School	Stair 1	S	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	73	3,000	3,000
1699	West Bristol K8 School	Hall 3Rd	3	2x26W CF HARDWIRED/EL	can rec	11	11	54	0.6	10 WATT LED/KIT	can kit LED Spectrum	11	11	0.1	0.5	1,005	2,100	2,100
1700	West Bristol K8 School	Hall 3Rd	3	2L2' T8 17w/EL	troffer indirect	17	17	33	0.6	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	17	19	0.3	0.2	503	2,100	2,100
1701	West Bristol K8 School	Hall 3Rd	3	26W CF HARDWIRED	decorative	2		28	0.1	NO RETRO	no change -specialized fixture		29	0.1			2,100	2,100
1702	West Bristol K8 School	Classroom A321	3	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1703	West Bristol K8 School	Classroom A318	3	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1704	West Bristol K8 School	Classroom A319	3	6L4' T8 32w/EL-8'	indirect/direct	9	9	180	1.6	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	107	1.0	0.7	1,286	1,960	1,960
1705	West Bristol K8 School	Storage A320	3	2L4' T8 32w/EL	trof acr	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	51	700	700
1706	West Bristol K8 School	Storage A316	3	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
1707	West Bristol K8 School	Classroom A317	3	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1708	West Bristol K8 School	Classroom A315	3	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1709	West Bristol K8 School	Bath Boys	3	4L4' T8 32w/EL-8'	valance	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	182	2,240	2,240
1710	West Bristol K8 School	Bath Boys	3	2x26W CF HARDWIRED/EL	can rec	3	3	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	0.1	292	2,240	2,240
1711	West Bristol K8 School	Storage Idf	3	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
1712	West Bristol K8 School	Bath Men	3	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
1713	West Bristol K8 School	Bath Women	3	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
1714	West Bristol K8 School	Storage Clean	3	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
1715	West Bristol K8 School	Bath Girls	3	4L4' T8 32w/EL-8'	valance	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	182	2,240	2,240

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
1716	West Bristol K8 School	Bath Girls	3	2x26W CF HARDWIRED/EL	can rec	3	3	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	0.1	292	2,240	2,240
1717	West Bristol K8 School	Classroom A304	3	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1718	West Bristol K8 School	Classroom A308	3	2L4' T8 32w/EL	troffer indirect bi-level	4	4	60	0.2	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	4	40	0.2	0.1	158	1,960	1,960
1719	West Bristol K8 School	Storage A307	3	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
1720	West Bristol K8 School	Storage A306	3	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
1721	West Bristol K8 School	Classroom A323	3	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1722	West Bristol K8 School	Storage A201	2	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	68	700	700
1723	West Bristol K8 School	Library B230	2	2x26W CF HARDWIRED/EL	can rec	20	20	54	1.1	10 WATT LED/KIT	can kit LED Spectrum	20	11	0.2	0.9	1,914	2,200	2,200
1724	West Bristol K8 School	Library B230	2	4L4' T8 32w/EL-8'	trof acr 6" wide	11	11	112	1.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	11	71	0.8	0.4	983	2,200	2,200
1725	West Bristol K8 School	Library B230	2	4L3' T8 25w/EL-6'	trof acr 6" wide	1	1	88	0.1	4L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	50	0.1	0.0	83	2,200	2,200
1726	West Bristol K8 School	Library B230	2	2L4' T8 32w/EL	trof acr 6" wide	22	22	60	1.3	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	22	36	0.8	0.5	1,176	2,200	2,200
1727	West Bristol K8 School	Library B230	2	2L3' T8 25w/EL	trof acr 6" wide	4	4	47	0.2	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	4	25	0.1	0.1	192	2,200	2,200
1728	West Bristol K8 School	Library B230	2	100W METAL HALIDE	indirect	8	8	120	1.0	20 WATT LED/NEW	new LED indirect	8	21	0.2	0.8	1,742	2,200	2,200
1729	West Bristol K8 School	Library B230	2	2L2' F40 BIAX/EL	indirect	16		72	1.2	NO RETRO	no change		76	1.2			2,200	2,200
1730	West Bristol K8 School	Library B230	2	26W CF HARDWIRED	decorative	5		28	0.1	NO RETRO	no change -specialized fixture		29	0.1			2,200	2,200
1731	West Bristol K8 School	Library B230	2	4L4' T8 32w/EL-8'	direct/indirect	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	804	2,200	2,200
1732	West Bristol K8 School	Library B230	2	1L4' T8 32w/EL	direct/indirect	8	8	30	0.2	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	18	0.1	0.1	214	2,200	2,200
1733	West Bristol K8 School	Storage B230C	2	2L4' T8 32w/EL	wrap	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	0.1	146	1,000	1,000
1734	West Bristol K8 School	Storage B230C	2	2L4' T8 32w/EL	wrap	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	0.1	146	1,000	1,000
1735	West Bristol K8 School	Office B230B	2	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	135	2,400	1,680
1736	West Bristol K8 School	Classroom B231	2	2L4' T8 32w/EL	troffer indirect bi-level	12	12	60	0.7	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	12	40	0.5	0.2	473	1,960	1,960
1737	West Bristol K8 School	Office B230A	2	2L4' T8 32w/EL	troffer indirect bi-level	3	3	60	0.2	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	3	40	0.1	0.1	101	1,680	1,680
1738	West Bristol K8 School	Office B230A	2	2L2' T8 17w/EL	troffer indirect	1	1	33	0.0	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	19	0.0	0.0	24	1,680	1,680
1739	West Bristol K8 School	Classroom C249	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1740	West Bristol K8 School	Classroom C248	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1741	West Bristol K8 School	Classroom C252	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1742	West Bristol K8 School	Classroom C253	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1743	West Bristol K8 School	Classroom C254	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1744	West Bristol K8 School	Classroom C255	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1745	West Bristol K8 School	Stair 5	S	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	146	3,000	3,000
1746	West Bristol K8 School	Stair 5	S	1L4' T8 32w/EL	valance	4	4	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	18	0.1	0.0	146	3,000	3,000
1747	West Bristol K8 School	Bath Boys	2	4L4' T8 32w/EL-8'	valance	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	182	2,240	2,240
1748	West Bristol K8 School	Bath Boys	2	2x26W CF HARDWIRED/EL	can rec	3	3	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	0.1	292	2,240	2,240
1749	West Bristol K8 School	Storage Idf	2	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
1750	West Bristol K8 School	Bath Men	2	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
1751	West Bristol K8 School	Bath Women	2	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
1752	West Bristol K8 School	Storage Clean	2	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
1753	West Bristol K8 School	Bath Girls	2	4L4' T8 32w/EL-8'	valance	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	182	2,240	2,240
1754	West Bristol K8 School	Bath Girls	2	2x26W CF HARDWIRED/EL	can rec	3	3	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	0.1	292	2,240	2,240
1755	West Bristol K8 School	Classroom C264	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1756	West Bristol K8 School	Classroom C265	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1757	West Bristol K8 School	Storage C268	2	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
1758	West Bristol K8 School	Classroom C266	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1759	West Bristol K8 School	Classroom C267	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1760	West Bristol K8 School	Classroom C269	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1761	West Bristol K8 School	Classroom C269	2	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	171	1,960	1,960
1762	West Bristol K8 School	Classroom C270	2	2L4' T8 32w/EL	troffer indirect bi-level	4	4	60	0.2	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	4	40	0.2	0.1	158	1,960	1,960
1763	West Bristol K8 School	Classroom C272	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1764	West Bristol K8 School	Classroom C272	2	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	85	1,960	1,960
1765	West Bristol K8 School	Classroom C273	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1766	West Bristol K8 School	Classroom C273	2	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	85	1,960	1,960
1767	West Bristol K8 School	Classroom C274	2	2L4' T8 32w/EL	troffer indirect bi-level	4	4	60	0.2	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	4	40	0.2	0.1	158	1,960	1,960
1768	West Bristol K8 School	Classroom C275	2	2L4' T8 32w/EL	troffer indirect bi-level	5	5	60	0.3	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	5	40	0.2	0.1	197	1,960	1,960
1769	West Bristol K8 School	Classroom C276	2	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	48	1,960	1,960
1770	West Bristol K8 School	Classroom C279	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1771	West Bristol K8 School	Classroom C279	2	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	85	1,960	1,960
1772	West Bristol K8 School	Classroom C281	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1773	West Bristol K8 School	Classroom C281	2	2x18W CF HARDWIRED/EL	can rec	1	1	38	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	54	1,960	1,960
1774	West Bristol K8 School	Classroom C280	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1775	West Bristol K8 School	Classroom C280	2	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	85	1,960	1,960
1776	West Bristol K8 School	Classroom C284	2	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1777	West Bristol K8 School	Classroom C284	2	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	85	1,960	1,960
1778	West Bristol K8 School	Storage C282	2	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
1779	West Bristol K8 School	Classroom C283	2	2L4' T8 32w/EL	troffer indirect bi-level	4	4	60	0.2	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	4	40	0.2	0.1	158	1,960	1,960
1780	West Bristol K8 School	Storage C285	2	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
1781	West Bristol K8 School	Classroom C286	2	2L4' T8 32w/EL	troffer indirect bi-level	4	4	60	0.2	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	4	40	0.2	0.1	158	1,960	1,960
1782	West Bristol K8 School	Stair 4	S	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	146	3,000	3,000
1783	West Bristol K8 School	Stair 4	S	1L4' T8 32w/EL	valance	4	4	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	18	0.1	0.0	146	3,000	3,000
1784	West Bristol K8 School	Hall 1St	1	2x26W CF HARDWIRED/EL	can rec	33	33	54	1.8	10 WATT LED/KIT	can kit LED Spectrum	33	11	0.3	1.4	4,307	3,000	3,000
1785	West Bristol K8 School	Hall 1St	1	2L2' T8 17w/EL	troffer indirect	116	116	33	3.8	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	116	19	2.2	1.6	4,907	3,000	3,000
1786	West Bristol K8 School	Hall 1St	1	26W CF HARDWIRED	decorative	6		28	0.2	NO RETRO	no change -specialized fixture		29	0.2			3,000	3,000
1787	West Bristol K8 School	Classroom C184	1	6L4' T8 32w/EL-8'	indirect/direct	11	11	180	2.0	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	11	107	1.2	0.8	1,572	1,960	1,960
1788	West Bristol K8 School	Bath C184	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
1789	West Bristol K8 School	Classroom C180	1	6L4' T8 32w/EL-8'	indirect/direct	11	11	180	2.0	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	11	107	1.2	0.8	1,572	1,960	1,960
1790	West Bristol K8 School	Bath C180	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
1791	West Bristol K8 School	Classroom C181	1	6L4' T8 32w/EL-8'	indirect/direct	11	11	180	2.0	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	11	107	1.2	0.8	1,572	1,960	1,960
1792	West Bristol K8 School	Bath C181	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
1793	West Bristol K8 School	Classroom C179	1	6L4' T8 32w/EL-8'	indirect/direct	11	11	180	2.0	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	11	107	1.2	0.8	1,572	1,960	1,960
1794	West Bristol K8 School	Bath C179	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
1795	West Bristol K8 School	Classroom C174	1	2L4' T8 32w/EL	troffer indirect bi-level	4	4	60	0.2	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	4	40	0.2	0.1	158	1,960	1,960
1796	West Bristol K8 School	Classroom C173A	1	6L4' T8 32w/EL-8'	indirect/direct	8	8	180	1.4	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	107	0.9	0.6	1,143	1,960	1,960
1797	West Bristol K8 School	Storage C173A	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	17	700	700
1798	West Bristol K8 School	Storage C173A	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	17	700	700
1799	West Bristol K8 School	Classroom C172	1	6L4' T8 32w/EL-8'	indirect/direct	11	11	180	2.0	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	11	107	1.2	0.8	1,572	1,960	1,960
1800	West Bristol K8 School	Bath C172	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
1801	West Bristol K8 School	Storage C171	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
1802	West Bristol K8 School	Classroom C170	1	2L4' T8 32w/EL	troffer indirect bi-level	4	4	60	0.2	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	4	40	0.2	0.1	158	1,960	1,960
1803	West Bristol K8 School	Classroom C169	1	2L4' T8 32w/EL	troffer indirect bi-level	4	4	60	0.2	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	4	40	0.2	0.1	158	1,960	1,960
1804	West Bristol K8 School	Storage C168	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
1805	West Bristol K8 School	Classroom C167	1	6L4' T8 32w/EL-8'	indirect/direct	8	8	180	1.4	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	107	0.9	0.6	1,143	1,960	1,960
1806	West Bristol K8 School	Bath C167	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
1807	West Bristol K8 School	Classroom C166	1	6L4' T8 32w/EL-8'	indirect/direct	8	8	180	1.4	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	107	0.9	0.6	1,143	1,960	1,960
1808	West Bristol K8 School	Bath C166	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
1809	West Bristol K8 School	Bath Boys	1	4L4' T8 32w/EL-8'	valance	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	182	2,240	2,240
1810	West Bristol K8 School	Bath Boys	1	2x26W CF HARDWIRED/EL	can rec	3	3	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	0.1	292	2,240	2,240
1811	West Bristol K8 School	Storage Idf	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
1812	West Bristol K8 School	Bath Men	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
1813	West Bristol K8 School	Bath Women	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
1814	West Bristol K8 School	Storage Clean	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
1815	West Bristol K8 School	Bath Girls	1	4L4' T8 32w/EL-8'	valance	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	182	2,240	2,240
1816	West Bristol K8 School	Bath Girls	1	2x26W CF HARDWIRED/EL	can rec	3	3	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	0.1	292	2,240	2,240
1817	West Bristol K8 School	Classroom C165	1	6L4' T8 32w/EL-8'	indirect/direct	8	8	180	1.4	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	107	0.9	0.6	1,143	1,960	1,960
1818	West Bristol K8 School	Bath C165	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
1819	West Bristol K8 School	Classroom C164	1	6L4' T8 32w/EL-8'	indirect/direct	8	8	180	1.4	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	107	0.9	0.6	1,143	1,960	1,960
1820	West Bristol K8 School	Bath C164	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
1821	West Bristol K8 School	Conference C165	1	2L4' T8 32w/EL	troffer indirect bi-level	4	4	60	0.2	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	4	40	0.2	0.1	135	1,680	1,680
1822	West Bristol K8 School	Office Open C155	1	2L4' T8 32w/EL	trof acr	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	0.2	374	1,925	1,925
1823	West Bristol K8 School	Office Open C155A	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	94	1,925	1,925
1824	West Bristol K8 School	Office Open C155B	1	2L4' T8 32w/EL	troffer indirect bi-level	2	2	60	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	77	1,925	1,925
1825	West Bristol K8 School	Office Open C155C	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	94	1,925	1,925
1826	West Bristol K8 School	Bath C155	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
1827	West Bristol K8 School	Bath C155	1	2x18W CF HARDWIRED/EL	can rec	1	1	38	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	62	2,240	2,240
1828	West Bristol K8 School	Classroom C154	1	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1829	West Bristol K8 School	Classroom C152	1	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1830	West Bristol K8 School	Storage C151	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	34	350	350
1831	West Bristol K8 School	Office C150	1	2L4' T8 32w/EL	troffer indirect bi-level	2	2	60	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	68	1,680	1,680
1832	West Bristol K8 School	Office C149	1	2L4' T8 32w/EL	troffer indirect bi-level	2	2	60	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	68	1,680	1,680
1833	West Bristol K8 School	Office Open C148	1	2L2' T8 17w/EL	troffer indirect	6	6	33	0.2	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	6	19	0.1	0.1	163	1,925	1,925
1834	West Bristol K8 School	Office C148A	1	2L4' T8 32w/EL	troffer indirect bi-level	2	2	60	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	68	1,680	1,680
1835	West Bristol K8 School	Office C148B	1	2L4' T8 32w/EL	troffer indirect bi-level	2	2	60	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	68	1,680	1,680
1836	West Bristol K8 School	Office C148C	1	2L4' T8 32w/EL	troffer indirect bi-level	2	2	60	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	68	1,680	1,680
1837	West Bristol K8 School	Conference Guidance	1	2L2' T8 17w/EL	troffer indirect	6	6	33	0.2	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	6	19	0.1	0.1	142	1,680	1,680
1838	West Bristol K8 School	Storage A101	1	2L4' T8 32w/EL	troffer indirect bi-level	3	3	60	0.2	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	3	40	0.1	0.1	42	700	700
1839	West Bristol K8 School	Mechanical A102	1	2L2' T8 17w/EL	troffer indirect	1	1	33	0.0	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	19	0.0	0.0	5	350	350
1840	West Bristol K8 School	Office Open C146	1	2L2' T8 17w/EL	troffer indirect	23	23	33	0.8	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	23	19	0.4	0.3	624	1,925	1,925
1841	West Bristol K8 School	Bath C146	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
1842	West Bristol K8 School	Bath C146	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
1843	West Bristol K8 School	Storage C146B	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	17	700	700
1844	West Bristol K8 School	Conference C146D	1	2L4' T8 32w/EL	troffer indirect bi-level	3	3	60	0.2	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	3	40	0.1	0.1	101	1,680	1,680
1845	West Bristol K8 School	Office C146C	1	2L4' T8 32w/EL	troffer indirect bi-level	4	4	60	0.2	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	4	40	0.2	0.1	135	1,680	1,680
1846	West Bristol K8 School	Office C146B	1	2L4' T8 32w/EL	troffer indirect bi-level	2	2	60	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	68	1,680	1,680
1847	West Bristol K8 School	Office C146A	1	2L4' T8 32w/EL	troffer indirect bi-level	2	2	60	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	68	1,680	1,680
1848	West Bristol K8 School	Classroom A104	1	2L4' T8 32w/EL	trof acr	11	11	60	0.7	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	11	36	0.4	0.3	524	1,960	1,960
1849	West Bristol K8 School	Storage A104	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	17	350	350
1850	West Bristol K8 School	Storage A106	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
1851	West Bristol K8 School	Storage A107	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
1852	West Bristol K8 School	Classroom A108	1	2L4' T8 32w/EL	troffer indirect bi-level	4	4	60	0.2	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	4	40	0.2	0.1	158	1,960	1,960
1853	West Bristol K8 School	Bath Boys	1	4L4' T8 32w/EL-8'	valance	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	182	2,240	2,240
1854	West Bristol K8 School	Bath Boys	1	2x26W CF HARDWIRED/EL	can rec	3	3	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	0.1	292	2,240	2,240
1855	West Bristol K8 School	Storage Idf	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
1856	West Bristol K8 School	Bath Men	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
1857	West Bristol K8 School	Bath Women	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
1858	West Bristol K8 School	Storage Clean	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
1859	West Bristol K8 School	Bath Girls	1	4L4' T8 32w/EL-8'	valance	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	182	2,240	2,240
1860	West Bristol K8 School	Bath Girls	1	2x26W CF HARDWIRED/EL	can rec	3	3	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	0.1	292	2,240	2,240
1861	West Bristol K8 School	Classroom A115	1	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
1862	West Bristol K8 School	Storage A116	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
1863	West Bristol K8 School	Classroom A117	1	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1864	West Bristol K8 School	Classroom A119	1	6L4' T8 32w/EL-8'	indirect/direct	9	9	180	1.6	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	107	1.0	0.7	1,286	1,960	1,960
1865	West Bristol K8 School	Classroom A119	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	85	1,960	1,960
1866	West Bristol K8 School	Storage A120	1	2L4' T8 32w/EL	trof acr	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	26	350	350
1867	West Bristol K8 School	Classroom A118	1	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1868	West Bristol K8 School	Classroom A121	1	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1869	West Bristol K8 School	Classroom B143	1	6L4' T8 32w/EL-8'	indirect/direct	9	9	180	1.6	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	107	1.0	0.7	1,286	1,960	1,960
1870	West Bristol K8 School	Classroom B143	1	2x26W CF HARDWIRED/EL	can rec	3	3	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	0.1	256	1,960	1,960
1871	West Bristol K8 School	Classroom B142	1	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	857	1,960	1,960
1872	West Bristol K8 School	Classroom B142	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	85	1,960	1,960
1873	West Bristol K8 School	Storage B141	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	68	700	700
1874	West Bristol K8 School	Gym B137 (30)	1	70W CF HARDWIRED/EL	high bay dim	240		70	16.8	NO RETRO	no change -specialized fixture		74	16.8			1,400	1,400
1875	West Bristol K8 School	Gym B137	1	2x26W CF HARDWIRED/EL	can rec	4	4	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	4	11	0.0	0.2	348	2,000	2,000
1876	West Bristol K8 School	Gym B137	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	97	2,000	2,000
1877	West Bristol K8 School	Bath Gym	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
1878	West Bristol K8 School	Storage B140	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	68	700	700
1879	West Bristol K8 School	Locker B137F	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	218	2,240	2,240
1880	West Bristol K8 School	Locker B137F	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	139	3,200	3,200
1881	West Bristol K8 School	Office B137E	1	2L4' T8 32w/EL	troffer indirect bi-level	4	4	60	0.2	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	4	40	0.2	0.1	135	1,680	1,680
1882	West Bristol K8 School	Locker B137B	1	2L4' T8 32w/EL	trof acr	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	0.1	327	2,240	2,240
1883	West Bristol K8 School	Locker B137B	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	139	3,200	3,200
1884	West Bristol K8 School	Storage Gym	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	68	700	700
1885	West Bristol K8 School	Stage B144	1	4L4' T8 32w/EL-8'	strip reflector	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	731	2,000	2,000
1886	West Bristol K8 School	Office B144A	1	2L4' T8 32w/EL	troffer indirect bi-level	2	2	60	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	68	1,680	1,680
1887	West Bristol K8 School	Gym B139	1	2L4' T8 32w/EL	troffer indirect bi-level	9	9	60	0.5	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	9	40	0.4	0.2	253	1,400	1,400
1888	West Bristol K8 School	Gym B139	1	2x26W CF HARDWIRED/EL	can rec	6	6	54	0.3	10 WATT LED/KIT	can kit LED Spectrum	6	11	0.1	0.3	365	1,400	1,400
1889	West Bristol K8 School	Gym B139	1	40W INCANDESCENT	track head	4	4	40	0.2	8 WATT LED SI	screw in LED par20	4	8	0.0	0.1	177	1,400	1,400
1890	West Bristol K8 School	Gym B138	1	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	612	1,400	1,400
1891	West Bristol K8 School	Gym B138	1	2x26W CF HARDWIRED/EL	can rec	3	3	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	0.1	183	1,400	1,400
1892	West Bristol K8 School	Classroom B124	1	6L4' T8 32w/EL-8'	indirect/direct	9	9	180	1.6	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	107	1.0	0.7	1,286	1,960	1,960
1893	West Bristol K8 School	Office B124A	1	2L4' T8 32w/EL	troffer indirect bi-level	3	3	60	0.2	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	3	40	0.1	0.1	101	1,680	1,680
1894	West Bristol K8 School	Storage B125	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	34	350	350
1895	West Bristol K8 School	Bath B125	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
1896	West Bristol K8 School	Bath Girls	1	2L4' T8 32w/EL	trof acr	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	163	2,240	2,240
1897	West Bristol K8 School	Bath Boys	1	2L4' T8 32w/EL	trof acr	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	163	2,240	2,240
1898	West Bristol K8 School	Storage B129	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
1899	West Bristol K8 School	Storage B133	1	2L4' T8 32w/EL	trof acr	12	12	60	0.7	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	36	0.4	0.3	204	700	700
1900	West Bristol K8 School	Lounge B130	1	2L4' T8 32w/EL	troffer indirect bi-level	6	6	60	0.4	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	6	40	0.2	0.1	186	1,540	1,540
1901	West Bristol K8 School	Storage B131	1	2L2' T8 17w/EL	troffer indirect	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	10	350	350
1902	West Bristol K8 School	Cafeteria Z	1	2L2' F40 BIAX/EL	decorative	21		72	1.5	NO RETRO	no change -specialized fixture		76	1.5			2,000	2,000
1903	West Bristol K8 School	Mechanical B135	1	4L4' T8 32w/EL-8'	strip reflector	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	183	500	350
1904	West Bristol K8 School	Kitchen Z	1	2L4' T8 32w/EL	trof acr	28	28	60	1.7	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	28	36	1.0	0.7	1,143	1,680	1,680
1905	West Bristol K8 School	Kitchen Z	1	26W CF HARDWIRED	range hood	10		28	0.3	NO RETRO	no change		29	0.3			2,400	2,400
1906	West Bristol K8 School	Storage B134E	1	2L4' T8 32w/EL	trof acr	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	0.1	102	700	700
1907	West Bristol K8 School	Bath Kit	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,240	2,240
1908	West Bristol K8 School	Office B134C	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	82	1,680	1,680
1909	West Bristol K8 School	Storage B134F	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
1912	Northeast MS	Bath Boys	2	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	109	2,800	1,960
1913	Northeast MS	Bath Men	2	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	63	2,800	1,960
1914	Northeast MS	Storage Janitor	2	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	8	350	350
1915	Northeast MS	Storage S-5	2	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	11	500	500
1916	Northeast MS	Storage Books	2	4L4' T8 32w/EL-8'	wrap	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	23	350	350
1917	Northeast MS	Bath Girls	2	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	109	2,800	1,960
1918	Northeast MS	Bath Woman	2	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	63	2,800	1,960
1919	Northeast MS	Classroom 207	2	4L4' T8 32w/EL-8'	old wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	552	1,890	1,890
1920	Northeast MS	Classroom 206	2	4L4' T8 32w/EL-8'	old wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	552	1,890	1,890
1921	Northeast MS	Classroom 205	2	4L4' T8 32w/EL-8'	old wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	552	1,890	1,890
1922	Northeast MS	Classroom 204	2	4L4' T8 32w/EL-8'	old wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	552	1,890	1,890
1923	Northeast MS	Classroom 203	2	4L4' T8 32w/EL-8'	old wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	552	1,890	1,890
1924	Northeast MS	Classroom 202	2	4L4' T8 32w/EL-8'	old wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	552	1,890	1,890
1925	Northeast MS	Classroom 201	2	4L4' T8 32w/EL-8'	old wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	552	1,890	1,890
1926	Northeast MS	Hall C201-C207	2	4L2' T8 17w/EL	box acrylic	20	20	62	1.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	20	29	0.6	0.7	1,669	3,200	2,240
1927	Northeast MS	Hall C201-C207	2	1L4' T8 32w/EL	wrap narrow	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	62	3,200	2,240
1928	Northeast MS	Classroom 101	1	4L4' T8 32w/EL-8'	old wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	552	1,890	1,890
1929	Northeast MS	Classroom 102	1	4L4' T8 32w/EL-8'	old wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	552	1,890	1,890
1930	Northeast MS	Classroom 103	1	4L4' T8 32w/EL-8'	old wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	552	1,890	1,890
1931	Northeast MS	Classroom 104	1	4L4' T8 32w/EL-8'	old wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	552	1,890	1,890
1932	Northeast MS	Classroom 105	1	4L4' T8 32w/EL-8'	old wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	552	1,890	1,890
1933	Northeast MS	Classroom 106	1	4L4' T8 32w/EL-8'	old wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	552	1,890	1,890
1934	Northeast MS	Classroom 107	1	4L4' T8 32w/EL-8'	old wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	552	1,890	1,890
1935	Northeast MS	Classroom 108	1	4L4' T8 32w/EL-8'	old wrap	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.2	246	1,890	1,890
1936	Northeast MS	Storage Janitor	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	8	350	350

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
1937	Northeast MS	Bath Boys	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	109	2,800	1,960
1938	Northeast MS	Bath Men	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	63	2,800	1,960
1939	Northeast MS	Bath Girls	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	109	2,800	1,960
1940	Northeast MS	Bath Woman	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	63	2,800	1,960
1941	Northeast MS	Hall C101-C108	1	4L2' T8 17w/EL	box acrylic	23	23	62	1.4	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	23	29	0.7	0.7	1,919	3,200	2,240
1942	Northeast MS	Hall C101-C108	1	1L4' T8 32w/EL	wrap narrow	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	62	3,200	2,240
1943	Northeast MS	Stair Near 101	stair	4L2' T8 17w/EL	box acrylic	6	6	62	0.4	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	6	29	0.2	0.2	501	3,200	3,200
1944	Northeast MS	Hall Music Room	1	4L2' T8 17w/EL	box acrylic	3	3	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	3	29	0.1	0.1	250	3,200	2,240
1945	Northeast MS	Storage Greenhouse	1	2L4' T8 32w/EL	wrap	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	39	500	500
1946	Northeast MS	Classroom 99	1	4L4' T8 32w/EL-8'	old wrap	11	11	112	1.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	11	71	0.8	0.4	675	1,890	1,890
1947	Northeast MS	Hall Near Caf	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	249	3,200	2,240
1948	Northeast MS	Cafeteria Main	1	4L4' T8 32w/EL-8'	trof acr 1' wide	19	19	112	2.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	19	71	1.4	0.8	1,173	1,900	1,330
1949	Northeast MS	Cafeteria Main	1	3x13W CF HARDWIRED	square surface mt.	20	20	45	0.9	16 WATT LED/NEW	new LED drum	20	17	0.3	0.6	857	1,900	1,900
1950	Northeast MS	Kitchen Main	1	4L4' T8 32w/EL-8'	vapor tight	10	10	112	1.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	10	71	0.7	0.4	552	1,700	1,700
1951	Northeast MS	Kitchen Main	1	2L4' T8 32w/EL	vapor tight	5	5	60	0.3	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	36	0.2	0.1	165	1,700	1,700
1952	Northeast MS	Kitchen Main	1	4L4' T8 32w/EL-8'	wrap	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	110	1,700	1,700
1953	Northeast MS	Storage Supplies	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	19	1,000	1,000
1954	Northeast MS	Storage Supplies	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	23	1,000	1,000
1955	Northeast MS	Bath Supplies	1	3x13W CF HARDWIRED	drum	2	2	45	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.1	126	2,800	2,800
1956	Northeast MS	Storage Food	1	2L4' T8 32w/EL	wrap wide	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	39	1,000	700
1957	Northeast MS	Foyer K	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,200	2,240
1958	Northeast MS	Office Fish	1	3x13W CF HARDWIRED	drum	2	2	45	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.1	108	2,400	1,680
1959	Northeast MS	Shop Engineering	1	4L4' T8 32w/EL-8'	industrial	17	17	112	1.9	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	17	71	1.2	0.7	1,491	2,700	2,700
1960	Northeast MS	Shop Engineering	1	2L4' T8 32w/EL	industrial	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	105	2,700	2,700
1961	Northeast MS	Storage Engineering	1	100W INCANDESCENT	keyless	2	2	100	0.2	11 WATT LED SI	screw in LED Alamp	2	12	0.0	0.2	142	1,000	1,000
1962	Northeast MS	Storage Wood	1	3x13W CF HARDWIRED	drum	4	4	45	0.2	16 WATT LED/NEW	new LED drum	4	17	0.1	0.1	90	1,000	700
1963	Northeast MS	Classroom Tech	1	2L8' T8/EL	industrial	18	18	109	2.0	2L4' T8 28w/ELEE HI/NEW-8'	new LF strip	18	67	1.2	0.8	1,625	2,700	2,700
1964	Northeast MS	Storage Tech	1	100W INCANDESCENT	keyless	3	3	100	0.3	11 WATT LED SI	screw in LED Alamp	3	12	0.0	0.3	212	1,000	1,000
1965	Northeast MS	Hall K-S1	1	2L4' T8 32w/EL	trof acr	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	0.2	498	3,200	2,240
1966	Northeast MS	Foyer Locker Room	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	72	3,200	2,240
1967	Northeast MS	Gym Main	1	4L4' T5 HO/EL	high bay	28	28	234	6.6	98 WATT LED/NEW	new LED hibay wg	28	103	2.9	3.7	8,751	2,980	2,086
1968	Northeast MS	Office Boys Locker	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	65	1,680	1,680
1969	Northeast MS	Locker Boys	1	2x13W CF HARDWIRED	drum	7	7	30	0.2	16 WATT LED/NEW	new LED drum	7	17	0.1	0.1	207	2,800	1,960
1970	Northeast MS	Locker Boys	1	60W INCANDESCENT	can rec 6"	3	3	60	0.2	8 WATT LED SI	screw in LED par20	3	8	0.0	0.2	347	2,800	1,960
1971	Northeast MS	Storage Balls	1	3x13W CF HARDWIRED	drum	2	2	45	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.1	45	1,000	700
1972	Northeast MS	Mechanical Boiler	1	2L4' T8 32w/EL	strip	11	11	60	0.7	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	11	36	0.4	0.3	107	500	500
1973	Northeast MS	Foyer Near Girls Locker	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	124	3,200	2,240
1974	Northeast MS	Stage Near Girls Locker	1	3x13W CF HARDWIRED	drum	2	2	45	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.1	34	750	750
1975	Northeast MS	Stage Near Girls Locker	1	100W INCANDESCENT	keyless	6	6	100	0.6	11 WATT LED SI	screw in LED Alamp	6	12	0.1	0.5	679	1,600	1,600
1976	Northeast MS	Locker Girls	1	2x13W CF HARDWIRED	drum	4	4	30	0.1	16 WATT LED/NEW	new LED drum	4	17	0.1	0.1	118	2,800	1,960
1977	Northeast MS	Locker Girls	1	60W INCANDESCENT	can rec 6"	9	9	60	0.5	8 WATT LED SI	screw in LED par20	9	8	0.1	0.5	1,040	2,800	1,960
1978	Northeast MS	Office Open Main	1	4L4' T8 32w/EL	trof acr	7	7	112	0.8	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	7	53	0.4	0.4	916	2,750	2,750
1979	Northeast MS	Conference Main	1	4L4' T8 32w/EL-8'	wrap	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	109	1,680	1,680
1980	Northeast MS	Bath Main	1	2x60W INCANDESCENTS	square surface mt.	1	1	120	0.1	16 WATT LED/NEW	new LED drum	1	17	0.0	0.1	231	2,800	1,960
1981	Northeast MS	Office Principal (2)	1	4L4' T8 32w/EL-8'	wrap	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.2	218	1,680	1,680
1982	Northeast MS	Office Copier	1	4L4' T8 32w/EL	wrap wide	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	55	1,680	1,680
1983	Northeast MS	Lobby Main	1	2L4' T8 32w/EL	trof acr	9	9	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	36	0.3	0.2	560	3,200	2,240
1984	Northeast MS	Foyer Main	1	70W METAL HALIDE	flood	1	1	95	0.1	21 WATT LED/NEW	new LED flood	1	22	0.0	0.1	131	2,240	2,240
1985	Northeast MS	Hall S1-Gym	1	2L4' T8 32w/EL	trof acr	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	0.2	498	3,200	2,240
1986	Northeast MS	Bath Woman	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	109	2,800	1,960
1987	Northeast MS	Bath Men	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	109	2,800	1,960
1988	Northeast MS	Office Open Guidance	1	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	0.2	275	1,925	1,925
1989	Northeast MS	Office Guidance (2)	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	160	1,680	1,680
1990	Northeast MS	Storage Guidance	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	0.1	33	700	700
1991	Northeast MS	Office Nurse	1	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	30	1,680	1,680
1992	Northeast MS	Office Nurse	1	4L4' T8 32w/EL	trof acr	5	5	112	0.6	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	5	53	0.3	0.3	400	1,680	1,680
1993	Northeast MS	Bath Nurse	1	2L4' T8 32w/EL	trof acr 1' wide	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,800	1,960
1994	Northeast MS	Classroom 30	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	552	1,890	1,890
1995	Northeast MS	Hall To Room 31	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	87	2,240	2,240
1996	Northeast MS	Office 31 (2)	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	160	1,680	1,680
1997	Northeast MS	Office 31 (3)	1	4L4' T8 32w/EL-8'	trof acr	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	164	1,680	1,680
1998	Northeast MS	Storage 104	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	205	700	700
1999	Northeast MS	Classroom 28	1	4L4' T8 32w/EL-8'	wrap	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	368	1,890	1,890
2000	Northeast MS	Classroom 28	1	2L4' T8 32w/EL	wrap	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	110	1,890	1,890
2001	Northeast MS	Classroom 26	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	552	1,890	1,890
2002	Northeast MS	Classroom 27	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	552	1,890	1,890
2003	Northeast MS	Classroom 25	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	552	1,890	1,890
2004	Northeast MS	Classroom 24	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	552	1,890	1,890
2005	Northeast MS	Hall C30-C24	1	2L4' T8 32w/EL	trof acr	9	9	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	36	0.3	0.2	560	3,200	2,240
2006	Northeast MS	Classroom Band	1	4L4' T8 32w/EL-8'	wrap	16	16	112	1.8	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	16	71	1.1	0.6	982	1,890	1,890
2007	Northeast MS	Storage Band	1	3x13W CF HARDWIRED	drum	2	2	45	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.1	23	500	500
2008	Northeast MS	Storage 18	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	10	500	500
2009	Northeast MS	Classroom 19	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	789	2,700	2,700

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
2010	Northeast MS	Classroom 17	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	789	2,700	2,700
2011	Northeast MS	Storage 16	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	10	500	500
2012	Northeast MS	Storage 15	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	10	500	500
2013	Northeast MS	Hall Lib-C21	1	2L4' T8 32w/EL	trof acr	13	13	60	0.8	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	13	36	0.5	0.3	809	3,200	2,240
2014	Northeast MS	Hall C21-Exit	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	124	3,200	2,240
2015	Northeast MS	Library Main	1	4L4' T8 32w/EL-8'	wrap	14	14	112	1.6	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	14	71	1.0	0.6	700	1,540	1,540
2016	Northeast MS	Library Main	1	2L4' T8 32w/EL	wrap	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	120	1,540	1,540
2017	Northeast MS	Kitchen Library	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	42	1,190	1,190
2018	Northeast MS	Storage Library	1	2L4' T8 32w/EL-8'	wrap narrow	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	14	700	700
2019	Northeast MS	Foyer Near Lib	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	62	3,200	2,240
2020	Northeast MS	Foyer To New Section	1	4L2' T8 17w/EL	box acrylic	3	3	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	3	29	0.1	0.1	250	3,200	2,240
2023	Northeast MS	Stair C207-C107	stair	4L2' T8 17w/EL	box acrylic	5	5	62	0.3	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	5	29	0.1	0.2	417	3,200	3,200
2024	Northeast MS	Classroom 8	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	552	1,890	1,890
2025	Northeast MS	Classroom 11	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	552	1,890	1,890
2026	Northeast MS	Classroom 6	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	552	1,890	1,890
2027	Northeast MS	Classroom 9	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	552	1,890	1,890
2028	Northeast MS	Classroom 7	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	552	1,890	1,890
2029	Northeast MS	Classroom 4	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	552	1,890	1,890
2030	Northeast MS	Classroom 2	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	552	1,890	1,890
2031	Northeast MS	Classroom 2	1	2L4' T8 32w/EL	wrap	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	110	1,890	1,890
2032	Northeast MS	Lounge 5	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	450	1,540	1,540
2033	Northeast MS	Storage 5	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	11	500	350
2034	Northeast MS	Bath Men (2)	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	218	2,800	1,960
2035	Northeast MS	Classroom 3	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	552	1,890	1,890
2036	Northeast MS	Classroom 1	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	552	1,890	1,890
2037	Northeast MS	Storage Custodian	1	3x13W CF HARDWIRED	drum	2	2	45	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.1	23	500	350
2038	Northeast MS	Hall C1-C8	1	2L4' T8 32w/EL	trof acr	14	14	60	0.8	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	14	36	0.5	0.3	871	3,200	2,240
2039	Northeast MS	Storage J-2	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	7	350	350
2040	Northeast MS	Bath Hc	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	54	2,800	1,960
2041	Northeast MS	Storage Textbook	1	3x13W CF HARDWIRED	drum	3	3	45	0.1	16 WATT LED/NEW	new LED drum	3	17	0.1	0.1	34	500	350
2042	Northeast MS	Storage Janitor	1	3x13W CF HARDWIRED	drum	2	2	45	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.1	16	350	350
2043	Northeast MS	Storage Sport Eq	1	4L4' T8 32w/EL-8'	wrap	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	45	700	700
2044	Northeast MS	Storage Sport Eq	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	14	700	700
2045	Northeast MS	Storage Sport Eq	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	16	700	700
2046	Northeast MS	Lounge Faculty	1	4L4' T8 32w/EL-8'	wrap	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.2	200	1,540	1,540
2047	Northeast MS	Office Copy	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	33	1,680	1,680
2048	Northeast MS	Storage Copy	1	4x60W INCANDESCENTS	square surface mt.	1	1	240	0.2	16 WATT LED/NEW	new LED drum	1	17	0.0	0.2	89	500	350
2049	Northeast MS	Classroom 90	1	4L4' T8 32w/EL-8'	wrap	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	184	1,890	1,890
2050	Northeast MS	Classroom 90	1	2L4' T8 32w/EL	wrap	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	110	1,890	1,890
2051	Northeast MS	Storage 90	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	19	1,000	700
2052	Northeast MS	Bath Women	1	3x13W CF HARDWIRED	drum	2	2	45	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.1	126	2,800	1,960
2053	Northeast MS	Bath Women	1	15W CF SCREWIN	globe	2	2	17	0.0	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.0	39	2,800	1,960
2060	Mountain View ES	Stair 2	S	2x26W CF HARDWIRED/EL	sconce	8		54	0.4	NO RETRO	no change		57	0.4			3,000	3,000
2061	Mountain View ES	Hall 2Nd	2	2x26W CF HARDWIRED/EL	can rec	6	6	54	0.3	10 WATT LED/KIT	can kit LED Spectrum	6	11	0.1	0.3	783	3,000	3,000
2062	Mountain View ES	Hall 2Nd	2	26W CF HARDWIRED	can rec	11		28	0.3	NO RETRO	no change		29	0.3			3,000	3,000
2063	Mountain View ES	Hall 2Nd	2	2L4' T8 32w/EL-8'	cove	15	15	60	0.9	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	15	36	0.5	0.4	1,094	3,000	3,000
2064	Mountain View ES	Hall 2Nd	2	1L4' T8 32w/EL	cove	7	7	30	0.2	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	7	18	0.1	0.1	255	3,000	3,000
2065	Mountain View ES	Classroom 213	2	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
2066	Mountain View ES	Classroom 213	2	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
2067	Mountain View ES	Classroom 214	2	4L4' T8 32w/EL-8'	wrap narrow	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	125	1,540	1,540
2068	Mountain View ES	Classroom 201	2	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
2069	Mountain View ES	Classroom 201	2	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
2070	Mountain View ES	Stair 1	S	2x26W CF HARDWIRED/EL	sconce	8		54	0.4	NO RETRO	no change		57	0.4			3,000	3,000
2071	Mountain View ES	Classroom 202	2	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
2072	Mountain View ES	Classroom 202	2	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
2073	Mountain View ES	Classroom 212	2	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
2074	Mountain View ES	Classroom 212	2	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
2075	Mountain View ES	Bath 212	2	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	68	2,100	2,100
2076	Mountain View ES	Classroom 211	2	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
2077	Mountain View ES	Classroom 211	2	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
2078	Mountain View ES	Bath 211	2	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	68	2,100	2,100
2079	Mountain View ES	Classroom 203	2	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
2080	Mountain View ES	Classroom 203	2	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
2081	Mountain View ES	Classroom 204	2	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
2082	Mountain View ES	Classroom 204	2	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
2083	Mountain View ES	Classroom 210	2	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
2084	Mountain View ES	Classroom 210	2	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
2085	Mountain View ES	Bath 210	2	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	68	2,100	2,100
2086	Mountain View ES	Classroom 209	2	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
2087	Mountain View ES	Classroom 209	2	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
2088	Mountain View ES	Bath 209	2	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	68	2,100	2,100
2089	Mountain View ES	Storage Electric	2	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	20	500	500
2090	Mountain View ES	Storage Clean	2	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	12	500	500

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
2091	Mountain View ES	Classroom 205	2	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
2092	Mountain View ES	Classroom 205	2	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
2093	Mountain View ES	Bath Boys	2	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	137	2,100	2,100
2094	Mountain View ES	Bath Boys	2	4L4' T8 32w/EL-8'	soffit	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	171	2,100	2,100
2095	Mountain View ES	Bath Boys	2	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	91	2,100	2,100
2096	Mountain View ES	Bath Men	2	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	68	2,100	2,100
2097	Mountain View ES	Bath Women	2	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	68	2,100	2,100
2098	Mountain View ES	Bath Girls	2	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	137	2,100	2,100
2099	Mountain View ES	Bath Girls	2	4L4' T8 32w/EL-8'	soffit	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	171	2,100	2,100
2100	Mountain View ES	Bath Girls	2	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	91	2,100	2,100
2101	Mountain View ES	Classroom 208	2	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
2102	Mountain View ES	Classroom 208	2	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
2103	Mountain View ES	Classroom 207	2	4L4' T8 32w/EL-8'	wrap narrow	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	125	1,540	1,540
2104	Mountain View ES	Classroom 206	2	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
2105	Mountain View ES	Classroom 206	2	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
2106	Mountain View ES	Hall 1St	1	2x26W CF HARDWIRED/EL	can rec	12	12	54	0.6	10 WATT LED/KIT	can kit LED Spectrum	12	11	0.1	0.5	1,566	3,000	3,000
2107	Mountain View ES	Hall 1St	1	26W CF HARDWIRED	can rec	3		28	0.1	NO RETRO	no change		29	0.1			3,000	3,000
2108	Mountain View ES	Hall 1St	1	2L4' T8 32w/EL-8'	cove	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	0.1	437	3,000	3,000
2109	Mountain View ES	Hall 1St	1	1L4' T8 32w/EL	cove	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	36	3,000	3,000
2110	Mountain View ES	Hall 1St	1	2L2' 24W T5HO/EL	troffer indirect	48		52	2.5	NO RETRO	no change -specialized fixture		55	2.5			3,000	3,000
2111	Mountain View ES	Hall 1St	1	2L4' T8 32w/EL	cove	5	5	60	0.3	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	36	0.2	0.1	365	3,000	3,000
2112	Mountain View ES	Hall 1St	1	2L3' T8 25w/EL	cove	5	5	47	0.2	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	5	25	0.1	0.1	327	3,000	3,000
2113	Mountain View ES	Hall 1St	1	2x26W CF HARDWIRED/EL	sconce	4		54	0.2	NO RETRO	no change		57	0.2			2,100	2,100
2114	Mountain View ES	Hall 1St	1	3 WATT LED	cove	1		3	0.0	NO RETRO	no change		3	0.0			2,100	2,100
2115	Mountain View ES	Classroom 108	1	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	674	1,540	1,540
2116	Mountain View ES	Classroom 108	1	2x26W CF HARDWIRED/EL	can rec	4	4	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	4	11	0.0	0.2	268	1,540	1,540
2117	Mountain View ES	Classroom 108	1	4L4' T8 32w/EL-8'	trof acr 1' wide	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	89	2,200	2,200
2118	Mountain View ES	Classroom 108	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	100	1,540	1,540
2119	Mountain View ES	Bath 108	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	98	3,000	3,000
2120	Mountain View ES	Storage 108	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	70	1,600	1,600
2121	Mountain View ES	Classroom 109	1	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	674	1,540	1,540
2122	Mountain View ES	Classroom 109	1	2x26W CF HARDWIRED/EL	can rec	4	4	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	4	11	0.0	0.2	268	1,540	1,540
2123	Mountain View ES	Classroom 109	1	4L4' T8 32w/EL-8'	trof acr 1' wide	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	89	2,200	2,200
2124	Mountain View ES	Classroom 109	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	100	1,540	1,540
2125	Mountain View ES	Bath 109	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	98	3,000	3,000
2126	Mountain View ES	Storage 109	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	70	1,600	1,600
2127	Mountain View ES	Classroom 107	1	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	674	1,540	1,540
2128	Mountain View ES	Classroom 107	1	2x26W CF HARDWIRED/EL	can rec	4	4	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	4	11	0.0	0.2	268	1,540	1,540
2129	Mountain View ES	Classroom 107	1	4L4' T8 32w/EL-8'	trof acr 1' wide	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	89	2,200	2,200
2130	Mountain View ES	Classroom 107	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	100	1,540	1,540
2131	Mountain View ES	Bath 107	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	98	3,000	3,000
2132	Mountain View ES	Storage 107	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	70	1,600	1,600
2133	Mountain View ES	Classroom 106	1	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	674	1,540	1,540
2134	Mountain View ES	Classroom 106	1	2x26W CF HARDWIRED/EL	can rec	4	4	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	4	11	0.0	0.2	268	1,540	1,540
2135	Mountain View ES	Classroom 106	1	4L4' T8 32w/EL-8'	trof acr 1' wide	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	89	2,200	2,200
2136	Mountain View ES	Classroom 106	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	100	1,540	1,540
2137	Mountain View ES	Bath 106	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	98	3,000	3,000
2138	Mountain View ES	Storage 106	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	70	1,600	1,600
2139	Mountain View ES	Classroom 110	1	2L2' 24W T5HO/EL	troffer indirect	6		52	0.3	NO RETRO	no change -specialized fixture		55	0.3			1,540	1,540
2140	Mountain View ES	Storage Electric	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	20	500	500
2141	Mountain View ES	Classroom 105	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
2142	Mountain View ES	Classroom 105	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
2143	Mountain View ES	Classroom 111	1	2L2' 24W T5HO/EL	troffer indirect	6		52	0.3	NO RETRO	no change -specialized fixture		55	0.3			1,540	1,540
2144	Mountain View ES	Storage 111	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	20	500	500
2145	Mountain View ES	Classroom 112	1	4L4' T8 32w/EL-8'	wrap narrow	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	563	1,540	1,540
2146	Mountain View ES	Classroom 112	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
2147	Mountain View ES	Classroom 113	1	4L4' T8 32w/EL-8'	wrap narrow	12	12	112	1.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	71	0.9	0.5	750	1,540	1,540
2148	Mountain View ES	Classroom 113	1	2x26W CF HARDWIRED/EL	can rec	3	3	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	0.1	201	1,540	1,540
2149	Mountain View ES	Storage 113	1	4L4' T8 32w/EL-8'	wrap	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	28	350	350
2150	Mountain View ES	Storage 113	1	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	12	350	350
2151	Mountain View ES	Classroom 104	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
2152	Mountain View ES	Classroom 104	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
2153	Mountain View ES	Classroom 104	1	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	134	1,540	1,540
2154	Mountain View ES	Bath 104	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	68	2,100	2,100
2155	Mountain View ES	Storage Clean	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
2156	Mountain View ES	Storage Equip	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	14	350	350
2157	Mountain View ES	Storage Z	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	14	350	350
2158	Mountain View ES	Classroom 103	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
2159	Mountain View ES	Classroom 103	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
2160	Mountain View ES	Classroom 103	1	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	134	1,540	1,540
2161	Mountain View ES	Bath 103	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	68	2,100	2,100
2162	Mountain View ES	Library Media	1	2x26W CF HARDWIRED/EL	can rec	12	12	54	0.6	10 WATT LED/KIT	can kit LED Spectrum	12	11	0.1	0.5	658	1,260	1,260
2163	Mountain View ES	Library Media	1	26W CF HARDWIRED	can rec	3		28	0.1	NO RETRO	no change		29	0.1			1,260	1,260

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
2164	Mountain View ES	Library Media	1	2L2' 24W T5HO/EL	troffer indirect	28		52	1.5	NO RETRO	no change -specialized fixture		55	1.5			1,260	1,260
2165	Mountain View ES	Office Workrm	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	183	1,400	1,400
2166	Mountain View ES	Storage Headend	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	45	1,120	1,120
2167	Mountain View ES	Storage Annex	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	39	1,600	1,600
2168	Mountain View ES	Storage Annex	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	146	1,120	1,120
2169	Mountain View ES	Classroom 102B	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
2170	Mountain View ES	Classroom 102B	1	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	134	1,540	1,540
2171	Mountain View ES	Classroom 102A	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
2172	Mountain View ES	Classroom 102A	1	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	134	1,540	1,540
2173	Mountain View ES	Classroom 101B	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
2174	Mountain View ES	Classroom 101B	1	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	134	1,540	1,540
2175	Mountain View ES	Classroom 101A	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
2176	Mountain View ES	Classroom 101A	1	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	134	1,540	1,540
2177	Mountain View ES	Storage Electric	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	20	500	500
2178	Mountain View ES	Office Open Staff	1	2L2' 24W T5HO/EL	troffer indirect	8		52	0.4	NO RETRO	no change -specialized fixture		55	0.4			1,680	1,680
2179	Mountain View ES	Lounge Staff	1	2L2' 24W T5HO/EL	troffer indirect	12		52	0.6	NO RETRO	no change -specialized fixture		55	0.6			1,260	1,260
2180	Mountain View ES	Storage Elevator	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	12	500	500
2181	Mountain View ES	Bath Men	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	68	2,100	2,100
2182	Mountain View ES	Bath Women	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	68	2,100	2,100
2183	Mountain View ES	Office Open Health	1	2L2' 24W T5HO/EL	troffer indirect	9		52	0.5	NO RETRO	no change -specialized fixture		55	0.5			1,680	1,680
2184	Mountain View ES	Office Open Health	1	1L4' T8 32w/EL	task strip	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	29	2,400	2,400
2185	Mountain View ES	Bath Health	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	68	2,100	2,100
2186	Mountain View ES	Office Health	1	2L2' 24W T5HO/EL	troffer indirect	9		52	0.5	NO RETRO	no change -specialized fixture		55	0.5			1,400	1,400
2187	Mountain View ES	Office Health	1	1L4' T8 32w/EL	task strip	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	24	2,000	2,000
2188	Mountain View ES	Conference Main	1	2L2' 24W T5HO/EL	troffer indirect	2		52	0.1	NO RETRO	no change -specialized fixture		55	0.1			1,400	1,400
2189	Mountain View ES	Conference Main	1	2x26W CF HARDWIRED/EL	can rec	7	7	54	0.4	10 WATT LED/KIT	can kit LED Spectrum	7	11	0.1	0.3	426	1,400	1,400
2190	Mountain View ES	Office Open Main	1	2L2' 24W T5HO/EL	troffer indirect	16		52	0.8	NO RETRO	no change -specialized fixture		55	0.8			1,680	1,680
2191	Mountain View ES	Office Principal	1	2L2' 24W T5HO/EL	troffer indirect	6		52	0.3	NO RETRO	no change -specialized fixture		55	0.3			1,400	1,400
2192	Mountain View ES	Gym Z	1	2L2' F55 BIAX/EL	trof acr dim	24		112	2.7	NO RETRO	no change -specialized fixture		118	2.7			2,000	2,000
2193	Mountain View ES	Office Pe	1	3L4' T8 32w/EL	trof acr	3	3	88	0.3	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	54	0.2	0.1	145	1,400	1,400
2194	Mountain View ES	Stage Z	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	70	1,600	1,600
2195	Mountain View ES	Stage Z	1	4L4' T8 32w/EL-8'	industrial	7	7	112	0.8	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	7	71	0.5	0.3	455	1,600	1,600
2196	Mountain View ES	Stage Z	1	75W INCANDESCENT	dome	9		75	0.7	NO RETRO	no change -low hours		79	0.7			100	100
2197	Mountain View ES	Storage Stage	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	14	350	350
2198	Mountain View ES	Storage Electric	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	20	500	500
2199	Mountain View ES	Storage 2Nd Equip	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	20	500	500
2200	Mountain View ES	Mechanical Boiler	1	4L4' T8 32w/EL-8'	industrial	7	7	112	0.8	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	7	71	0.5	0.3	142	500	350
2201	Mountain View ES	Mechanical Outside Electric	1	4L4' T8 32w/EL-8'	industrial	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	41	500	500
2202	Mountain View ES	Bath Boys	1	4L2' T8 17w/EL	trof acr	3	3	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	3	29	0.1	0.1	205	2,100	2,100
2203	Mountain View ES	Bath Boys	1	4L4' T8 32w/EL-8'	soffit	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	171	2,100	2,100
2204	Mountain View ES	Bath Girls	1	4L2' T8 17w/EL	trof acr	3	3	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	3	29	0.1	0.1	205	2,100	2,100
2205	Mountain View ES	Bath Girls	1	4L4' T8 32w/EL-8'	soffit	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	171	2,100	2,100
2206	Mountain View ES	Office Custodian	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	261	2,000	1,400
2207	Mountain View ES	Storage Slop Sink	1	4L2' T8 17w/EL	box acrylic	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	52	1,600	1,600
2208	Mountain View ES	Kitchen Z	1	3L4' T8 32w/EL	trof acr	13	13	88	1.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	13	54	0.7	0.4	851	1,900	1,900
2209	Mountain View ES	Kitchen Z	1	2L3' T8 25w/EL	range hood	4	4	47	0.2	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	4	25	0.1	0.1	166	1,900	1,900
2210	Mountain View ES	Storage Dry Good	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	45	1,120	1,120
2211	Mountain View ES	Office Kitchen	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	34	1,400	1,400
2212	Mountain View ES	Bath Kitchen	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	68	2,100	2,100
2213	Mountain View ES	Cafeteria Z	1	4L2' T8 17w/EL	trof acrylic dbl switch	44	44	62	2.7	4L2' LED HO/ELEE/RLRB	rlrb LEDho 2' dbl switched	44	42	1.8	0.9	1,496	1,700	1,700
2214	Mountain View ES	Cafeteria Z	1	2L2' T8 17w/EL	wrap	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	96	1,700	1,700
2219	Ellen P. Hubbell ES	Mechanical Boiler	1	2L4' T8 32w/ELEE	wrap	5	5	53	0.3	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	5	40	0.2	0.1	28	500	500
2220	Ellen P. Hubbell ES	Mechanical Boiler	1	1L4' T8 32w/EL	vanity	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	5	500	500
2221	Ellen P. Hubbell ES	Office Maint	1	2L4' T8 32w/ELEE	wrap	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	45	2,000	1,400
2222	Ellen P. Hubbell ES	Bath Maint	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	50	3,000	2,100
2223	Ellen P. Hubbell ES	Bath Boys	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	303	3,000	2,100
2224	Ellen P. Hubbell ES	Bath Staff	1	2L4' T8 32w/ELEE	trof acr	1	1	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	1	40	0.0	0.0	33	3,000	2,100
2225	Ellen P. Hubbell ES	Bath Girls	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	303	3,000	2,100
2226	Ellen P. Hubbell ES	Bath Staff	1	2L4' T8 32w/ELEE	trof acr	1	1	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	1	40	0.0	0.0	33	3,000	2,100
2227	Ellen P. Hubbell ES	Office 134	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	621	2,000	1,400
2228	Ellen P. Hubbell ES	Office 134	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	45	2,000	1,400
2229	Ellen P. Hubbell ES	Classroom 133	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
2230	Ellen P. Hubbell ES	Classroom 133	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	49	2,200	1,540
2231	Ellen P. Hubbell ES	Classroom 132	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
2232	Ellen P. Hubbell ES	Classroom 132	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	49	2,200	1,540
2233	Ellen P. Hubbell ES	Classroom 130	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
2234	Ellen P. Hubbell ES	Classroom 130	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	49	2,200	1,540
2235	Ellen P. Hubbell ES	Classroom 131	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
2236	Ellen P. Hubbell ES	Classroom 131	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	49	2,200	1,540
2237	Ellen P. Hubbell ES	Classroom 129	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
2238	Ellen P. Hubbell ES	Classroom 129	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	49	2,200	1,540
2239	Ellen P. Hubbell ES	Classroom 128	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
2240	Ellen P. Hubbell ES	Classroom 128	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	49	2,200	1,540

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
2241	Ellen P. Hubbell ES	Classroom 126	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
2242	Ellen P. Hubbell ES	Classroom 126	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	49	2,200	1,540
2243	Ellen P. Hubbell ES	Classroom 127	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
2244	Ellen P. Hubbell ES	Classroom 127	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	49	2,200	1,540
2245	Ellen P. Hubbell ES	Storage Janitor	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	0.1	25	500	350
2246	Ellen P. Hubbell ES	Office 125	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	202	2,000	1,400
2247	Ellen P. Hubbell ES	Storage 124 Books	1	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	10	1,000	700
2248	Ellen P. Hubbell ES	Office 123 Copy	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	202	2,000	1,400
2249	Ellen P. Hubbell ES	Office 123 Copy	1	3L4' T8 32w/EL	task strip	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	117	2,000	1,400
2250	Ellen P. Hubbell ES	Office 122	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	202	2,000	1,400
2251	Ellen P. Hubbell ES	Bath Men	1	1L4' T8 32w/EL	vanity	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	31	3,000	2,100
2252	Ellen P. Hubbell ES	Bath Boys	1	2L2' F36 BIAX/EL	trof acr	3	3	74	0.2	36 WATT LED/KIT	trof kit LED	3	38	0.1	0.1	277	3,000	2,100
2253	Ellen P. Hubbell ES	Bath Boys	1	1L4' T8 32w/EL	trof para 1' wide	4	4	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	18	0.1	0.0	124	3,000	2,100
2254	Ellen P. Hubbell ES	Bath Hc	1	2L2' F36 BIAX/EL	trof acr	1	1	74	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	0.0	92	3,000	2,100
2255	Ellen P. Hubbell ES	Bath Hc	1	1L4' T8 32w/EL	trof para 1' wide	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	62	3,000	2,100
2256	Ellen P. Hubbell ES	Bath Women	1	1L4' T8 32w/EL	vanity	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	31	3,000	2,100
2257	Ellen P. Hubbell ES	Bath Girls	1	2L2' F36 BIAX/EL	trof acr	3	3	74	0.2	36 WATT LED/KIT	trof kit LED	3	38	0.1	0.1	277	3,000	2,100
2258	Ellen P. Hubbell ES	Bath Girls	1	1L4' T8 32w/EL	trof para 1' wide	4	4	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	18	0.1	0.0	124	3,000	2,100
2259	Ellen P. Hubbell ES	Classroom 121	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
2260	Ellen P. Hubbell ES	Classroom 121	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	49	2,200	1,540
2261	Ellen P. Hubbell ES	Classroom 120	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
2262	Ellen P. Hubbell ES	Classroom 120	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	49	2,200	1,540
2263	Ellen P. Hubbell ES	Classroom 119	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
2264	Ellen P. Hubbell ES	Classroom 119	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	49	2,200	1,540
2265	Ellen P. Hubbell ES	Classroom 118	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
2266	Ellen P. Hubbell ES	Classroom 118	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	49	2,200	1,540
2267	Ellen P. Hubbell ES	Storage Book Room 6	1	2L4' T8 32w/ELEE	trof acr 1' wide	1	1	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	1	40	0.0	0.0	11	1,000	700
2268	Ellen P. Hubbell ES	Classroom 116	1	4L4' T8 32w/EL-8'	wrap	15	15	112	1.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	15	71	1.1	0.6	1,139	2,200	1,540
2269	Ellen P. Hubbell ES	Classroom 116	1	2L4' T8 32w/ELEE	trof acr	4	4	53	0.2	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	4	40	0.2	0.1	98	2,200	1,540
2270	Ellen P. Hubbell ES	Storage Janitor	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	0.1	25	500	350
2271	Ellen P. Hubbell ES	Classroom 117	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
2272	Ellen P. Hubbell ES	Classroom 117	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	49	2,200	1,540
2273	Ellen P. Hubbell ES	Classroom 115	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
2274	Ellen P. Hubbell ES	Classroom 115	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	49	2,200	1,540
2275	Ellen P. Hubbell ES	Storage Book Room 1	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	0.1	51	1,000	700
2276	Ellen P. Hubbell ES	Classroom 114	1	4L4' T8 32w/EL-8'	wrap	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	456	2,200	1,540
2277	Ellen P. Hubbell ES	Classroom 114	1	2L4' T8 32w/ELEE	wrap	3	3	53	0.2	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	3	40	0.1	0.0	73	2,200	1,540
2278	Ellen P. Hubbell ES	Classroom 114	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	0.1	111	2,200	1,540
2279	Ellen P. Hubbell ES	Classroom 114	1	2L2' F36 BIAX/EL	trof acr	3	3	74	0.2	36 WATT LED/KIT	trof kit LED	3	38	0.1	0.1	203	2,200	1,540
2280	Ellen P. Hubbell ES	Classroom 114	1	2x13W CF HARDWIRED	can rec 6"	2	2	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.0	73	2,200	1,540
2281	Ellen P. Hubbell ES	Storage 114	1	2L2' F36 BIAX/EL	trof acr	1	1	74	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	0.0	31	1,000	700
2282	Ellen P. Hubbell ES	Classroom 114	1	2L3' T8 25w/EL-6'	valance	5	5	47	0.2	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	5	25	0.1	0.1	204	2,200	1,540
2283	Ellen P. Hubbell ES	Classroom 114	1	1L3' T8 25w/EL	valance	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	0.0	43	2,200	1,540
2284	Ellen P. Hubbell ES	Bath 114	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	50	3,000	2,100
2285	Ellen P. Hubbell ES	Classroom 113	1	4L4' T8 32w/EL-8'	wrap	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	456	2,200	1,540
2286	Ellen P. Hubbell ES	Classroom 113	1	2L4' T8 32w/ELEE	wrap	3	3	53	0.2	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	3	40	0.1	0.0	73	2,200	1,540
2287	Ellen P. Hubbell ES	Classroom 113	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	0.1	111	2,200	1,540
2288	Ellen P. Hubbell ES	Classroom 113	1	2L2' F36 BIAX/EL	trof acr	3	3	74	0.2	36 WATT LED/KIT	trof kit LED	3	38	0.1	0.1	203	2,200	1,540
2289	Ellen P. Hubbell ES	Classroom 113	1	2x13W CF HARDWIRED	can rec 6"	2	2	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.0	73	2,200	1,540
2290	Ellen P. Hubbell ES	Classroom 113	1	2L3' T8 25w/EL-6'	valance	5	5	47	0.2	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	5	25	0.1	0.1	204	2,200	1,540
2291	Ellen P. Hubbell ES	Classroom 113	1	1L3' T8 25w/EL	valance	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	0.0	43	2,200	1,540
2292	Ellen P. Hubbell ES	Bath 113	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	50	3,000	2,100
2293	Ellen P. Hubbell ES	Classroom 112	1	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	0.2	445	2,200	1,540
2294	Ellen P. Hubbell ES	Storage Bookroom 2	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	101	1,000	700
2295	Ellen P. Hubbell ES	Classroom 111	1	4L4' T8 32w/EL	trof acr	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	1,001	2,200	1,540
2296	Ellen P. Hubbell ES	Storage 111 (2)	1	2x13W CF HARDWIRED	can rec 6"	2	2	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.0	17	500	500
2297	Ellen P. Hubbell ES	Storage 111	1	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	0.2	152	1,000	700
2298	Ellen P. Hubbell ES	Bath Near C111	1	1L4' T8 32w/EL	vanity	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	31	3,000	2,100
2299	Ellen P. Hubbell ES	Storage Janitor	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	0.1	25	500	350
2300	Ellen P. Hubbell ES	Classroom 110	1	4L4' T8 32w/EL-8'	wrap	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	456	2,200	1,540
2301	Ellen P. Hubbell ES	Classroom 110	1	2L4' T8 32w/ELEE	wrap	3	3	53	0.2	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	3	40	0.1	0.0	73	2,200	1,540
2302	Ellen P. Hubbell ES	Classroom 110	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	0.1	111	2,200	1,540
2303	Ellen P. Hubbell ES	Classroom 110	1	2L2' F36 BIAX/EL	trof acr	3	3	74	0.2	36 WATT LED/KIT	trof kit LED	3	38	0.1	0.1	203	2,200	1,540
2304	Ellen P. Hubbell ES	Classroom 110	1	2x13W CF HARDWIRED	can rec 6"	2	2	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.0	73	2,200	1,540
2305	Ellen P. Hubbell ES	Storage 110	1	2L2' F36 BIAX/EL	trof acr	1	1	74	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	0.0	31	1,000	700
2306	Ellen P. Hubbell ES	Classroom 110	1	2L3' T8 25w/EL-6'	valance	5	5	47	0.2	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	5	25	0.1	0.1	204	2,200	1,540
2307	Ellen P. Hubbell ES	Classroom 110	1	1L3' T8 25w/EL	valance	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	0.0	43	2,200	1,540
2308	Ellen P. Hubbell ES	Bath 110	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	50	3,000	2,100
2309	Ellen P. Hubbell ES	Classroom 109	1	4L4' T8 32w/EL-8'	wrap	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	456	2,200	1,540
2310	Ellen P. Hubbell ES	Classroom 109	1	2L4' T8 32w/ELEE	wrap	3	3	53	0.2	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	3	40	0.1	0.0	73	2,200	1,540
2311	Ellen P. Hubbell ES	Classroom 109	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	0.1	111	2,200	1,540
2312	Ellen P. Hubbell ES	Classroom 109	1	2L2' F36 BIAX/EL	trof acr	3	3	74	0.2	36 WATT LED/KIT	trof kit LED	3	38	0.1	0.1	203	2,200	1,540
2313	Ellen P. Hubbell ES	Classroom 109	1	2x13W CF HARDWIRED	can rec 6"	2	2	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.0	73	2,200	1,540

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
2314	Ellen P. Hubbell ES	Classroom 109	1	2L3' T8 25w/EL-6'	valance	5	5	47	0.2	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	5	25	0.1	0.1	204	2,200	1,540
2315	Ellen P. Hubbell ES	Classroom 109	1	1L3' T8 25w/EL	valance	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	0.0	43	2,200	1,540
2316	Ellen P. Hubbell ES	Bath 109	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	50	3,000	2,100
2317	Ellen P. Hubbell ES	Classroom 107	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
2318	Ellen P. Hubbell ES	Classroom 107	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	49	2,200	1,540
2319	Ellen P. Hubbell ES	Bath 107	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	50	3,000	2,100
2320	Ellen P. Hubbell ES	Classroom 108	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
2321	Ellen P. Hubbell ES	Classroom 108	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	49	2,200	1,540
2322	Ellen P. Hubbell ES	Bath 108	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	50	3,000	2,100
2323	Ellen P. Hubbell ES	Classroom 106	1	4L4' T8 32w/EL-8'	wrap	12	12	112	1.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	71	0.9	0.5	911	2,200	1,540
2324	Ellen P. Hubbell ES	Classroom 106	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	49	2,200	1,540
2325	Ellen P. Hubbell ES	Bath 106	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	50	3,000	2,100
2326	Ellen P. Hubbell ES	Classroom 105	1	4L4' T8 32w/EL-8'	wrap	12	12	112	1.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	71	0.9	0.5	911	2,200	1,540
2327	Ellen P. Hubbell ES	Classroom 105	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	49	2,200	1,540
2328	Ellen P. Hubbell ES	Bath 105	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	50	3,000	2,100
2329	Ellen P. Hubbell ES	Classroom 104	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
2330	Ellen P. Hubbell ES	Classroom 104	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	49	2,200	1,540
2331	Ellen P. Hubbell ES	Bath 104	1	1L2' T12 20w STD/STD	old vanity	1	1	32	0.0	1L2' T8 15w/ELEE LO/NEW	new LF vanity	1	15	0.0	0.0	44	3,000	3,000
2332	Ellen P. Hubbell ES	Classroom 103	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
2333	Ellen P. Hubbell ES	Classroom 103	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	49	2,200	1,540
2334	Ellen P. Hubbell ES	Bath 103	1	1L2' T12 20w STD/STD	old vanity	1	1	32	0.0	1L2' T8 15w/ELEE LO/NEW	new LF vanity	1	15	0.0	0.0	44	3,000	3,000
2335	Ellen P. Hubbell ES	Classroom 101	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
2336	Ellen P. Hubbell ES	Classroom 101	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	49	2,200	1,540
2337	Ellen P. Hubbell ES	Bath 101	1	1L2' T12 20w STD/STD	old vanity	1	1	32	0.0	1L2' T8 15w/ELEE LO/NEW	new LF vanity	1	15	0.0	0.0	44	3,000	3,000
2338	Ellen P. Hubbell ES	Classroom 102	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
2339	Ellen P. Hubbell ES	Classroom 102	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	49	2,200	1,540
2340	Ellen P. Hubbell ES	Bath 102	1	1L2' T12 20w STD/STD	old vanity	1	1	32	0.0	1L2' T8 15w/ELEE LO/NEW	new LF vanity	1	15	0.0	0.0	44	3,000	3,000
2341	Ellen P. Hubbell ES	Office Health Room	1	2L2' F36 BIAX/EL	trof acr	7	7	74	0.5	36 WATT LED/KIT	trof kit LED	7	38	0.3	0.3	431	2,000	1,400
2342	Ellen P. Hubbell ES	Bath Health Room	1	1L4' T8 32w/EL	vanity	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	31	3,000	2,100
2343	Ellen P. Hubbell ES	Bath Staff	1	1L4' T8 32w/EL	vanity	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	31	3,000	2,100
2344	Ellen P. Hubbell ES	Storage Paper	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	0.1	51	1,000	700
2345	Ellen P. Hubbell ES	Mechanical Paper	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	0.1	25	500	350
2346	Ellen P. Hubbell ES	Library Media Center	1	2L2' F36 BIAX/EL	trof parabolic	9	9	74	0.7	36 WATT LED/KIT	trof kit LED	9	38	0.3	0.3	498	1,800	1,260
2347	Ellen P. Hubbell ES	Library Media Center	1	2L2' F36 BIAX/EL	trof parabolic	12	12	74	0.9	36 WATT LED/KIT	trof kit LED	12	38	0.5	0.4	665	1,800	1,260
2348	Ellen P. Hubbell ES	Library Media Center (2)	1	4L4' T8 32w/EL-8'	indirect/direct	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.2	248	1,800	1,260
2349	Ellen P. Hubbell ES	Library Media Center (2)	1	2L4' T8 32w/ELEE	indirect/direct	4	4	53	0.2	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	4	40	0.2	0.1	80	1,800	1,260
2350	Ellen P. Hubbell ES	Library Media Center (2)	1	2L3' T8 25w/EL	indirect/direct	8	8	47	0.4	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	8	25	0.2	0.2	267	1,800	1,260
2351	Ellen P. Hubbell ES	Storage Media Center	1	2L4' T8 32w/ELEE	strip	1	1	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	1	40	0.0	0.0	6	500	350
2352	Ellen P. Hubbell ES	Storage Bookroom 5	1	2L4' T8 32w/ELEE	trof acr 1' wide	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	11	500	350
2353	Ellen P. Hubbell ES	Office Library	1	2L2' F36 BIAX/EL	trof parabolic	2	2	74	0.1	36 WATT LED/KIT	trof kit LED	2	38	0.1	0.1	123	2,000	1,400
2354	Ellen P. Hubbell ES	Office 141 Psych	1	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	0.2	303	2,000	1,400
2355	Ellen P. Hubbell ES	Office 142	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	202	2,000	1,400
2356	Ellen P. Hubbell ES	Office 142	1	1L3' T12 25w EE/EEMAG	task strip	3	3	38	0.1	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	3	13	0.0	0.1	130	2,000	1,400
2357	Ellen P. Hubbell ES	Lounge 143 Staff	1	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	0.2	273	1,800	1,260
2358	Ellen P. Hubbell ES	Bath 143 Staff (2)	1	1L4' T8 32w/EL	vanity	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	62	3,000	2,100
2359	Ellen P. Hubbell ES	Kitchen Main	1	4L4' T8 32w/EL	trof acr	12	12	112	1.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	12	53	0.6	0.7	1,153	1,900	1,900
2360	Ellen P. Hubbell ES	Kitchen Main	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	72	1,900	1,900
2361	Ellen P. Hubbell ES	Storage Main	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	101	1,000	700
2362	Ellen P. Hubbell ES	Locker Kitchen	1	2L2' F36 BIAX/EL	trof acr	1	1	74	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	0.0	92	3,000	2,100
2363	Ellen P. Hubbell ES	Bath Kitchen	1	2L2' F36 BIAX/EL	trof acr	1	1	74	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	0.0	92	3,000	2,100
2364	Ellen P. Hubbell ES	Hall Kitch-Caf	1	2L2' F36 BIAX/EL	trof acr	4	4	74	0.3	36 WATT LED/KIT	trof kit LED	4	38	0.2	0.1	369	3,000	2,100
2365	Ellen P. Hubbell ES	Hall Kitch-Caf	1	2L2' F36 BIAX/EL	trof acr	6	6	74	0.4	36 WATT LED/KIT	trof kit LED	6	38	0.2	0.2	554	3,000	2,100
2366	Ellen P. Hubbell ES	Cafeteria Main (4)	1	4L4' T8 32w/EL-8'	indirect/direct	8	8	112	0.9	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	71	0.6	0.3	469	1,700	1,190
2367	Ellen P. Hubbell ES	Cafeteria Main (4)	1	2L4' T8 32w/ELEE	indirect/direct	16	16	53	0.8	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	16	40	0.6	0.2	303	1,700	1,700
2368	Ellen P. Hubbell ES	Cafeteria Main (4)	1	1L3' T8 25w/EL	indirect/direct	16	16	24	0.4	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	16	13	0.2	0.2	264	1,700	1,700
2369	Ellen P. Hubbell ES	Cafeteria Main	1	4L3' T8 25w/EL-6'	indirect/direct	2	2	88	0.2	4L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	50	0.1	0.1	109	1,700	1,700
2370	Ellen P. Hubbell ES	Cafeteria Main	1	2L4' T8 32w/ELEE	indirect/direct	3	3	53	0.2	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	3	40	0.1	0.0	57	1,700	1,700
2371	Ellen P. Hubbell ES	Cafeteria Main	1	1L3' T8 25w/EL	indirect/direct	3	3	24	0.1	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	3	13	0.0	0.0	49	1,700	1,700
2372	Ellen P. Hubbell ES	Cafeteria Main	1	4L4' T8 32w/EL-8'	indirect/direct	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	117	1,700	1,700
2373	Ellen P. Hubbell ES	Cafeteria Main	1	1L3' T8 25w/EL	indirect/direct	4	4	24	0.1	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	4	13	0.1	0.0	66	1,700	1,700
2374	Ellen P. Hubbell ES	Cafeteria Main	1	2L4' T8 32w/ELEE	indirect/direct	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	38	1,700	1,700
2375	Ellen P. Hubbell ES	Cafeteria Main	1	2L2' F36 BIAX/EL	trof acr	1	1	74	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	0.0	52	1,700	1,700
2376	Ellen P. Hubbell ES	Gym Main	1	4L4' T5 HO/EL	high bay	22	22	234	5.1	98 WATT LED/NEW	new LED hibay wg	22	103	2.3	2.9	4,903	2,000	1,400
2377	Ellen P. Hubbell ES	Gym Main	1	2x13W CF HARDWIRED	square recessed	4	4	30	0.1	16 WATT LED/NEW	new LED drum	4	17	0.1	0.1	90	2,000	2,000
2378	Ellen P. Hubbell ES	Office Phys Ed	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	0.1	101	2,000	1,400
2379	Ellen P. Hubbell ES	Storage Gymnasium	1	2L4' T8 32w/ELEE	trof acr 1' wide	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	0.0	22	1,000	700
2380	Ellen P. Hubbell ES	Stage Main	1	2L4' T8 32w/ELEE	wrap	9	9	53	0.5	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	9	40	0.4	0.1	160	1,600	1,120
2381	Ellen P. Hubbell ES	Stage Main	1	2x13W CF HARDWIRED	square recessed	2	2	30	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.0	36	1,600	1,120
2382	Ellen P. Hubbell ES	Office Open Main Waiting	1	2L2' F36 BIAX/EL	trof parabolic	5	5	74	0.4	36 WATT LED/KIT	trof kit LED	5	38	0.2	0.2	369	2,400	1,680
2383	Ellen P. Hubbell ES	Office Open Main Files	1	2L2' F36 BIAX/EL	trof parabolic	6	6	74	0.4	36 WATT LED/KIT	trof kit LED	6	38	0.2	0.2	443	2,400	1,680
2384	Ellen P. Hubbell ES	Office Staff	1	2L2' F36 BIAX/EL	trof parabolic	3	3	74	0.2	36 WATT LED/KIT	trof kit LED	3	38	0.1	0.1	185	2,000	1,400
2385	Ellen P. Hubbell ES	Office Principal	1	2L2' F36 BIAX/EL	trof parabolic	6	6	74	0.4	36 WATT LED/KIT	trof kit LED	6	38	0.2	0.2	369	2,000	1,400
2386	Ellen P. Hubbell ES	Lobby Main	1	2L2' F36 BIAX/EL	trof opaque	8	8	74	0.6	36 WATT LED/KIT	trof kit LED	8	38	0.3	0.3	738	3,000	2,100

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
2387	Ellen P. Hubbell ES	Lobby Main (4)	1	1L4' T8 32w/EL	trof acr 6" wide	16	16	30	0.5	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	16	18	0.3	0.2	496	3,000	2,100
2388	Ellen P. Hubbell ES	Hall Near Main Lobby	1	2L2' F36 BIAX/EL	trof opaque	6	6	74	0.4	36 WATT LED/KIT	trof kit LED	6	38	0.2	0.2	554	3,000	2,100
2389	Ellen P. Hubbell ES	Hall Near Main Lobby	1	1L4' T8 32w/EL	trof acr 6" wide	4	4	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	18	0.1	0.0	124	3,000	2,100
2390	Ellen P. Hubbell ES	Hall Gym-Maint Office	1	2L2' F36 BIAX/EL	trof opaque	7	7	74	0.5	36 WATT LED/KIT	trof kit LED	7	38	0.3	0.3	646	3,000	3,000
2391	Ellen P. Hubbell ES	Hall Gym-Maint Office	1	2L3' T8 25w/EL-6'	trof acr 6" wide	1	1	47	0.0	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	25	0.0	0.0	56	3,000	3,000
2392	Ellen P. Hubbell ES	Hall Gym-Maint Office	1	2L3' T8 25w/EL-6'	trof acr 6" wide	2	2	47	0.1	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	25	0.1	0.0	111	3,000	3,000
2393	Ellen P. Hubbell ES	Hall Honesty Rd	1	1L4' T8 32w/EL	trof acr 6" wide	4	4	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	18	0.1	0.0	124	3,000	3,000
2394	Ellen P. Hubbell ES	Hall Honesty Rd	1	2L2' F36 BIAX/EL	trof opaque	9	9	74	0.7	36 WATT LED/KIT	trof kit LED	9	38	0.3	0.3	831	3,000	3,000
2395	Ellen P. Hubbell ES	Hall Honesty Rd	1	2L3' T8 25w/EL-6'	trof acr 6" wide	2	2	47	0.1	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	25	0.1	0.0	111	3,000	3,000
2396	Ellen P. Hubbell ES	Hall Honesty Rd	1	2x13W CF HARDWIRED	can rec 6"	2	2	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.0	99	3,000	3,000
2397	Ellen P. Hubbell ES	Hall Respect Way	1	2L2' F36 BIAX/EL	trof opaque	10	10	74	0.7	36 WATT LED/KIT	trof kit LED	10	38	0.4	0.4	923	3,000	3,000
2398	Ellen P. Hubbell ES	Hall Respect Way	1	2L3' T8 25w/EL-6'	trof acr 6" wide	6	6	47	0.3	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	6	25	0.2	0.1	334	3,000	3,000
2399	Ellen P. Hubbell ES	Hall Respect Way	1	1L4' T8 32w/EL	trof acr 6" wide	4	4	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	18	0.1	0.0	124	3,000	3,000
2400	Ellen P. Hubbell ES	Hall C123-127	1	2L2' F36 BIAX/EL	trof opaque	10	10	74	0.7	36 WATT LED/KIT	trof kit LED	10	38	0.4	0.4	923	3,000	3,000
2401	Ellen P. Hubbell ES	Hall C123-127 (2)	1	1L4' T8 32w/EL	trof acr 6" wide	8	8	30	0.2	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	18	0.1	0.1	248	3,000	3,000
2402	Ellen P. Hubbell ES	Hall C123-127	1	1L2' T8 17w/EL	trof acr 6" wide	2	2	17	0.0	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	9	0.0	0.0	39	3,000	3,000
2403	Ellen P. Hubbell ES	Hall C123-127	1	1L3' T8 25w/EL	trof acr 6" wide	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	0.0	58	3,000	3,000
2404	Ellen P. Hubbell ES	Hall C120-C114	1	2L2' F36 BIAX/EL	trof opaque	9	9	74	0.7	36 WATT LED/KIT	trof kit LED	9	38	0.3	0.3	831	3,000	3,000
2405	Ellen P. Hubbell ES	Hall C120-C114	1	1L2' T8 17w/EL	trof acr 6" wide	8	8	17	0.1	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	8	9	0.1	0.1	154	3,000	3,000
2406	Ellen P. Hubbell ES	Hall C120-C114	1	1L3' T8 25w/EL	trof acr 6" wide	8	8	24	0.2	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	8	13	0.1	0.1	233	3,000	3,000
2407	Ellen P. Hubbell ES	Hall C120-C114	1	3L4' T8 32w/EL	trof opaque	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	351	3,000	3,000
2408	Ellen P. Hubbell ES	Hall Kindness Ave	1	2L2' F36 BIAX/EL	trof opaque	16	16	74	1.2	36 WATT LED/KIT	trof kit LED	16	38	0.6	0.6	1,477	3,000	3,000
2409	Ellen P. Hubbell ES	Hall Kindness Ave	1	1L2' T8 17w/EL	trof acr 6" wide	2	2	17	0.0	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	9	0.0	0.0	39	3,000	3,000
2410	Ellen P. Hubbell ES	Hall Kindness Ave	1	1L3' T8 25w/EL	trof acr 6" wide	5	5	24	0.1	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	5	13	0.1	0.1	145	3,000	3,000
2411	Ellen P. Hubbell ES	Hall Kindness Ave	1	1L4' T8 32w/EL	trof acr 6" wide	3	3	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	18	0.1	0.0	93	3,000	3,000
2412	Ellen P. Hubbell ES	Hall Kindness Ave	1	2L4' T8 32w/EL-8'	trof acr 6" wide	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	62	3,000	3,000
2413	Ellen P. Hubbell ES	Hall Kindness Ave	1	2L3' T8 25w/EL-6'	trof acr 6" wide	3	3	47	0.1	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	3	25	0.1	0.1	167	3,000	3,000
2414	Ellen P. Hubbell ES	Hall C110-C107	1	1L4' T8 32w/EL	trof acr 6" wide	4	4	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	18	0.1	0.0	124	3,000	3,000
2415	Ellen P. Hubbell ES	Hall C110-C107	1	2L2' F36 BIAX/EL	trof opaque	2	2	74	0.1	36 WATT LED/KIT	trof kit LED	2	38	0.1	0.1	185	3,000	3,000
2416	Ellen P. Hubbell ES	Hall C110-C107	1	1L2' T8 17w/EL	trof acr 6" wide	2	2	17	0.0	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	9	0.0	0.0	39	3,000	3,000
2417	Ellen P. Hubbell ES	Hall C110-C107	1	1L3' T8 25w/EL	trof acr 6" wide	3	3	24	0.1	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	3	13	0.0	0.0	87	3,000	3,000
2418	Ellen P. Hubbell ES	Hall C110-C107	1	2L4' T8 32w/EL-8'	trof acr 6" wide	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	124	3,000	3,000
2419	Ellen P. Hubbell ES	Hall C110-C107	1	2L3' T8 25w/EL-6'	trof acr 6" wide	2	2	47	0.1	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	25	0.1	0.0	111	3,000	3,000
2420	Ellen P. Hubbell ES	Hall C107-Health Room	1	2L2' F36 BIAX/EL	trof opaque	11	11	74	0.8	36 WATT LED/KIT	trof kit LED	11	38	0.4	0.4	1,015	3,000	3,000
2421	Ellen P. Hubbell ES	Hall C107-Health Room	1	3L4' T8 32w/EL	trof opaque	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	351	3,000	3,000
2422	Ellen P. Hubbell ES	Hall C107-Health Room	1	2x13W CF HARDWIRED	can rec 6"	9	9	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	9	11	0.1	0.2	448	3,000	3,000
2423	Ellen P. Hubbell ES	Hall C107-Health Room	1	1L3' T8 25w/EL	can rec 6"	1	1	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	13	0.0	0.0	29	3,000	3,000
2424	Ellen P. Hubbell ES	Hall C107-Health Room	1	2L3' T8 25w/EL-6'	can rec 6"	6	6	47	0.3	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	6	25	0.2	0.1	334	3,000	3,000
2425	Ellen P. Hubbell ES	Hall By Library	1	2L2' F36 BIAX/EL	trof opaque	8	8	74	0.6	36 WATT LED/KIT	trof kit LED	8	38	0.3	0.3	738	3,000	3,000
2426	Ellen P. Hubbell ES	Hall By Library	1	2x13W CF HARDWIRED	can rec 6"	8	8	30	0.2	10 WATT LED/KIT	can kit LED Spectrum	8	11	0.1	0.2	398	3,000	3,000
2431	Main Library	Library Stacks Parking Lot Side	2	4L4' T8 32w/EL	indirect/direct	36	36	112	4.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	36	71	2.6	1.5	7,220	4,940	4,940
2432	Main Library	Library Stacks Parking Lot Side	2	2x26W CF HARDWIRED/EL	can rec 8"	29	29	54	1.6	15 WATT LED/KIT	can kit LED Spectrum	29	16	0.5	1.1	5,480	4,940	4,940
2433	Main Library	Lobby Elevator	2	2x26W CF HARDWIRED/EL	can rec 8"	2	2	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	2	16	0.0	0.1	378	4,940	4,940
2434	Main Library	Library Open Main Area	2	4L4' T8 32w/EL	indirect/direct	52	52	112	5.8	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	52	71	3.7	2.1	10,429	4,940	4,940
2435	Main Library	Library Open Main Area	2	2x26W CF HARDWIRED/EL	can rec 8"	51	51	54	2.8	15 WATT LED/KIT	can kit LED Spectrum	51	16	0.8	2.0	9,637	4,940	4,940
2436	Main Library	Office Ref Staff (2)	2	2L2' F40 BIAX/EL	indirect/direct	2	2	72	0.1	36 WATT LED/KIT	trof kit LED	2	38	0.1	0.1	86	1,260	1,260
2437	Main Library	Office Study Room 2 (2)	2	2L2' F40 BIAX/EL	indirect/direct	2	2	72	0.1	36 WATT LED/KIT	trof kit LED	2	38	0.1	0.1	86	1,260	1,260
2438	Main Library	Storage To Roof	2	1L4' T8 32w/EL	strip	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	6	500	350
2439	Main Library	Storage History Room	2	2L2' F40 BIAX/EL	indirect/direct	17	17	72	1.2	36 WATT LED/KIT	trof kit LED	17	38	0.6	0.6	407	700	700
2440	Main Library	Storage Printer	2	2L2' F40 BIAX/EL	indirect/direct	1	1	72	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	0.0	24	700	700
2441	Main Library	Storage Av	2	2L2' F40 BIAX/EL	indirect/direct	1	1	72	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	0.0	24	700	700
2442	Main Library	Storage Books	2	2L2' F40 BIAX/EL	indirect/direct	12	12	72	0.9	36 WATT LED/KIT	trof kit LED	12	38	0.5	0.4	287	700	700
2443	Main Library	Office Supervisor	2	2L2' F40 BIAX/EL	indirect/direct	6	6	72	0.4	36 WATT LED/KIT	trof kit LED	6	38	0.2	0.2	259	1,260	1,260
2444	Main Library	Storage Supervisor	2	2L2' F40 BIAX/EL	trof acr	1	1	72	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	0.0	12	350	350
2445	Main Library	Lab Computer	2	2L2' F40 BIAX/EL	indirect/direct	16	16	72	1.2	36 WATT LED/KIT	trof kit LED	16	38	0.6	0.5	1,892	3,458	3,458
2446	Main Library	Storage Electric	2	2L2' F40 BIAX/EL	indirect/direct	1	1	72	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	0.0	12	350	350
2447	Main Library	Library Fiction	2	2L2' F40 BIAX/EL	indirect/direct	40	40	72	2.9	36 WATT LED/KIT	trof kit LED	40	38	1.5	1.4	6,758	4,940	4,940
2448	Main Library	Library Fiction	2	2x26W CF HARDWIRED/EL	can rec 8"	9	9	54	0.5	15 WATT LED/KIT	can kit LED Spectrum	9	16	0.1	0.3	1,701	4,940	4,940
2449	Main Library	Lobby Bathroom	2	2L2' F40 BIAX/EL	indirect/direct	2	2	72	0.1	36 WATT LED/KIT	trof kit LED	2	38	0.1	0.1	237	3,458	3,458
2450	Main Library	Bath Men (2)	2	2L2' F40 BIAX/EL	indirect/direct	4	4	72	0.3	36 WATT LED/KIT	trof kit LED	4	38	0.2	0.1	239	1,750	1,750
2451	Main Library	Library Fiction Area 6-7	2	2L2' F40 BIAX/EL	indirect/direct	3	3	72	0.2	36 WATT LED/KIT	trof kit LED	3	38	0.1	0.1	507	4,940	4,940
2452	Main Library	Library Fiction Area 6-7	2	2L4' T8 32w/EL	wrap	18	18	60	1.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	18	36	0.6	0.4	2,161	4,940	4,940
2453	Main Library	Library Fiction Area 4	2	2L2' F40 BIAX/EL	indirect/direct	8	8	72	0.6	36 WATT LED/KIT	trof kit LED	8	38	0.3	0.3	1,352	4,940	4,940
2454	Main Library	Library Fiction Area 4	2	2x26W CF HARDWIRED/EL	can rec 8"	2	2	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	2	16	0.0	0.1	378	4,940	4,940
2455	Main Library	Storage City Records	2	2L4' T8 32w/EL	wrap wide	5	5	60	0.3	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	36	0.2	0.1	43	350	350
2456	Main Library	Stair Main	stair	2L4' T8 32w/EL	wrap	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	336	3,458	3,458
2457	Main Library	Stair Main	stair	2x42W CF HARDWIRED/EL	decorative	4		86	0.3	NO RETRO	no change -specialized fixture		90	0.3			3,458	3,458
2458	Main Library	Stair Main	stair	4L4' T8 32w/EL	indirect/direct	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.2	562	3,458	3,458
2459	Main Library	Stair Main	stair	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	84	3,458	3,458
2460	Main Library	Storage Janitor Parking Lot Side	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
2461	Main Library	Bath Children	1	2L2' F40 BIAX/EL	trof acr	1	1	72	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	0.0	60	1,750	1,750
2462	Main Library	Storage Story Time Room	1	2L2' F40 BIAX/EL	indirect/direct	9	9	72	0.6	36 WATT LED/KIT	trof kit LED	9	38	0.3	0.3	308	1,000	700
2463	Main Library	Storage Story Time Room	1	2L2' F40 BIAX/EL	indirect/direct	19	19	72	1.4	36 WATT LED/KIT	trof kit LED	19	38	0.7	0.6	650	1,000	700

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
2464	Main Library	Library Pre-School	1	2L2' F40 BIAX/EL	indirect/direct	43	43	72	3.1	36 WATT LED/KIT	trof kit LED	43	38	1.6	1.5	7,265	4,940	4,940
2465	Main Library	Library Pre-School	1	2x26W CF HARDWIRED/EL	can rec 8"	12	12	54	0.6	15 WATT LED/KIT	can kit LED Spectrum	12	16	0.2	0.5	2,267	4,940	4,940
2466	Main Library	Library Children	1	2L2' F40 BIAX/EL	indirect/direct	80	80	72	5.8	36 WATT LED/KIT	trof kit LED	80	38	3.0	2.7	13,516	4,940	4,940
2467	Main Library	Library Non-Print	1	2L2' F40 BIAX/EL	indirect/direct	26	26	72	1.9	36 WATT LED/KIT	trof kit LED	26	38	1.0	0.9	4,393	4,940	4,940
2468	Main Library	Bath Non-Print	1	2L2' F40 BIAX/EL	trof acr	1	1	72	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	0.0	60	1,750	1,750
2469	Main Library	Library Fiction	1	2L2' F40 BIAX/EL	indirect/direct	27	27	72	1.9	36 WATT LED/KIT	trof kit LED	27	38	1.0	0.9	4,562	4,940	4,940
2470	Main Library	Library Fiction	1	2x26W CF HARDWIRED/EL	decorative	3		54	0.2	NO RETRO	no change -specialized fixture		57	0.2			4,940	4,940
2471	Main Library	Library Information	1	2L2' F40 BIAX/EL	indirect/direct	4	4	72	0.3	36 WATT LED/KIT	trof kit LED	4	38	0.2	0.1	676	4,940	4,940
2472	Main Library	Library Young Adult	1	2L2' F40 BIAX/EL	indirect/direct	15	15	72	1.1	36 WATT LED/KIT	trof kit LED	15	38	0.6	0.5	2,534	4,940	4,940
2473	Main Library	Library Young Adult	1	2x26W CF HARDWIRED/EL	decorative	2		54	0.1	NO RETRO	no change -specialized fixture		57	0.1			4,940	4,940
2474	Main Library	Library Young Adult	1	2x26W CF HARDWIRED/EL	can rec 8"	3	3	54	0.2	15 WATT LED/KIT	can kit LED Spectrum	3	16	0.0	0.1	567	4,940	4,940
2475	Main Library	Lobby Main Elevator	1	2x26W CF HARDWIRED/EL	can rec 8"	8	8	54	0.4	15 WATT LED/KIT	can kit LED Spectrum	8	16	0.1	0.3	1,512	4,940	4,940
2476	Main Library	Bath Men (2)	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	85	1,750	1,750
2477	Main Library	Lobby Fireplace	1	4L4' T8 32w/EL	indirect/direct	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.2	802	4,940	4,940
2478	Main Library	Lobby Fireplace	1	30W INCANDESCENT	cone	4		30	0.1	NO RETRO	no change		32	0.1			4,940	4,940
2479	Main Library	Library Newspapers	1	4L4' T8 32w/EL	indirect/direct	8	8	112	0.9	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	71	0.6	0.3	1,605	4,940	4,940
2480	Main Library	Library Circulation	1	4L4' T8 32w/EL	indirect/direct	14	14	112	1.6	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	14	71	1.0	0.6	2,808	4,940	4,940
2481	Main Library	Library Circulation	1	2L2' F40 BIAX/EL	indirect/direct	7	7	72	0.5	36 WATT LED/KIT	trof kit LED	7	38	0.3	0.2	1,183	4,940	4,940
2482	Main Library	Library Circulation	1	30W INCANDESCENT	cone	4		30	0.1	NO RETRO	no change		32	0.1			4,940	4,940
2483	Main Library	Library New Fiction	1	4L4' T8 32w/EL	indirect/direct	8	8	112	0.9	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	71	0.6	0.3	1,605	4,940	4,940
2484	Main Library	Library Reading Room	1	4L4' T8 32w/EL	indirect/direct	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.2	802	4,940	4,940
2485	Main Library	Office Near Circ	1	2L2' F40 BIAX/EL	indirect/direct	4	4	72	0.3	36 WATT LED/KIT	trof kit LED	4	38	0.2	0.1	172	1,260	1,260
2486	Main Library	Office Open Near Circ	1	2L2' F40 BIAX/EL	indirect/direct	13	13	72	0.9	36 WATT LED/KIT	trof kit LED	13	38	0.5	0.4	777	1,748	1,748
2487	Main Library	Office Open Near Information	1	2L2' F40 BIAX/EL	indirect/direct	14	14	72	1.0	36 WATT LED/KIT	trof kit LED	14	38	0.5	0.5	837	1,748	1,748
2488	Main Library	Office Supervisor	1	2L2' F40 BIAX/EL	indirect/direct	5	5	72	0.4	36 WATT LED/KIT	trof kit LED	5	38	0.2	0.2	215	1,260	1,260
2489	Main Library	Stair Near Circ Desk	stair	2L4' T8 32w/EL	vanity	9	9	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	36	0.3	0.2	756	3,458	3,458
2490	Main Library	Stair Near Circ Desk	stair	2x26W CF HARDWIRED/EL	can rec 8"	6	6	54	0.3	15 WATT LED/KIT	can kit LED Spectrum	6	16	0.1	0.2	794	3,458	3,458
2491	Main Library	Mechanical Boiler	b	4L4' T8 32w/EL-8'	industrial cage	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	85	350	350
2492	Main Library	Storage Sprinkler	b	4L4' T8 32w/EL-8'	industrial cage	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	43	350	350
2493	Main Library	Storage Mail	b	4L4' T8 32w/EL-8'	industrial cage	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	57	700	700
2494	Main Library	Storage Elect	b	4L4' T8 32w/EL-8'	industrial cage	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	28	350	350
2495	Main Library	Office Open Tech Services	b	2L2' F40 BIAX/EL	indirect/direct	20	20	72	1.4	36 WATT LED/KIT	trof kit LED	20	38	0.8	0.7	1,196	1,748	1,748
2496	Main Library	Storage Tech Services	b	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	68	700	700
2497	Main Library	Office Supervisor	b	2L2' F40 BIAX/EL	indirect/direct	4	4	72	0.3	36 WATT LED/KIT	trof kit LED	4	38	0.2	0.1	172	1,260	1,260
2498	Main Library	Storage Supplies	b	2L2' F40 BIAX/EL	indirect/direct	1	1	72	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	0.0	12	350	350
2499	Main Library	Bath Staff	b	2L2' F40 BIAX/EL	indirect/direct	1	1	72	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	0.0	60	1,750	1,750
2500	Main Library	Storage Server	b	2L2' F40 BIAX/EL	indirect/direct	2	2	72	0.1	36 WATT LED/KIT	trof kit LED	2	38	0.1	0.1	48	700	700
2501	Main Library	Hall Meeting Rm 1-Mail	b	2L4' T8 32w/EL	trof acr	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	0.2	672	3,458	3,458
2502	Main Library	Office Meeting Rm 1	b	2L2' F40 BIAX/EL	indirect/direct	20	20	72	1.4	36 WATT LED/KIT	trof kit LED	20	38	0.8	0.7	1,231	1,800	1,800
2503	Main Library	Office Meeting Rm 1	b	2x26W CF HARDWIRED/EL	can rec 8"	25	25	54	1.4	15 WATT LED/KIT	can kit LED Spectrum	25	16	0.4	1.0	1,721	1,800	1,800
2504	Main Library	Storage Meeting Rm 1	b	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	34	350	350
2505	Main Library	Storage Handicapped Ref Area	b	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	24	500	500
2506	Main Library	Office Meeting Room 2	b	2L2' F40 BIAX/EL	indirect/direct	20	20	72	1.4	36 WATT LED/KIT	trof kit LED	20	38	0.8	0.7	1,231	1,800	1,800
2507	Main Library	Office Meeting Room 2	b	2x26W CF HARDWIRED/EL	can rec 8"	9	9	54	0.5	15 WATT LED/KIT	can kit LED Spectrum	9	16	0.1	0.3	620	1,800	1,800
2508	Main Library	Kitchen Meeting Room 2	b	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	72	1,050	1,050
2509	Main Library	Office Meeting Room 3	b	2L2' F40 BIAX/EL	indirect/direct	15	15	72	1.1	36 WATT LED/KIT	trof kit LED	15	38	0.6	0.5	923	1,800	1,800
2510	Main Library	Office Meeting Room 3	b	2x26W CF HARDWIRED/EL	can rec 8"	13	13	54	0.7	15 WATT LED/KIT	can kit LED Spectrum	13	16	0.2	0.5	895	1,800	1,800
2511	Main Library	Storage Meeting Room 3	b	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	34	350	350
2512	Main Library	Storage Handicapped Ref Area	b	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	24	500	500
2513	Main Library	Lounge Staff	b	3L4' T8 32w/EL	trof acr	8	8	88	0.7	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	54	0.4	0.3	367	1,330	1,330
2514	Main Library	Lounge Lockers	b	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	92	1,330	1,330
2515	Main Library	Bath Men (2)	b	2L4' T8 32w/EL	trof acr	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	0.2	340	1,750	1,750
2516	Main Library	Bath Men (2)	b	2L4' T8 32w/EL	vanity	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	0.1	255	1,750	1,750
2517	Main Library	Bath Men (2)	b	2L2' F40 BIAX/EL	trof acr	2	2	72	0.1	36 WATT LED/KIT	trof kit LED	2	38	0.1	0.1	120	1,750	1,750
2518	Main Library	Storage Elev (2)	b	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	17	350	350
2519	Main Library	Lobby Elevator-Meeting Rooms	b	2L2' F40 BIAX/EL	indirect/direct	20	20	72	1.4	36 WATT LED/KIT	trof kit LED	20	38	0.8	0.7	2,365	3,458	3,458
2520	Main Library	Lobby Elevator-Meeting Rooms	b	2x26W CF HARDWIRED/EL	can rec 8"	21	21	54	1.1	15 WATT LED/KIT	can kit LED Spectrum	21	16	0.3	0.8	2,778	3,458	3,458
2521	Main Library	Office Maintenance	b	2L4' T8 32w/EL	wrap	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	122	1,260	1,260
2522	Main Library	Office Maintenance	b	2L2' F40 BIAX/EL	indirect/direct	1	1	72	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	0.0	43	1,260	1,260
2523	Main Library	Bath Staff	b	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	43	1,750	1,750
2524	Main Library	Hall By Model Ship	b	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	84	3,458	3,458
2525	Main Library	Office Director	b	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	228	1,657	1,657
2526	Main Library	Office Public Relations Mgr	b	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	174	1,260	1,260
2527	Main Library	Storage Boxes	b	2L4' T8 32w/EL	industrial cage	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	17	350	350
2528	Main Library	Mechanical Air Handler	b	4L4' T8 32w/EL-8'	industrial cage	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	43	350	350
2529	Main Library	Storage Friends Of Lib	b	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	24	700	700
2530	Main Library	Office Admin Asst	b	3L4' T8 32w/EL	trof acr	6	6	88	0.5	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	54	0.3	0.2	260	1,260	1,260
2531	Main Library	Hall Friends-Elevator	b	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	168	3,458	3,458
2532	Main Library	Hall Friends-Elevator	b	2L4' T8 32w/EL	trof acr	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	0.1	504	3,458	3,458
2533	Main Library	Hall Friends-Elevator	b	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	119	3,458	3,458
2534	Main Library	Hall Friends-Elevator	b	2L2' F40 BIAX/EL	indirect/direct	1	1	72	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	0.0	118	3,458	3,458
2535	Main Library	Storage Paper	b	2L4' T8 32w/EL	wrap	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	26	350	350
2536	Main Library	Stair Near Parling	stair	2L4' T8 32w/EL	vanity	9	9	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	36	0.3	0.2	756	3,458	3,458

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
2537	Main Library	Lobby Main Entry	b	2x42W CF HARDWIRED/EL	decorative	1		86	0.1	NO RETRO	no change -specialized fixture		90	0.1			4,940	4,940
2538	Main Library	Storage Garage	b	4L4' T8 32w/EL-8'	industrial	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	85	700	700
2545	Manross Library	Mechanical Boiler	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	24	500	350
2546	Manross Library	Storage Elect	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	24	500	350
2547	Manross Library	Storage Elect	1	26W CF SCREWIN	keyless	1	1	28	0.0	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.0	10	500	350
2548	Manross Library	Hall Near Mech	1	2L4' T8 32w/EL	trof acr 1' wide	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	126	2,600	1,820
2549	Manross Library	Bath Staff And Hc	1	2x18W CF HARDWIRED/EL	drum	1	1	38	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	53	2,500	2,500
2550	Manross Library	Office Near Mech	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	214	1,800	1,260
2551	Manross Library	Kitchen Near Mech	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	179	1,500	1,050
2552	Manross Library	Office Near Librarian	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	214	1,800	1,260
2553	Manross Library	Office Librarian	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	214	1,800	1,260
2554	Manross Library	Storage To Stained Glass	1	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	11	500	350
2555	Manross Library	Storage To Stained Glass	1	2L4' T8 32w/EL	strip	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
2556	Manross Library	Storage To Stained Glass	1	13W CF HARDWIRED	jar	1		15	0.0	NO RETRO	no change		16	0.0			500	350
2557	Manross Library	Library Home School Collection	1	4L4' T8 32w/EL-8'	trof para 1' wide	8	8	112	0.9	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	71	0.6	0.3	1,334	4,108	4,108
2558	Manross Library	Library Home School Collection	1	4L3' T8 25w/EL-6'	trof para 1' wide	2	2	88	0.2	4L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	50	0.1	0.1	309	4,108	4,108
2559	Manross Library	Library Home School Collection	1	2L4' T8 32w/EL	trof para 1' wide	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	100	4,108	4,108
2560	Manross Library	Library Childrens Desks	1	4L4' T8 32w/EL-8'	trof para 1' wide	12	12	112	1.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	71	0.9	0.5	2,001	4,108	4,108
2561	Manross Library	Library Videos	1	4L4' T8 32w/EL-8'	trof para 1' wide	8	8	112	0.9	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	71	0.6	0.3	1,334	4,108	4,108
2562	Manross Library	Library Videos	1	4L3' T8 25w/EL-6'	trof para 1' wide	2	2	88	0.2	4L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	50	0.1	0.1	309	4,108	4,108
2563	Manross Library	Library Videos	1	2L4' T8 32w/EL	trof para 1' wide	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	100	4,108	4,108
2564	Manross Library	Library Main Lobby And Computers	1	4L3' T8 25w/EL-6'	trof para 1' wide	4	4	88	0.4	4L3' LED/ELEE LO/RLRB	rlrb LED 3'	4	50	0.2	0.2	618	4,108	4,108
2565	Manross Library	Library Main Lobby And Computers	1	4L4' T8 32w/EL-8'	trof para 1' wide	12	12	112	1.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	71	0.9	0.5	2,001	4,108	4,108
2566	Manross Library	Library Main Lobby And Computers	1	4L4' T8 32w/EL-8'	trof acr 6" wide	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	334	4,108	4,108
2567	Manross Library	Library Main Lobby And Computers	1	4L4' T8 32w/EL-8'	trof minicube	8	8	112	0.9	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	71	0.6	0.3	1,334	4,108	4,108
2568	Manross Library	Bath Men (2)	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	78	1,750	1,750
2569	Manross Library	Lobby Entry	1	28W CF HARDWIRED	can rec 6"	7	7	30	0.2	10 WATT LED/KIT	can kit LED Spectrum	7	11	0.1	0.1	355	2,600	1,820
2570	Manross Library	Lobby Stacks	1	4L4' T8 32w/EL-8'	specialty application	26	26	112	2.9	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	26	71	1.9	1.1	2,745	2,600	2,600
2571	Manross Library	Lobby Magazines	1	4L3' T8 25w/EL-6'	trof minicube	12	12	88	1.1	4L3' LED/ELEE LO/RLRB	rlrb LED 3'	12	50	0.6	0.5	1,173	2,600	2,600
2572	Manross Library	Lobby Magazines	1	4L4' T8 32w/EL-8'	trof para 1' wide	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	317	2,600	2,600
2573	Manross Library	Stair Rear	stair	18W CF HARDWIRED	sconce	1		20	0.0	NO RETRO	no change		21	0.0			2,600	2,600
2574	Manross Library	Stair Rear	stair	26W CF HARDWIRED	keyless	3		28	0.1	NO RETRO	no change		29	0.1			2,600	2,600
2575	Manross Library	Lobby Basement	b	2L2' T8 17w/EL	trof acr	7	7	33	0.2	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	7	19	0.1	0.1	257	2,600	1,820
2576	Manross Library	Lobby Basement	b	26W CF HARDWIRED	can rec 6"	3	3	28	0.1	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	0.1	137	2,600	1,820
2577	Manross Library	Lobby Basement	b	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	58	2,600	1,820
2578	Manross Library	Mechanical Basement	b	26W CF SCREWIN	keyless	1	1	28	0.0	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.0	10	500	350
2579	Manross Library	Bath Womans	b	2L4' T8 32w/EL	wrap wide	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	61	2,500	1,750
2580	Manross Library	Bath Mens	b	2L4' T8 32w/EL	wrap wide	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	61	2,500	1,750
2581	Manross Library	Storage Meeting Room	b	2L4' T8 32w U/EL	trof acr	10	10	60	0.6	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	10	38	0.4	0.2	222	1,000	700
2582	Manross Library	Storage Meeting Room	b	2x18W CF HARDWIRED/EL	can eyeball rec	22		38	0.8	NO RETRO	no change		40	0.8			1,000	700
2583	Manross Library	Storage Meeting Room	b	2x26W CF HARDWIRED/EL	can rec 8"	4	4	54	0.2	15 WATT LED/KIT	can kit LED Spectrum	4	16	0.1	0.2	153	1,000	700
2584	Manross Library	Storage Meeting Room	b	2L4' T8 32w/EL	trof opaque	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	24	1,000	700
2592	Water Main Office & Garage	Storage Garage	1	2L4' T8 32w/EL	industrial	12	12	60	0.7	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	36	0.4	0.3	292	1,000	700
2593	Water Main Office & Garage	Storage Garage	1	2L4' T8 32w/EL	industrial	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	73	1,000	700
2595	Water Main Office & Garage	Office Open Main Office	1	3 WATT LED	decorative	10		3	0.0	NO RETRO	no change -specialized fixture		3	0.0			2,860	2,860
2596	Water Main Office & Garage	Office Low	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	0.1	139	2,340	2,340
2597	Water Main Office & Garage	Office Near Joyce	1	3x13W CF HARDWIRED	decorative	2		45	0.1	NO RETRO	no change -specialized fixture		47	0.1			2,340	2,340
2598	Water Main Office & Garage	Office Near Joyce	1	75W INCANDESCENT	sconce	2	2	75	0.2	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	312	2,340	2,340
2599	Water Main Office & Garage	Office Joe	1	3 WATT LED	box acrylic	2		3	0.0	NO RETRO	no change		3	0.0			2,340	1,638
2600	Water Main Office & Garage	Lounge Staff	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	46	1,900	1,900
2601	Water Main Office & Garage	Lounge Staff	1	4L4' T8 32w/EL	box opaque	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	0.1	113	1,900	1,900
2602	Water Main Office & Garage	Office Staff	1	4L4' T8 32w/EL	box opaque	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	278	2,340	1,638
2603	Water Main Office & Garage	Hall Lockers-Main Office	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	309	2,600	1,820
2604	Water Main Office & Garage	Hall Lockers-Main Office	1	4L4' T8 32w/EL	box opaque	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	0.1	155	2,600	1,820
2605	Water Main Office & Garage	Locker Staff	1	2L8' T12 60w EE/EEMAG	strip	3	3	123	0.4	2L4' T8 28w/ELEE HI/NEW-8'	new LF strip	3	67	0.2	0.2	435	2,600	1,820
2606	Water Main Office & Garage	Storage Fittings	1	2L8' T12 60w EE/EEMAG	strip	2	2	123	0.2	2L4' T8 28w/ELEE HI/NEW-8'	new LF strip	2	67	0.1	0.1	112	1,000	700
2607	Water Main Office & Garage	Office Open Meters	1	4L4' T8 32w/EL	trof acr	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	1,532	2,860	2,002
2608	Water Main Office & Garage	Bath Meters	1	2L4' T8 32w/EL	wrap	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	190	2,600	1,820
2609	Water Main Office & Garage	Office Open Plans	1	4L4' T8 32w/EL	trof acr	8	8	112	0.9	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	8	53	0.4	0.5	1,361	2,860	2,002
2610	Water Main Office & Garage	Foyer Plans	1	22W & 32W CIRCLELINE HARDWIRED	box opaque	1	1	58	0.1	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	107	2,600	1,820
2611	Water Main Office & Garage	Bath Women	1	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	90	2,600	1,820
2612	Water Main Office & Garage	Conference Main	1	75W INCANDESCENT	decorative	5		75	0.4	NO RETRO	no change -specialized fixture		79	0.4			2,340	2,340
2613	Water Main Office & Garage	Conference Main	1	2x75W INCANDESCENTS	decorative	2		150	0.3	NO RETRO	no change -specialized fixture		158	0.3			2,340	2,340
2614	Water Main Office & Garage	Conference Main	1	75W INCANDESCENT	track can	3	3	75	0.2	8 WATT LED SI	screw in LED par20	3	8	0.0	0.2	468	2,340	2,340
2615	Water Main Office & Garage	Storage Safe	1	4L4' T8 32w/EL	box opaque	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	60	500	350
2616	Water Main Office & Garage	Office Printers	1	4L4' T8 32w/EL	box opaque	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	278	2,340	1,638
2617	Water Main Office & Garage	Stair To Basement	stair	100W INCANDESCENT	keyless	1	1	100	0.1	11 WATT LED SI	screw in LED Alamp	1	12	0.0	0.1	230	2,600	2,600
2618	Water Main Office & Garage	Storage Files	b	2L4' T8 32w/EL-8'	industrial	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	0.2	97	500	500
2619	Water Main Office & Garage	Storage Files	b	1L4' T8 32w/EL	industrial	3	3	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	18	0.1	0.0	18	500	500
2620	Water Main Office & Garage	Storage Files	b	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	24	500	500
2626	Water Pollution Control Park	Office Open Operations	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	227	2,340	1,638
2627	Water Pollution Control Park	Office Manager	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	107	2,200	1,540
2628	Water Pollution Control Park	Office Map	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	107	2,200	1,540

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
2629	Water Pollution Control Park	Storage Electric	1	2L4' T8 32w/EL	wrap	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	0.1	73	500	500
2630	Water Pollution Control Park	Lounge Staff	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	185	1,900	1,330
2631	Water Pollution Control Park	Foyer To Basement	1	75W INCANDESCENT	can rec 6"	1	1	75	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	173	2,600	1,820
2632	Water Pollution Control Park	Bath Men	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	126	2,600	1,820
2633	Water Pollution Control Park	Locker Men	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	126	2,600	1,820
2634	Water Pollution Control Park	Locker Men	1	2L4' T8 32w/EL	vapor tight	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	126	2,600	2,600
2635	Water Pollution Control Park	Storage Janitor	1	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	26	500	350
2636	Water Pollution Control Park	Bath Woman	1	2L4' T8 32w/EL	wrap	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	190	2,600	1,820
2637	Water Pollution Control Park	Bath Woman	1	2L4' T8 32w/EL	vapor tight	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	63	2,600	1,820
2638	Water Pollution Control Park	Lab Testing	1	2L4' T8 32w/EL	trof acr	7	7	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	7	36	0.2	0.2	354	2,080	1,456
2639	Water Pollution Control Park	Office Testing	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	53	2,200	1,540
2640	Water Pollution Control Park	Storage Testing	1	2L4' T8 32w/EL	vapor tight	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	12	500	350
2641	Water Pollution Control Park	Stair 4	stair	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	63	2,600	2,600
2642	Water Pollution Control Park	Storage Uv	b	2L4' T8 32w/EL	vapor tight	17	17	60	1.0	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	17	36	0.6	0.4	413	1,000	1,000
2643	Water Pollution Control Park	Storage Uv	b	2L4' T8 32w/EL	strip	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	24	1,000	1,000
2646	Water Pollution Control Park	Storage Generator Bldg	1	2L4' T8 32w/EL	vapor tight	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	97	1,000	1,000
2648	Water Pollution Control Park	Storage Pump House	1	2L4' T8 32w/EL	vapor tight	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	73	1,000	1,000
2649	Water Pollution Control Park	Storage Pump House Parts	1	2L4' T8 32w/EL	vapor tight	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	49	500	500
2650	Water Pollution Control Park	Storage Basement	b	2L4' T8 32w/EL	vapor tight	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	24	500	500
2652	Water Pollution Control Park	Storage Air Blowers	1	4L4' T8 32w/EL	wrap	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.2	162	1,000	1,000
2653	Water Pollution Control Park	Storage Air Blowers	1	2L4' T8 32w/EL	vapor tight	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	97	1,000	1,000
2657	Water Pollution Control Park	Storage Chemical Room	1	2L4' T8 32w/EL	vapor tight	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	97	1,000	1,000
2660	Water Pollution Control Park	Storage Secondary Pump Gallery	1	2L4' T8 32w/EL	vapor tight	9	9	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	36	0.3	0.2	219	1,000	1,000
2662	Water Pollution Control Park	Storage Sludge Trucks	1	4L4' T5 HO/EL	high bay	15	15	234	3.5	98 WATT LED/NEW	new LED hibay wg	15	103	1.5	2.0	1,967	1,000	1,000
2663	Water Pollution Control Park	Storage Lawn Mowers	1	2L4' T8 32w/EL	vanity	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	24	500	350
2664	Water Pollution Control Park	Storage Elect	1	2L4' T8 32w/EL	vapor tight	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	49	1,000	700
2665	Water Pollution Control Park	Bath Sludge	1	2L4' T8 32w/EL	vapor tight	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	63	2,600	2,600
2666	Water Pollution Control Park	Storage Sludge	1	2L4' T8 32w/EL	vapor tight	12	12	60	0.7	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	36	0.4	0.3	292	1,000	1,000
2667	Water Pollution Control Park	Storage Sludge Garage	1	4L4' T8 32w/EL	wrap wide	8	8	112	0.9	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	71	0.6	0.3	325	1,000	1,000
2668	Water Pollution Control Park	Storage Sludge Garage	1	2L4' T8 32w/EL	vapor tight	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	97	1,000	1,000
2669	Water Pollution Control Park	Office Maintenance Personnel	1	2L4' T8 32w/EL	wrap	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	214	2,200	2,200
2672	Water Pollution Control Park	Office Admin Bldg	1	4L4' T8 32w/EL-8'	trof parabolic	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	179	2,200	1,540
2673	Water Pollution Control Park	Office Brian	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	214	2,200	1,540
2674	Water Pollution Control Park	Bath Men (2)	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	126	2,600	1,820
2675	Water Pollution Control Park	Foyer Admin Bldg	1	18W CF HARDWIRED	can rec 6"	4	4	20	0.1	10 WATT LED/KIT	can kit LED Spectrum	4	11	0.0	0.0	99	2,600	1,820
2676	Water Pollution Control Park	Conference Admin Bldg	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	214	2,200	1,540
2677	Water Pollution Control Park	Conference Admin Bldg	1	75W INCANDESCENT	track can	4	4	75	0.3	8 WATT LED SI	screw in LED par20	4	8	0.0	0.3	586	2,200	2,200
2678	Water Pollution Control Park	Storage Files	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	49	1,000	700
2679	Water Pollution Control Park	Foyer Rear	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	63	2,600	1,820
2681	Water Pollution Control Park	Storage Storage Thickening	1	2L4' T8 32w/EL	vapor tight	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	0.2	194	1,000	1,000
2684	Water Pollution Control Park	Storage Headworks-Screening And Grit Removal	1	250W HI PRESSURE SODIUM	keyless	8	8	295	2.4	52 WATT LED/NEW	new LED canopy	8	55	0.4	1.9	1,923	1,000	1,000
2685	Water Pollution Control Park	Storage Grit And Septage Gallery	1	2L4' T8 32w/EL	vapor tight	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	0.1	146	1,000	1,000
2689	City Yard	Lobby Main Entry	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	74	2,600	1,820
2690	City Yard	Lobby Main Entry	1	1L4' T8 32w/EL	wrap narrow	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	22	2,600	1,820
2691	City Yard	Office Dispatch	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	75	2,200	1,540
2692	City Yard	Storage Supplies	1	1L4' T8 32w/EL	wrap narrow	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	9	1,000	700
2693	City Yard	Office Dispatch	1	2L4' T8 32w/EL	trof acr 1' wide	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	48	2,804	1,963
2694	City Yard	Bath Executive	1	1L4' T8 32w/EL	wrap narrow	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	22	2,600	1,820
2695	City Yard	Office Solid Waste	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	89	2,628	1,840
2696	City Yard	Office Streets	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	75	2,200	1,540
2697	City Yard	Lounge Staff	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	65	1,900	1,330
2698	City Yard	Lounge Lunch Room	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	129	1,900	1,330
2699	City Yard	Storage Chain Room	1	2L4' T8 32w/EL	industrial	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	34	500	350
2700	City Yard	Storage Main Garage	1	4L4' T5 HO/EL	high bay	18	18	234	4.2	98 WATT LED/NEW	new LED hibay wg	18	103	1.9	2.4	1,652	1,000	700
2701	City Yard	Storage Main Garage	1	400W INC HALOGEN	flood	42	42	400	16.8	93 WATT LED/NEW	new LED flood	42	98	4.1	12.7	8,889	1,000	1,000
2702	City Yard	Storage Main Garage	1	4L4' T12 34w EE/EEMAG-8'	industrial	1	1	140	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.1	48	1,000	1,000
2703	City Yard	Storage Main Garage	1	4L4' T8 32w/EL-8'	industrial	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	171	1,000	1,000
2704	City Yard	Locker Main	1	2L4' T8 32w/EL	trof acr 1' wide	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	177	2,600	1,820
2705	City Yard	Bath Men	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	88	2,600	1,820
2706	City Yard	Storage Tool Room	1	2L4' T8 32w/EL	industrial	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	51	1,000	700
2707	City Yard	Shop Signs	1	2L4' T8 32w/EL-8'	industrial	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	0.1	239	2,340	1,638
2710	City Yard	Shop Oil Storage	1	2L4' T8 32w/EL-8'	industrial	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	159	2,340	1,638
2711	City Yard	Hall Mechanics Garage	1	2L4' T8 32w/EL-8'	industrial	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	44	2,600	1,820
2712	City Yard	Office Mechanics Garage	1	2L4' T8 32w/EL-8'	industrial	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	75	2,200	1,540
2713	City Yard	Office Mechanics Garage	1	1L4' T8 32w/EL	industrial	3	3	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	18	0.1	0.0	56	2,200	1,540
2714	City Yard	Shop Mechanics Garage	1	4L4' T5 HO/EL	high bay	29	29	234	6.8	98 WATT LED/NEW	new LED hibay wg	29	103	3.0	3.8	6,228	2,340	1,638
2715	City Yard	Office Fleet Super	2	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	75	2,200	1,540
2716	City Yard	Storage Parts	2	2L4' T8 32w/EL	industrial	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	0.2	136	1,000	700
2717	City Yard	Storage Parts	2	2L4' T8 32w/EL-8'	industrial	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	34	1,000	700
2718	City Yard	Shop Fab	2	2L4' T8 32w/EL	industrial	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	0.2	318	2,340	1,638
2719	City Yard	Shop Fab	2	2L4' T8 32w/EL-8'	industrial	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	80	2,340	1,638
2720	City Yard	Office Johnny	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	183	2,200	1,540
2721	City Yard	Shop Fab	2	4L4' T8 32w/EL-8'	industrial	5	5	112	0.6	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	71	0.4	0.2	333	2,340	1,638

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
2725	City Yard	Storage Quonsett Hut	1	2L4' T8 32w/EL	industrial	15	15	60	0.9	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	15	36	0.5	0.4	255	1,000	700
2734	City Yard	Storage Social Services Storage (Across Street)	1	1L4' T12 34w EE/EEMAG	strip	3	3	40	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	18	0.1	0.1	23	500	500
2735	City Yard	Storage Social Services Storage (Across Street)	1	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	18	500	500
2736	Transfer Stations - Lake Ave	Storage Quonset	1	400W HI PRESSURE SODIUM	lowbay	6	6	460	2.8	107 WATT LED/NEW	new LED canopy	6	112	0.7	2.1	2,086	1,000	700
2739	Transfer Stations - Lake Ave	Storage Attendant Shack Brown	1	2L4' T12 34w EE/EEMAG	wrap	1	1	70	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	17	500	350
2740	Transfer Stations - Lake Ave	Storage Attendant Shack Brown	1	2L4' T12 34w EE/EEMAG	wrap	1	1	70	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	17	500	350
2743	Transfer Stations - Lake Ave	Office Trailer	1	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	0.2	524	2,200	1,540
2744	Transfer Stations - Lake Ave	Bath Trailer	1	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	47	2,132	1,492
2745	Transfer Stations - Lake Ave	Office Main	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	262	2,200	1,540
2747	Transfer Stations - Lake Ave	Office Scale House	1	4L4' T8 32w/EL	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	89	2,200	1,540
2749	Animal Control	Office Main	1	2L4' T8 32w/EL	wrap	5	5	60	0.3	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	36	0.2	0.1	61	500	350
2750	Animal Control	Bath Main	1	2x60W INCANDESCENTS	vanity	1	1	120	0.1	1L2' T8 15w/ELEE LO/NEW	new LF vanity	1	15	0.0	0.1	53	500	350
2751	Animal Control	Hall To Kennel	1	2L4' T8 32w/EL	wrap	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	36	500	350
2752	Animal Control	Mechanical Furnace	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	6	250	175
2753	Animal Control	Storage Janitor	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	12	500	350
2754	Animal Control	Storage Quarantine	1	4L4' T8 32w/EL	wrap wide	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.2	81	500	500
2755	Animal Control	Kitchen Quarantine	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	24	500	350
2756	Animal Control	Storage Kennel Room 2	1	4L4' T8 32w/EL	wrap wide	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.2	81	500	500
2757	Animal Control	Storage Kennel Room 3	1	4L4' T8 32w/EL	wrap wide	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.2	81	500	500
2758	Animal Control	Hall By Kennel 2-3	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	12	500	350
2762	Memorial Boulevard School	Auditorium Theatre	1	3x100W INCANDESCENTS	decorative	12		300	3.6	NO RETRO	no change per customer		315	3.6				
2763	Memorial Boulevard School	Auditorium Theatre	1	2x75W INCANDESCENTS	cylinder indirect/direct wall mt.	16		150	2.4	NO RETRO	no change per customer		158	2.4				
2764	Memorial Boulevard School	Auditorium Theatre	1	300W INCANDESCENT	can rec 8"	14		300	4.2	NO RETRO	no change per customer		315	4.2				
2765	Memorial Boulevard School	Auditorium Theatre	1	3x100W INCANDESCENTS	decorative	4		300	1.2	NO RETRO	no change per customer		315	1.2				
2766	Memorial Boulevard School	Stage Theatre	1	4L4' T8 32w/EL-8'	industrial cage	4		112	0.4	NO RETRO	no change per customer		118	0.4				
2767	Memorial Boulevard School	Classroom Typical	1	4L4' T8 32w/EL-8'	eggcrate	2		112	0.2	NO RETRO	no change per customer		118	0.2				
2768	Memorial Boulevard School	Classroom Typical	1	2L4' T8 32w/EL	eggcrate	2		60	0.1	NO RETRO	no change per customer		63	0.1				
2769	Memorial Boulevard School	Hall Typical	1	2L2' T8 17w/EL	box acrylic	1		33	0.0	NO RETRO	no change per customer		35	0.0				
2770	Memorial Boulevard School	Gym Main	1	4L4' T5 HO/EL	high bay	1		234	0.2	NO RETRO	no change per customer		246	0.2				
2771	Fire Head Quarters	Storage Trucks	1	4L4' T5 HO/EL	lowbay	8	8	234	1.9	100 WATT LED/NEW	new LED lobay acr dome	8	105	0.8	1.0	1,135	1,000	1,000
2772	Fire Head Quarters	Storage Compressor Room	1	4L4' T8 32w/EL-8'	industrial	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	89	1,000	1,000
2773	Fire Head Quarters	Lobby Entry	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	0.1	164	2,500	2,500
2774	Fire Head Quarters	Hall By Front Offices	1	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	0.2	491	2,500	1,750
2775	Fire Head Quarters	Bath By Front Offices	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	327	2,500	1,750
2776	Fire Head Quarters	Office Admin	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	393	3,000	2,100
2777	Fire Head Quarters	Office Chief	1	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	6	53	0.3	0.4	1,178	3,000	2,100
2778	Fire Head Quarters	Office Fire Marshal	1	4L4' T8 32w/EL	trof acr	8	8	112	0.9	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	8	53	0.4	0.5	1,571	3,000	2,100
2779	Fire Head Quarters	Storage Files	1	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	0.2	196	1,000	700
2780	Fire Head Quarters	Office Fire Prevention	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	393	3,000	2,100
2781	Fire Head Quarters	Office Plans	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	0.1	196	3,000	2,100
2782	Fire Head Quarters	Shop Mechanics Bay	1	4L4' T5 HO/EL	lowbay	5	5	234	1.2	98 WATT LED/NEW	new LED hibay wg	5	103	0.5	0.7	1,687	2,340	1,638
2783	Fire Head Quarters	Office Mechanics Bay	1	4L4' T8 32w/EL-8'	industrial	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	268	3,000	2,100
2784	Fire Head Quarters	Storage Oil	1	300W INCANDESCENT	keyless	1	1	300	0.3	19 WATT LED SI	screw in LED Alamp	1	20	0.0	0.3	154	500	350
2785	Fire Head Quarters	Storage Parts	1	300W INCANDESCENT	keyless	1	1	300	0.3	19 WATT LED SI	screw in LED Alamp	1	20	0.0	0.3	154	500	350
2786	Fire Head Quarters	Stair Near Mechanic	stair	2L4' T8 32w/EL	wrap	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	267	2,500	2,500
2787	Fire Head Quarters	Lounge Staff	2	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	0.2	497	1,900	1,330
2788	Fire Head Quarters	Stair Pole (2)	stair	75W INCANDESCENT	flood	2	2	75	0.2	8 WATT LED SI	screw in LED par20	2	8	0.0	0.1	366	2,500	2,500
2789	Fire Head Quarters	Lounge Near K	2	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	6	53	0.3	0.4	746	1,900	1,900
2790	Fire Head Quarters	Kitchen Main	2	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	0.2	393	1,500	1,050
2791	Fire Head Quarters	Stair Near K	stair	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	0.1	164	2,500	2,500
2792	Fire Head Quarters	Stair Near K	stair	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	134	2,500	2,500
2793	Fire Head Quarters	Stair Near K	stair	2L4' T8 32w/EL	wrap narrow	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	67	2,500	2,500
2794	Fire Head Quarters	Bath Near Sleeping Quarters	2	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	0.1	164	2,500	1,750
2795	Fire Head Quarters	Bath Near Sleeping Quarters	2	1L2' T12 20w STD/STD	strip	1	1	32	0.0	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	9	0.0	0.0	62	2,500	1,750
2796	Fire Head Quarters	Bedroom Sleeping Quarters Private (3)	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	0.2	255	1,300	910
2797	Fire Head Quarters	Bedroom Open Quarters	2	4L4' T8 32w/EL	trof acr	10	10	112	1.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	10	53	0.5	0.6	851	1,300	910
2798	Fire Head Quarters	Hall Near Kitchen	2	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	0.1	164	2,500	1,750
2799	Fire Head Quarters	Locker All	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	0.2	491	2,500	1,750
2800	Fire Head Quarters	Hall Near Locker	2	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	0.1	164	2,500	1,750
2801	Fire Head Quarters	Bath Near Locker	2	2L4' T8 32w U/EL	trof acr	3	3	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	3	38	0.1	0.1	183	2,500	1,750
2802	Fire Head Quarters	Bath Near Locker	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	327	2,500	1,750
2803	Fire Head Quarters	Bath Near Locker	2	1L4' T8 32w/EL	vanity	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	33	2,500	1,750
2806	Fire Head Quarters	Mechanical Boiler	1	60W INCANDESCENT	keyless	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	57	500	350
2807	Engine 2	Office Main	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	143	2,804	1,963
2808	Engine 2	Lounge Main	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	97	1,900	1,330
2809	Engine 2	Kitchen Main	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	77	1,500	1,050
2810	Engine 2	Bath Main	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	64	2,500	2,500
2811	Engine 2	Bath Main	1	13W CF HARDWIRED	dome	1		15	0.0	NO RETRO	no change		16	0.0			2,500	2,500
2812	Engine 2	Bedroom Sleeping Quarters	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	66	1,300	910
2813	Engine 2	Storage Trucks	1	2L4' T8 32w/EL-8'	industrial	16	16	60	1.0	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	16	36	0.6	0.4	408	1,000	1,000
2814	Engine 2	Storage Fire Alarm Bureau	1	2L4' T8 32w/EL-8'	industrial	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	77	1,000	700
2815	Engine 2	Storage Miscel	1	60W INCANDESCENT	jar	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	27	500	500
2816	Engine 2	Storage Special Ops Truck	1	4L4' T8 32w/EL-8'	industrial	5	5	112	0.6	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	71	0.4	0.2	213	1,000	700

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
2820	Engine 2	Mechanical Boiler	1	60W INCANDESCENT	keyless	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	54	500	350
2821	Engine 5	Office Main	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	153	3,000	2,100
2822	Engine 5	Lounge Staff	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	97	1,900	1,330
2823	Engine 5	Kitchen Main	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	77	1,500	1,050
2824	Engine 5	Storage Janitor	1	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	27	500	350
2825	Engine 5	Bath Staff	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	64	2,500	1,750
2826	Engine 5	Bath Staff	1	2x13W CF HARDWIRED	vanity	1		30	0.0	NO RETRO	no change		32	0.0			2,500	1,750
2827	Engine 5	Bedroom Sleeping Quarters	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	66	1,300	910
2828	Engine 5	Storage Trucks	1	2L4' T8 32w/EL-8'	industrial	16	16	60	1.0	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	16	36	0.6	0.4	408	1,000	700
2831	Engine 5	Mechanical Boiler	1	60W INCANDESCENT	keyless	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	54	500	350
2832	Engine 3	Office Main	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	77	3,000	2,100
2833	Engine 3	Lounge Staff	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	97	1,900	1,330
2834	Engine 3	Hall Main	1	1L4' T8 32w/EL	vanity	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	64	2,500	1,750
2835	Engine 3	Kitchen Main	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	77	1,500	1,050
2836	Engine 3	Storage Janitor	1	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	27	500	500
2837	Engine 3	Bath Main	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	64	2,500	2,500
2838	Engine 3	Bath Main	1	1L2' 24W T5HO/EL	vanity	1		29	0.0	NO RETRO	no change -specialized fixture		30	0.0			2,500	1,750
2839	Engine 3	Bedroom Sleeping Quarters	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	66	1,300	910
2840	Engine 3	Storage Trucks	1	2L4' T8 32w/EL-8'	industrial	11	11	60	0.7	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	11	36	0.4	0.3	281	1,000	1,000
2841	Engine 3	Storage Janitor	1	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	27	500	350
2842	Engine 3	Storage Supplies	1	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	27	500	500
2845	Engine 3	Mechanical Boiler	1	60W INCANDESCENT	keyless	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	54	500	350
2846	Youth Services Building	Lobby Main	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	92	2,600	1,820
2847	Youth Services Building	Hall Main	1	2L4' T8 32w U/EL	trof acr	6	6	60	0.4	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	6	38	0.2	0.1	277	2,600	1,820
2848	Youth Services Building	Office Reception	1	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	32	1,800	1,260
2849	Youth Services Building	Bath Near Recept	1	13W CF HARDWIRED	square surface mt.	1		15	0.0	NO RETRO	no change		16	0.0			2,340	1,638
2850	Youth Services Building	Office Cindy'S	1	2L4' T8 32w U/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	4	38	0.2	0.1	128	1,800	1,260
2851	Youth Services Building	Conference Staff	1	2L4' T8 32w U/EL	trof acr	10	10	60	0.6	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	10	38	0.4	0.2	320	1,800	1,260
2852	Youth Services Building	Office Director	1	2L4' T8 32w U/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	4	38	0.2	0.1	128	1,800	1,260
2853	Youth Services Building	Office Alison	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	64	1,800	1,260
2854	Youth Services Building	Office Front	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	64	1,800	1,260
2855	Youth Services Building	Hall Victorian Side	1	2L4' T8 32w U/EL	trof acr	15	15	60	0.9	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	15	38	0.6	0.3	693	2,600	1,820
2856	Youth Services Building	Lounge Front	1	2L4' T8 32w U/EL	trof acr	8	8	60	0.5	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	8	38	0.3	0.2	270	1,900	1,330
2857	Youth Services Building	Storage Tv Cart	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	18	500	350
2858	Youth Services Building	Storage Files	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	18	500	350
2859	Youth Services Building	Lounge Rear	1	2L4' T8 32w U/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	4	38	0.2	0.1	135	1,900	1,330
2860	Youth Services Building	Storage Day Care	1	2L4' T8 32w U/EL	trof acr	9	9	60	0.5	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	9	38	0.3	0.2	160	1,000	700
2861	Youth Services Building	Storage Janitor	1	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	9	500	350
2862	Youth Services Building	Bath Staff (2)	1	13W CF HARDWIRED	square surface mt.	2		15	0.0	NO RETRO	no change		16	0.0			2,340	1,638
2863	Youth Services Building	Bath Mf	1	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	42	2,340	1,638
2864	Youth Services Building	Storage Paper	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	18	500	350
2865	Youth Services Building	Office Near Kitchen	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	64	1,800	1,260
2866	Youth Services Building	Kitchen Near Kitchen	1	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	27	1,500	1,050
2867	Youth Services Building	Foyer To Dr. Office	1	13W CF HARDWIRED	square recessed	1		15	0.0	NO RETRO	no change		16	0.0			2,600	2,600
2868	Youth Services Building	Foyer To Dr. Office	1	2L4' T8 32w U/EL	trof parabolic	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	46	2,600	2,600
2869	Youth Services Building	Office Open Main	1	2L4' T8 32w U/EL	trof parabolic	3	3	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	3	38	0.1	0.1	125	2,340	1,638
2870	Youth Services Building	Office Open Waiting	1	2L4' T8 32w U/EL	trof parabolic	4	4	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	4	38	0.2	0.1	166	2,340	1,638
2871	Youth Services Building	Office Dr.	1	2L4' T8 32w U/EL	trof parabolic	4	4	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	4	38	0.2	0.1	128	1,800	1,260
2872	Youth Services Building	Storage Files	1	2L4' T8 32w U/EL	trof parabolic	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	18	1,000	700
2873	Youth Services Building	Bath Hc	1	2L4' T8 32w U/EL	trof parabolic	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	42	2,340	1,638
2874	Youth Services Building	Bath Hc	1	2L4' T12 34w U EE/EEMAG	trof parabolic	1	1	70	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	76	2,340	1,638
2875	Youth Services Building	Storage Janitor	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	21	500	350
2876	Youth Services Building	Storage Files	1	2L4' T8 32w U/EL	trof parabolic	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	18	500	350
2877	Youth Services Building	Office Exam Room	1	2L4' T8 32w U/EL	trof parabolic	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	64	1,800	1,260
2878	Youth Services Building	Office Exam Room	1	2L4' T8 32w U/EL	trof parabolic	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	64	1,800	1,260
2879	Youth Services Building	Hall Exam Rooms-Oo-Stair	1	2L4' T8 32w U/EL	trof parabolic	4	4	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	4	38	0.2	0.1	185	2,600	1,820
2880	Youth Services Building	Stair Front Building Entry	stair	2L4' T8 32w U/EL	box acrylic	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	46	2,600	2,600
2881	Youth Services Building	Stair Front Building Entry	stair	2L4' T8 32w U/EL	trof acr	3	3	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	3	38	0.1	0.1	139	2,600	1,820
2882	Youth Services Building	Lounge Sitting	2	2L4' T8 32w U/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	4	38	0.2	0.1	135	1,900	1,330
2883	Youth Services Building	Kitchen Sitting	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	53	1,500	1,050
2884	Youth Services Building	Office Caitlin	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	64	1,800	1,260
2885	Youth Services Building	Conference Quilt	2	2L4' T8 32w U/EL	trof acr	6	6	60	0.4	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	6	38	0.2	0.1	192	1,800	1,260
2886	Youth Services Building	Office Liz	2	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	32	1,800	1,260
2887	Youth Services Building	Conference Rear	2	2L4' T8 32w U/EL	trof acr	6	6	60	0.4	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	6	38	0.2	0.1	192	1,800	1,260
2888	Youth Services Building	Hall 2Nd Fl	2	2L4' T8 32w U/EL	trof acr	6	6	60	0.4	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	6	38	0.2	0.1	277	2,600	1,820
2889	Youth Services Building	Hall Back	2	2L4' T8 32w U/EL	trof acr	5	5	60	0.3	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	5	38	0.2	0.1	231	2,600	1,820
2890	Youth Services Building	Bath Back	2	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	97	2,340	1,638
2891	Youth Services Building	Office Back	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	64	1,800	1,260
2892	Youth Services Building	Conference Back	2	2L4' T8 32w U/EL	trof acr	6	6	60	0.4	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	6	38	0.2	0.1	192	1,800	1,260
2893	Youth Services Building	Storage Attic	3	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	21	500	500
2894	Youth Services Building	Storage Mech	3	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	21	500	500
2895	Youth Services Building	Stair Back	stair	2L4' T8 32w U/EL	box acrylic	4	4	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	4	38	0.2	0.1	185	2,600	2,600
2903	Beals Senior Center	Office Main Office Boe	1 boe	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	0.2	428	1,800	1,260

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
2904	Beals Senior Center	Storage Server	1 boe	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	17	500	350
2905	Beals Senior Center	Bath Staff	1 boe	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	57	2,340	1,638
2906	Beals Senior Center	Bath Staff (2)	1 boe	3L4' T8 32w/EL	trof parabolic	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	322	2,340	1,638
2907	Beals Senior Center	Bath Staff (2)	1 boe	2L2' T8 17w/EL	trof parabolic	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	66	2,340	1,638
2908	Beals Senior Center	Classroom 13	1 boe	4L4' T8 32w/EL	trof acr	12	12	112	1.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	12	53	0.6	0.7	1,170	1,638	1,638
2909	Beals Senior Center	Bath 13	1 boe	2x13W CF HARDWIRED	drum	1	1	30	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	31	2,340	1,638
2910	Beals Senior Center	Office Nurse	1 boe	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	6	53	0.3	0.4	450	1,260	1,260
2911	Beals Senior Center	Hall Nurse	1 boe	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	0.1	119	2,002	2,002
2912	Beals Senior Center	Conference Near Nurse	1 boe	4L4' T8 32w/EL	trof acr	5	5	112	0.6	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	5	53	0.3	0.3	375	1,260	1,260
2913	Beals Senior Center	Classroom 23	1 boe	4L4' T8 32w/EL	trof acr	12	12	112	1.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	12	53	0.6	0.7	1,170	1,638	1,638
2914	Beals Senior Center	Classroom 14	1 boe	4L4' T8 32w/EL	trof acr	12	12	112	1.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	12	53	0.6	0.7	1,170	1,638	1,638
2915	Beals Senior Center	Classroom 15	1 boe	4L4' T8 32w/EL	trof acr	12	12	112	1.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	12	53	0.6	0.7	1,170	1,638	1,638
2916	Beals Senior Center	Classroom 22	1 boe	4L4' T8 32w/EL	trof acr	13	13	112	1.5	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	13	53	0.7	0.8	1,267	1,638	1,638
2917	Beals Senior Center	Classroom 21	1 boe	4L4' T8 32w/EL	trof acr	11	11	112	1.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	11	53	0.6	0.7	1,072	1,638	1,638
2918	Beals Senior Center	Classroom 16A	1 boe	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	6	53	0.3	0.4	585	1,638	1,638
2919	Beals Senior Center	Classroom 16B	1 boe	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	6	53	0.3	0.4	585	1,638	1,638
2920	Beals Senior Center	Bath 16B	1 boe	2x13W CF HARDWIRED	old drum	1	1	30	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	31	2,340	1,638
2921	Beals Senior Center	Storage 17	1 boe	4L4' T8 32w/EL	trof acr	12	12	112	1.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	12	53	0.6	0.7	500	700	700
2922	Beals Senior Center	Storage 20	1 boe	4L4' T8 32w/EL	trof acr	11	11	112	1.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	11	53	0.6	0.7	229	350	350
2923	Beals Senior Center	Storage 19	1 boe	4L4' T8 32w/EL	trof acr	11	11	112	1.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	11	53	0.6	0.7	229	350	350
2924	Beals Senior Center	Storage 18	1 boe	4L4' T8 32w/EL	trof acr	8	8	112	0.9	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	8	53	0.4	0.5	167	350	350
2925	Beals Senior Center	Foyer North	1 boe	2L4' T8 32w U/EL	trof parabolic	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	63	2,860	2,860
2926	Beals Senior Center	Hall Main	1 boe	4L4' T8 32w/EL	trof acr	14	14	112	1.6	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	14	53	0.7	0.8	2,382	2,860	2,002
2927	Beals Senior Center	Office Exec Dir	1 senior center	3L4' T8 32w/EL	trof parabolic	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	174	1,260	1,260
2928	Beals Senior Center	Storage Chairs	1 senior center	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	11	500	350
2929	Beals Senior Center	Office Open Main	1 senior center	2L4' T8 32w/EL	trof parabolic	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	159	1,638	1,638
2930	Beals Senior Center	Office Open Main	1 senior center	3L4' T8 32w/EL	trof parabolic	7	7	88	0.6	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	7	54	0.4	0.2	395	1,638	1,638
2931	Beals Senior Center	Office Med Specialist	1 senior center	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	124	1,800	1,260
2932	Beals Senior Center	Bath Staff	1 senior center	2L2' T8 17w/EL	trof parabolic	1	1	33	0.0	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	19	0.0	0.0	33	2,340	1,638
2933	Beals Senior Center	Storage Elect	1 senior center	2L4' T8 32w/EL	trof parabolic	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	12	500	350
2934	Beals Senior Center	Lounge Staff	1 senior center	3L4' T8 32w/EL	trof parabolic	3	3	88	0.3	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	54	0.2	0.1	196	1,900	1,330
2935	Beals Senior Center	Office Assist Dir	1 senior center	3L4' T8 32w/EL	trof parabolic	3	3	88	0.3	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	54	0.2	0.1	130	1,260	1,260
2936	Beals Senior Center	Bath Women	1 senior center	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	81	2,340	1,638
2937	Beals Senior Center	Bath Men	1 senior center	2L4' T8 32w U/EL	trof parabolic	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	52	2,340	1,638
2938	Beals Senior Center	Lounge Ping Pong	1 senior center	3L4' T8 32w/EL	trof parabolic	11	11	88	1.0	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	11	54	0.6	0.4	504	1,330	1,330
2939	Beals Senior Center	Storage Ping Pong	1 senior center	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	17	500	350
2940	Beals Senior Center	Exercise Fitness	1 senior center	3L4' T8 32w/EL	trof parabolic	11	11	88	1.0	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	11	54	0.6	0.4	483	1,274	1,274
2941	Beals Senior Center	Storage Health Storage	1 senior center	2L4' T8 32w/EL	trof parabolic	9	9	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	36	0.3	0.2	77	350	350
2942	Beals Senior Center	Office Open Sanitarians	1 senior center	2L4' T8 32w/EL	trof parabolic	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	0.1	239	1,638	1,638
2943	Beals Senior Center	Storage Vault	1 senior center	2L4' T8 32w/EL	trof parabolic	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	0.1	102	700	700
2944	Beals Senior Center	Office Open Health District	1 senior center	2L4' T8 32w/EL	trof parabolic	13	13	60	0.8	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	13	36	0.5	0.3	517	1,638	1,638
2945	Beals Senior Center	Office Office Manager	1 senior center	2L4' T8 32w/EL	trof parabolic	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	61	1,260	1,260
2946	Beals Senior Center	Lounge Staff	1 senior center	2L4' T8 32w/EL	trof parabolic	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	97	1,330	1,330
2947	Beals Senior Center	Office Dir Nursing	1 senior center	2L4' T8 32w/EL	trof parabolic	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	87	1,800	1,260
2948	Beals Senior Center	Office Dir Health	1 senior center	2L4' T8 32w/EL	trof parabolic	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	61	1,260	1,260
2949	Beals Senior Center	Office Epidemiologist	1 senior center	2L4' T8 32w/EL	trof parabolic	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	61	1,260	1,260
2950	Beals Senior Center	Office Open Back Office	1 senior center	2L4' T8 32w/EL	trof parabolic	7	7	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	7	36	0.2	0.2	279	1,638	1,638
2951	Beals Senior Center	Bath Women	1 senior center	2L4' T8 32w/EL	trof parabolic	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	171	2,340	1,638
2952	Beals Senior Center	Bath Men	1 senior center	2L4' T8 32w/EL	trof parabolic	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	171	2,340	1,638
2953	Beals Senior Center	Storage Maint	1 senior center	2L4' T8 32w/EL	trof parabolic	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	12	500	350
2954	Beals Senior Center	Hall Health	1 senior center	4L4' T8 32w/EL-8'	trof parabolic	23	23	112	2.6	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	23	71	1.6	0.9	2,671	2,860	2,002
2955	Beals Senior Center	Hall Health	1 senior center	4L3' T8 25w/EL-6'	trof parabolic	2	2	88	0.2	4L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	50	0.1	0.1	215	2,860	2,002
2956	Beals Senior Center	Hall Health	1 senior center	2L3' T8 25w/EL	trof parabolic	2	2	47	0.1	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	25	0.1	0.0	125	2,860	2,002
2957	Beals Senior Center	Hall Health	1 senior center	2L4' T8 32w/EL	trof parabolic	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	69	2,860	2,860
2958	Beals Senior Center	Hall Ping Pong - Main Office	1 senior center	4L4' T8 32w/EL-8'	trof parabolic	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.2	464	2,860	2,860
2959	Beals Senior Center	Hall Ping Pong - Main Office	1 senior center	4L3' T8 25w/EL-6'	trof parabolic	1	1	88	0.1	4L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	50	0.1	0.0	108	2,860	2,860
2960	Beals Senior Center	Cafeteria Main	1 senior center	2L4' T8 32w/EL	trof parabolic	12	12	60	0.7	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	36	0.4	0.3	478	1,638	1,638
2961	Beals Senior Center	Cafeteria Main	1 senior center	28W CF HARDWIRED	can rec 8"	19	19	30	0.6	10 WATT LED/KIT	can kit LED Spectrum	19	11	0.2	0.4	607	1,638	1,638
2962	Beals Senior Center	Stage Main	1 senior center	2L4' T8 32w/EL	trof parabolic	12	12	60	0.7	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	36	0.4	0.3	682	2,340	1,638
2963	Beals Senior Center	Stage Main	1 senior center	75W INCANDESCENT	track can	5	5	75	0.4	8 WATT LED SI	screw in LED par20	5	8	0.0	0.3	779	2,340	1,638
2964	Beals Senior Center	Office Nutrition	1 senior center	2L4' T8 32w/EL	trof parabolic	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	87	1,800	1,260
2965	Beals Senior Center	Office Maint6	1 senior center	2L4' T8 32w/EL	trof parabolic	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	0.1	262	1,800	1,260
2966	Beals Senior Center	Kitchen Main	1 senior center	2L4' T8 32w U/EL	trof acr	12	12	60	0.7	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	12	38	0.5	0.3	623	2,340	2,340
2967	Beals Senior Center	Kitchen Ice	1 senior center	2L4' T8 32w/EL	trof parabolic	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	57	2,340	1,638
2968	Beals Senior Center	Storage Plates	1 senior center	2L4' T8 32w/EL	trof parabolic	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	24	1,000	700
2969	Beals Senior Center	Lounge Billiards	1 senior center	2L4' T8 32w/EL	trof parabolic	12	12	60	0.7	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	36	0.4	0.3	388	1,330	1,330
2970	Beals Senior Center	Lounge Billiards	1 senior center	13W CF HARDWIRED	keyless	12		15	0.2	NO RETRO	no change		16	0.2			1,330	1,330
2971	Beals Senior Center	Hall To Billiards	1 senior center	4L4' T8 32w/EL-8'	valance	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	348	2,860	2,002
2972	Beals Senior Center	Hall To Billiards	1 senior center	2L3' T8 25w/EL	valance	1	1	47	0.0	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	25	0.0	0.0	62	2,860	2,002
2973	Beals Senior Center	Hall To Billiards	1 senior center	2L4' T8 32w/EL	valance	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	139	2,860	2,002
2974	Beals Senior Center	Office Delivered Meals	1 senior center	2L4' T8 32w/EL	trof parabolic	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	0.1	184	1,260	1,260
2975	Beals Senior Center	Storage Delivered Meals	1 senior center	2L4' T8 32w/EL	trof parabolic	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	0.1	102	700	700
2976	Beals Senior Center	Gym Main	1 senior center	4L4' T5 HO/EL	high bay	24	24	234	5.6	98 WATT LED/NEW	new LED hibay wg	24	103	2.5	3.1	5,726	1,820	1,274

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
2977	Beals Senior Center	Storage Main	1 senior center	60W INCANDESCENT	keyless	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	52	500	500
2978	Beals Senior Center	Mechanical Boiler	1 senior center	4L4' T8 32w/EL-8'	industrial	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.2	81	500	500
2979	Beals Senior Center	Bath Men (2)	1 senior center	2L4' T8 32w/EL	trof parabolic	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	114	2,340	1,638
2980	Beals Senior Center	Storage Shower	1 senior center	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	11	500	350
2981	Beals Senior Center	Storage Elect	1 senior center	2L4' T8 32w/EL	strip	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	24	500	500
2982	Beals Senior Center	Classroom Art	1 senior center	2L4' T8 32w/EL	trof parabolic	12	12	60	0.7	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	36	0.4	0.3	478	1,638	1,638
2983	Beals Senior Center	Bath Men	1 senior center	2L4' T8 32w/EL	trof parabolic	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	171	2,340	1,638
2984	Beals Senior Center	Bath Ladies	1 senior center	2L4' T8 32w/EL	trof parabolic	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	171	2,340	1,638
2985	Beals Senior Center	Conference 101	1 senior center	2L4' T8 32w/EL	trof parabolic	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	122	1,260	1,260
2986	Beals Senior Center	Storage Janitor	1 senior center	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	11	500	350
2987	Beals Senior Center	Classroom Computers	1 senior center	2L4' T8 32w/EL	trof parabolic	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	159	1,638	1,638
2988	Beals Senior Center	Shop Wood	1 senior center	2L4' T8 32w/EL	trof acr	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	0.2	318	1,638	1,638
2989	Beals Senior Center	Lobby Wood Shop	1 senior center	2L4' T8 32w U/EL	trof parabolic	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	63	2,860	2,002
2990	Beals Senior Center	Storage Drill Press	1 senior center	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	24	1,000	700
2991	Beals Senior Center	Lounge 105	1 senior center	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	92	1,330	1,330
2992	Beals Senior Center	Lounge 105	1 senior center	3L4' T8 32w/EL	trof parabolic	12	12	88	1.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	54	0.6	0.4	550	1,330	1,330
2993	Beals Senior Center	Classroom 104	1 senior center	2L4' T8 32w/EL	trof parabolic	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	0.2	455	2,340	1,638
2994	Beals Senior Center	Storage Kiln	1 senior center	2L4' T8 32w/EL	trof parabolic	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	34	700	700
2995	Beals Senior Center	Conference Community Room	1 senior center	2L4' T8 32w/EL	trof parabolic	12	12	60	0.7	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	36	0.4	0.3	367	1,260	1,260
2996	Beals Senior Center	Storage Card Room	1 senior center	2L4' T8 32w/EL	trof parabolic	9	9	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	36	0.3	0.2	153	700	700
2997	Beals Senior Center	Cafeteria Coffee	1 senior center	2L4' T8 32w/EL	trof parabolic	9	9	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	36	0.3	0.2	512	2,340	1,638
2998	Beals Senior Center	Retail Tag Sale	1 senior center	3L4' T8 32w/EL	trof parabolic	3	3	88	0.3	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	54	0.2	0.1	242	2,340	1,638
2999	Beals Senior Center	Office Friends	1 senior center	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	87	1,260	1,260
3000	Beals Senior Center	Office Friends	1 senior center	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	87	1,260	1,260
3001	Beals Senior Center	Storage Drinks	1 senior center	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	24	350	350
3002	Beals Senior Center	Lobby Clinic	1 senior center	4L4' T8 32w/EL-8'	valance	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.2	325	2,002	2,002
3003	Beals Senior Center	Office Open Clinic	1 senior center	3L4' T8 32w/EL	trof parabolic	3	3	88	0.3	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	54	0.2	0.1	242	2,340	1,638
3004	Beals Senior Center	Bath Clinic	1 senior center	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	57	2,340	1,638
3005	Beals Senior Center	Storage Compressor	1 senior center	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	12	500	350
3006	Beals Senior Center	Storage Supplies	1 senior center	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	34	1,000	700
3007	Beals Senior Center	Office Dental	1 senior center	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	62	1,800	1,260
3008	Beals Senior Center	Office Exam A	1 senior center	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	62	1,800	1,260
3009	Beals Senior Center	Office Aprn	1 senior center	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	62	1,800	1,260
3010	Beals Senior Center	Office Exam B	1 senior center	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	62	1,800	1,260
3011	Beals Senior Center	Kitchen Near Exam Rooms	1 senior center	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	81	2,340	1,638
3012	Beals Senior Center	Foyer Near Clinic	1 senior center	2L2' T8 17w/EL	trof parabolic	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	81	2,860	2,860
3013	Beals Senior Center	Hall Clinic - Conf 101	1 senior center	4L4' T8 32w/EL-8'	valance	15	15	112	1.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	15	71	1.1	0.6	1,742	2,860	2,002
3014	Beals Senior Center	Hall Clinic - Conf 101	1 senior center	75W INCANDESCENT	track can	5	5	75	0.4	8 WATT LED SI	screw in LED par20	5	8	0.0	0.3	952	2,860	2,860
3015	Beals Senior Center	Hall Adjacent To Maint Office	1 senior center	4L4' T8 32w/EL-8'	valance	5	5	112	0.6	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	71	0.4	0.2	581	2,860	2,002
3016	Beals Senior Center	Hall Adjacent To Maint Office	1 senior center	2L3' T8 25w/EL	valance	1	1	47	0.0	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	25	0.0	0.0	62	2,860	2,002
3017	Beals Senior Center	Hall Conf 101 - K	1 senior center	4L4' T8 32w/EL-8'	valance	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	232	2,860	2,002
3018	Beals Senior Center	Hall Conf 101 - K	1 senior center	2L4' T8 32w/EL	valance	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	69	2,860	2,002
3019	Beals Senior Center	Hall Adj To Art	1 senior center	4L4' T8 32w/EL-8'	valance	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	348	2,860	2,002
3020	Beals Senior Center	Hall Adj To Art	1 senior center	2L4' T8 32w/EL	valance	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	69	2,860	2,002
3021	Beals Senior Center	Hall K - Billiards	1 senior center	4L4' T8 32w/EL-8'	valance	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	1,045	2,860	2,002
3022	Beals Senior Center	Hall K - Billiards	1 senior center	2L4' T8 32w/EL	valance	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	69	2,860	2,002
3023	Beals Senior Center	Hall K - Billiards	1 senior center	2L3' T8 25w/EL	valance	1	1	47	0.0	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	25	0.0	0.0	62	2,860	2,002
3024	Beals Senior Center	Foyer Near Gym	1 senior center	2L2' T8 17w/EL	trof parabolic	1	1	33	0.0	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	19	0.0	0.0	40	2,860	2,860
3025	Beals Senior Center	Hall K - Main Entry	1 senior center	4L4' T8 32w/EL-8'	valance	10	10	112	1.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	10	71	0.7	0.4	1,161	2,860	2,002
3026	Beals Senior Center	Hall K - Main Entry	1 senior center	4L3' T8 25w/EL-6'	valance	1	1	88	0.1	4L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	50	0.1	0.0	108	2,860	2,002
3027	Beals Senior Center	Hall K - Main Entry	1 senior center	2L2' T8 17w/EL	trof parabolic	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	81	2,860	2,002
3039	Dennis Malone Aquatic Center	Lobby Main	1	250W MERCURY VAPOR	cylinder surf mt.	4	4	290	1.2	46 WATT LED/KIT	can kit LED Spectrum	4	48	0.2	1.0	4,848	5,278	5,278
3040	Dennis Malone Aquatic Center	Lobby Main	1	13W CF HARDWIRED	can rec 6"	7		15	0.1	NO RETRO	no change		16	0.1			5,278	5,278
3041	Dennis Malone Aquatic Center	Locker Mens Vestibule	1	13W CF HARDWIRED	can rec 6"	1		15	0.0	NO RETRO	no change		16	0.0			5,278	3,695
3042	Dennis Malone Aquatic Center	Storage Fire Alarm	1	60W INCANDESCENT	drum	1	1	60	0.1	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	21	500	350
3043	Dennis Malone Aquatic Center	Locker Men	1	2L4' T8 32w/EL	trof acr	10	10	60	0.6	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	10	36	0.4	0.2	1,218	5,278	5,278
3044	Dennis Malone Aquatic Center	Locker Men	1	2L4' T8 32w/EL	vanity	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	244	5,278	5,278
3045	Dennis Malone Aquatic Center	Locker Men	1	2L4' T8 32w/EL	vapor tight	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	244	5,278	5,278
3046	Dennis Malone Aquatic Center	Locker Men	1	13W CF HARDWIRED	can rec 6"	1		15	0.0	NO RETRO	no change		16	0.0			5,278	3,695
3047	Dennis Malone Aquatic Center	Locker Womans	1	2L4' T8 32w/EL	trof acr	12	12	60	0.7	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	36	0.4	0.3	1,462	5,278	5,278
3048	Dennis Malone Aquatic Center	Locker Womans	1	2L4' T8 32w/EL	vanity	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	244	5,278	5,278
3049	Dennis Malone Aquatic Center	Locker Womans	1	13W CF HARDWIRED	can rec 6"	5		15	0.1	NO RETRO	no change		16	0.1			5,278	3,695
3050	Dennis Malone Aquatic Center	Pool Pool	1	250W MERCURY VAPOR	high bay	20	20	290	5.8	98 WATT LED/NEW	new LED hibay wg	20	103	2.1	3.7	18,763	5,278	5,278
3051	Dennis Malone Aquatic Center	Locker Staff	1	2L4' T8 32w/EL	wrap	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	366	5,278	3,695
3052	Dennis Malone Aquatic Center	Bath Staff	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	122	5,278	3,695
3053	Dennis Malone Aquatic Center	Bath Shower	1	18W CF HARDWIRED	box acrylic	2	2	20	0.0	16 WATT LED/NEW	new LED drum	2	17	0.0	0.0	32	5,278	3,695
3054	Dennis Malone Aquatic Center	Locker Changing	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	204	5,278	5,278
3055	Dennis Malone Aquatic Center	Locker Changing	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	122	5,278	5,278
3056	Dennis Malone Aquatic Center	Locker Changing	1	4L4' T8 32w/EL-8'	vanity	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	204	5,278	3,695
3057	Dennis Malone Aquatic Center	Storage Air Handler	1	4L4' T8 32w/EL-8'	industrial	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	77	1,000	700
3058	Dennis Malone Aquatic Center	Storage Mech Loft	2	4L4' T12 34w EE/EEMAG-8'	industrial	6	6	140	0.8	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.4	391	1,000	1,000
3059	Dennis Malone Aquatic Center	Mechanical Boiler	1	2L4' T8 32w/EL-8'	industrial	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	46	500	500
3060	Dennis Malone Aquatic Center	Storage Janitor	1	1L4' T8 32w/EL	industrial	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	6	500	350

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
3061	Dennis Malone Aquatic Center	Storage Chairs	1	1L4' T8 32w/EL	industrial	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	23	1,000	700
3062	Dennis Malone Aquatic Center	Office Front	1	65W INCANDESCENT	can rec 6"	6	6	65	0.4	8 WATT LED SI	screw in LED Alamp	6	8	0.1	0.3	581	1,800	1,260
3066	Water Filtration Plant & High Service Pump Station	Storage Back Garage	1	4L4' T8 32w/EL-8'	industrial	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	183	500	350
3067	Water Filtration Plant & High Service Pump Station	Hall Back Garage	1	2L4' T8 32w/EL	vapor tight	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	182	2,500	1,750
3068	Water Filtration Plant & High Service Pump Station	Storage Raw Water Pump Station	1	60W INCANDESCENT	keyless	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	52	500	350
3069	Water Filtration Plant & High Service Pump Station	Storage High Service Station	1	150W INCANDESCENT	keyless	4	4	150	0.6	11 WATT LED SI	screw in LED Alamp	4	12	0.0	0.6	277	500	350
3070	Water Filtration Plant & High Service Pump Station	Foyer Main	1	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	71	2,500	1,750
3071	Water Filtration Plant & High Service Pump Station	Office 202	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	175	1,800	1,260
3072	Water Filtration Plant & High Service Pump Station	Office 203	1	2L4' T8 32w/EL	trof acr	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	131	1,800	1,260
3073	Water Filtration Plant & High Service Pump Station	Office 204	1	2L4' T8 32w/EL	trof acr	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	131	1,800	1,260
3074	Water Filtration Plant & High Service Pump Station	Office 207 Control Room	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	175	1,800	1,260
3075	Water Filtration Plant & High Service Pump Station	Storage 214 Elect	1	2L4' T8 32w/EL	trof acr	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	73	1,000	700
3076	Water Filtration Plant & High Service Pump Station	Storage 212	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	49	1,000	700
3077	Water Filtration Plant & High Service Pump Station	Office 216	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	175	1,800	1,260
3078	Water Filtration Plant & High Service Pump Station	Lab 217	1	2L4' T8 32w/EL	trof acr	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	0.2	1,703	8,760	6,132
3079	Water Filtration Plant & High Service Pump Station	Lab 217	1	2L2' T8 17w/EL	trof acr	1	1	33	0.0	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	19	0.0	0.0	124	8,760	6,132
3080	Water Filtration Plant & High Service Pump Station	Storage 217	1	2L4' T8 32w/EL	trof acr	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	36	500	350
3081	Water Filtration Plant & High Service Pump Station	Storage 217	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	12	500	350
3082	Water Filtration Plant & High Service Pump Station	Bath 226	1	1L4' T8 32w/EL	trof acr 1' wide	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	61	2,500	1,750
3083	Water Filtration Plant & High Service Pump Station	Bath 226	1	60W INCANDESCENT	can rec 6"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	0.1	258	2,500	1,750
3084	Water Filtration Plant & High Service Pump Station	Locker 226	1	1L4' T8 32w/EL	trof acr 1' wide	3	3	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	18	0.1	0.0	91	2,500	1,750
3085	Water Filtration Plant & High Service Pump Station	Locker 226 (2)	1	75W INCANDESCENT	can rec 10"	4	4	75	0.3	8 WATT LED SI	screw in LED Alamp	4	8	0.0	0.3	666	2,500	2,500
3086	Water Filtration Plant & High Service Pump Station	Storage 225	1	2L2' T8 17w/EL	trof parabolic	1	1	33	0.0	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	19	0.0	0.0	7	500	350
3087	Water Filtration Plant & High Service Pump Station	Bath 224	1	1L4' T8 32w/EL	trof acr 1' wide	3	3	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	18	0.1	0.0	91	2,500	1,750
3088	Water Filtration Plant & High Service Pump Station	Bath 224	1	15W CF SCREWIN	can rec 6"	2	2	17	0.0	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.0	43	2,500	1,750
3089	Water Filtration Plant & High Service Pump Station	Locker 224	1	1L4' T8 32w/EL	trof acr 1' wide	6	6	30	0.2	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	18	0.1	0.1	182	2,500	1,750
3090	Water Filtration Plant & High Service Pump Station	Locker 224	1	75W INCANDESCENT	can rec 10"	1	1	75	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	167	2,500	2,500
3091	Water Filtration Plant & High Service Pump Station	Locker 224 (2)	1	75W INCANDESCENT	can rec 10"	4	4	75	0.3	8 WATT LED SI	screw in LED Alamp	4	8	0.0	0.3	666	2,500	2,500
3092	Water Filtration Plant & High Service Pump Station	Kitchen Near Lockers	1	2L4' T8 32w/EL	trof acr	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	109	1,500	1,050
3093	Water Filtration Plant & High Service Pump Station	Lounge Near Lockers	1	2L4' T8 32w/EL	trof acr	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	0.2	369	1,900	1,330
3094	Water Filtration Plant & High Service Pump Station	Conference 209	1	4L4' T8 32w/EL-8'	trof acr	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	146	1,800	1,260
3095	Water Filtration Plant & High Service Pump Station	Hall Main	1	2L2' T8 17w/EL	trof acr	14	14	33	0.5	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	14	19	0.3	0.2	494	2,500	1,750
3096	Water Filtration Plant & High Service Pump Station	Hall Control-Lockers	1	2L2' T8 17w/EL	trof acr	13	13	33	0.4	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	13	19	0.2	0.2	458	2,500	1,750
3097	Water Filtration Plant & High Service Pump Station	Hall 228	1	2L4' T8 32w/EL	trof acr	25	25	60	1.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	25	36	0.9	0.6	1,519	2,500	1,750
3098	Water Filtration Plant & High Service Pump Station	Storage Tank Gallery	1	2L4' T8 32w/EL	vapor tight	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	0.2	97	500	350
3099	Water Filtration Plant & High Service Pump Station	Storage Tank Gallery	1	150W INCANDESCENT	flood	4	4	150	0.6	21 WATT LED/NEW	new LED flood	4	22	0.1	0.5	256	500	350
3100	Water Filtration Plant & High Service Pump Station	Storage Tank Gallery	1	2L4' T8 32w/EL	vapor tight	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	0.1	73	500	350
3101	Water Filtration Plant & High Service Pump Station	Storage 231	1	2L4' T8 32w/EL	vapor tight	15	15	60	0.9	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	15	36	0.5	0.4	365	1,000	700
3102	Water Filtration Plant & High Service Pump Station	Storage 231	1	2L4' T8 32w/EL	vapor tight	12	12	60	0.7	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	36	0.4	0.3	292	1,000	700
3103	Water Filtration Plant & High Service Pump Station	Storage 231	1	2L4' T8 32w/EL	vapor tight	15	15	60	0.9	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	15	36	0.5	0.4	365	1,000	700
3104	Water Filtration Plant & High Service Pump Station	Storage 230	1	2L4' T8 32w/EL	industrial	5	5	60	0.3	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	36	0.2	0.1	61	500	350
3105	Water Filtration Plant & High Service Pump Station	Stair Off 231	stair	2L4' T8 32w/EL	vanity	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	182	2,500	1,750
3106	Water Filtration Plant & High Service Pump Station	Storage Large Green Pipe	lower	2L4' T8 32w/EL	vapor tight	13	13	60	0.8	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	13	36	0.5	0.3	316	1,000	1,000
3107	Water Filtration Plant & High Service Pump Station	Storage Chem Lines (2)	lower	100W INCANDESCENT	explosion	2	2	100	0.2	15 WATT LED SI	screw in LED Alamp	2	16	0.0	0.2	84	500	350
3108	Water Filtration Plant & High Service Pump Station	Storage Wash Water Drains	lower	2L4' T8 32w/EL	vapor tight	12	12	60	0.7	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	36	0.4	0.3	292	1,000	700
3109	Water Filtration Plant & High Service Pump Station	Lobby Generator	lower	2L4' T8 32w/EL	industrial	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	243	2,500	1,750
3110	Water Filtration Plant & High Service Pump Station	Storage Generator	lower	2L4' T8 32w/EL	industrial	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	49	500	350
3111	Water Filtration Plant & High Service Pump Station	Stair Near Generator	stair	2L4' T8 32w/EL	vanity	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	122	2,500	1,750
3112	Water Filtration Plant & High Service Pump Station	Stair Near Generator	stair	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	61	2,500	2,500
3113	Water Filtration Plant & High Service Pump Station	Stair Near Main Lobby	stair	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	61	2,500	2,500
3114	Water Filtration Plant & High Service Pump Station	Stair Near Main Lobby	stair	2L4' T8 32w/EL	vanity	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	122	2,500	1,750
3115	Water Filtration Plant & High Service Pump Station	Mechanical 115	lower	2L4' T8 32w/EL	industrial	5	5	60	0.3	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	36	0.2	0.1	61	500	500
3116	Water Filtration Plant & High Service Pump Station	Storage Chem Treatment	lower	2L4' T8 32w/EL	vapor tight	49	49	60	2.9	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	49	36	1.7	1.2	1,191	1,000	700
3117	Water Filtration Plant & High Service Pump Station	Storage 113	lower	2L4' T8 32w/EL	vapor tight	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	49	500	350
3118	Water Filtration Plant & High Service Pump Station	Hall Time Clock	lower	2L4' T8 32w/EL	industrial	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	182	2,500	1,750
3119	Water Filtration Plant & High Service Pump Station	Storage Garage	lower	4L4' T5 HO/EL	high bay	6	6	234	1.4	98 WATT LED/NEW	new LED hibay wg	6	103	0.6	0.8	787	1,000	700
3120	Water Filtration Plant & High Service Pump Station	Storage Garage	lower	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	73	1,000	1,000
3121	Water Filtration Plant & High Service Pump Station	Storage Garage	lower	2L4' T8 32w/EL	industrial	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	49	1,000	1,000
3122	Water Filtration Plant & High Service Pump Station	Storage Chain Saws	lower	2L4' T8 32w/EL	industrial	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	12	500	350
3123	Water Filtration Plant & High Service Pump Station	Storage 103	lower	2L4' T8 32w/EL	industrial	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	24	500	350
3124	Water Filtration Plant & High Service Pump Station	Storage 104	lower	2L4' T8 32w/EL	industrial	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	24	500	350
3125	Water Filtration Plant & High Service Pump Station	Storage 105	lower	2L4' T8 32w/EL	industrial	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	24	500	350
3126	Water Filtration Plant & High Service Pump Station	Storage 106	lower	2L4' T8 32w/EL	industrial	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	12	500	350
3127	Water Filtration Plant & High Service Pump Station	Bath 107	lower	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	61	2,500	1,750
3128	Water Filtration Plant & High Service Pump Station	Storage Garage Mez	lower	2L4' T8 32w/EL	industrial	5	5	60	0.3	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	36	0.2	0.1	61	500	350
3129	Water Filtration Plant & High Service Pump Station	Stair Near Lockers	stair	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	61	2,500	2,500
3130	Water Filtration Plant & High Service Pump Station	Stair Near Lockers	stair	2L4' T8 32w/EL	vanity	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	122	2,500	1,750
3131	Water Filtration Plant & High Service Pump Station	Storage 110	lower	2L4' T8 32w/EL	vapor tight	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	49	500	350
3132	Water Filtration Plant & High Service Pump Station	Storage 111	lower	2L4' T8 32w/EL	vapor tight	5	5	60	0.3	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	36	0.2	0.1	61	500	350
3138	#1 Well House	Storage All	1	2L4' T12 34w EE/EEMAG	industrial	4	4	70	0.3	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	69	500	500
3140	#2 Well House	Storage Well 2	1	4L4' T8 32w/EL-8'	vapor tight	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	20	500	500
3141	#2 Well House	Storage Well Chem Bldg	1	2L4' T12 34w EE/EEMAG	vapor tight	9	9	70	0.6	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	36	0.3	0.3	154	500	500
3144	Chemical Control, Generator & #3-5 Well Houses	Storage #3 Well House	1	100W INCANDESCENT	explosion	2	2	100	0.2	15 WATT LED SI	screw in LED Alamp	2	16	0.0	0.2	84	500	500

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
3145	Chemical Control, Generator & #3-5 Well Houses	Storage #4 Well House	1	150W INCANDESCENT	explosion	2	2	150	0.3	15 WATT LED SI	screw in LED Alamp	2	16	0.0	0.3	134	500	500
3146	Chemical Control, Generator & #3-5 Well Houses	Storage #5 Well House	1	150W INCANDESCENT	explosion	2	2	150	0.3	15 WATT LED SI	screw in LED Alamp	2	16	0.0	0.3	134	500	500
3147	Chemical Control, Generator & #3-5 Well Houses	Storage Generator	1	2L8' T12 60w EE/EEMAG	strip	4	4	123	0.5	2L4' T8 28w/ELEE HI/NEW-8'	new LF strip	4	67	0.3	0.2	112	500	500
3148	Chemical Control, Generator & #3-5 Well Houses	Storage Main Bldg	1	120W INCANDESCENT	explosion	4	4	120	0.5	15 WATT LED SI	screw in LED Alamp	4	16	0.1	0.4	209	500	500
3149	Chemical Control, Generator & #3-5 Well Houses	Storage Chem Room	1	120W INCANDESCENT	explosion	2	2	120	0.2	15 WATT LED SI	screw in LED Alamp	2	16	0.0	0.2	104	500	500
3152	Chemical Control - Mechanic St	Storage Mechanic St	1	2L4' T12 34w EE/EEMAG	vapor tight	4	4	70	0.3	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	69	500	500
3153	Chemical Control - Mechanic St	Storage Mechanic St	1	28W CF HARDWIRED	rectangular	1		30	0.0	NO RETRO	no change		32	0.0			500	500
3155	Pump Control - Peck Lane	Storage Pump Room	1	2L4' T8 32w/EL	vapor tight	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	0.2	97	500	500
3158	Pump Control & Generator - Hill St.	Storage Pump Room	1	200W INCANDESCENT	keyless	10	10	200	2.0	19 WATT LED SI	screw in LED Alamp	10	20	0.2	1.8	900	500	500
3159	Pump Control & Generator - Hill St.	Mechanical Boiler	1	200W INCANDESCENT	keyless	2	2	200	0.4	19 WATT LED SI	screw in LED Alamp	2	20	0.0	0.4	180	500	500
3161	Pump and Control - Wolcott St	Storage Pump Room	1	2L4' T8 32w/EL	vapor tight	9	9	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	36	0.3	0.2	109	500	500
3163	Rockwell Park & Pavilion	Auditorium Main	1	2L4' T8 32w/EL	wrap	12	12	60	0.7	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	36	0.4	0.3	146	500	500
3164	Rockwell Park & Pavilion	Hall Restrooms	1	60W INCANDESCENT	jar	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	52	500	500
3165	Rockwell Park & Pavilion	Bath Men (2)	1	2x13W CF HARDWIRED	square surface mt.	2	2	30	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.0	13	500	350
3166	Rockwell Park & Pavilion	Storage Christmas Supplies	1	13W CF HARDWIRED	keyless	1		15	0.0	NO RETRO	no change		16	0.0			500	350
3167	Rockwell Park & Pavilion	Mechanical Boiler	1	60W INCANDESCENT	keyless	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	52	500	350
3168	Rockwell Park & Pavilion	Storage Boiler	1	13W CF HARDWIRED	keyless	1		15	0.0	NO RETRO	no change		16	0.0			500	500
3169	Rockwell Park & Pavilion	Kitchen Main	1	2x60W INCANDESCENTS	square surface mt.	1	1	120	0.1	16 WATT LED/NEW	new LED drum	1	17	0.0	0.1	52	500	350
3170	Rockwell Park & Pavilion	Storage K	1	2x60W INCANDESCENTS	square surface mt.	1	1	120	0.1	16 WATT LED/NEW	new LED drum	1	17	0.0	0.1	52	500	350
3171	Bathhouse	Storage Boats	1	60W INCANDESCENT	square surface mt.	10		60	0.6	NO RETRO	no change per customer		63	0.6				
3172	Bathhouse	Bath Men (2)	1	60W INCANDESCENT	square surface mt.	4		60	0.2	NO RETRO	no change per customer		63	0.2				
3173	Bathhouse	Storage Goals	1	60W INCANDESCENT	square surface mt.	2		60	0.1	NO RETRO	no change per customer		63	0.1				
3174	Bathhouse	Stair Main	stair	60W INCANDESCENT	square surface mt.	4		60	0.2	NO RETRO	no change per customer		63	0.2				
3175	Bathhouse	Storage Trees	2	60W INCANDESCENT	square surface mt.	8		60	0.5	NO RETRO	no change per customer		63	0.5				
3176	Bathhouse	Storage Changing (2)	2	60W INCANDESCENT	square surface mt.	4		60	0.2	NO RETRO	no change per customer		63	0.2				
3180	Muzzy Field	Storage Locker Room	1	4L4' T12 34w EE/EEMAG	trof acr	2	2	140	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	69	500	500
3181	Muzzy Field	Locker Main	1	4L4' T12 34w EE/EEMAG	trof acr	6	6	140	0.8	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.4	62	150	150
3182	Muzzy Field	Bath Locker Room	1	2L4' T12 34w EE/EEMAG	trof acr	2	2	70	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.1	10	150	150
3183	Muzzy Field	Bath Locker Room	1	4L4' T12 34w EE/EEMAG	trof acr	2	2	140	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	21	150	150
3184	Muzzy Field	Storage Concession	1	4L4' T12 34w EE/EEMAG-8'	wrap	2	2	140	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	69	500	500
3185	Muzzy Field	Bath Main (2)	1	4L4' T12 34w EE/EEMAG-8'	wrap	4	4	140	0.6	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.3	41	150	150
3186	Muzzy Field	Mechanical Boiler	1	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	3	50	50
3188	Muzzy Field	Storage Electric	1	2L8' T12 60w EE/EEMAG	wrap narrow	3	3	123	0.4	2L4' T8 28w/ELEE HI/NEW-8'	new LF wrap	3	67	0.2	0.2	84	500	500
3189	Muzzy Field	Storage Pads (2)	1	2L8' T12 60w EE/EEMAG	wrap narrow	4	4	123	0.5	2L4' T8 28w/ELEE HI/NEW-8'	new LF wrap	4	67	0.3	0.2	112	500	500
3190	Muzzy Field	Locker Main	1	2L8' T12 60w EE/EEMAG	wrap narrow	12	12	123	1.5	2L4' T8 28w/ELEE HI/NEW-8'	new LF wrap	12	67	0.8	0.7	100	150	150
3191	Muzzy Field	Storage Locker Room	1	60W INCANDESCENT	keyless	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	52	500	500
3192	Muzzy Field	Locker Officials	1	2L8' T12 60w EE/EEMAG	wrap narrow	3	3	123	0.4	2L4' T8 28w/ELEE HI/NEW-8'	new LF wrap	3	67	0.2	0.2	25	150	150
3193	Muzzy Field	Locker Officials	1	1L4' T12 34w EE/EEMAG	vanity	1	1	40	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	3	150	150
3194	Muzzy Field	Bath Men (2)	1	2L8' T12 60w EE/EEMAG	wrap narrow	6	6	123	0.7	2L4' T8 28w/ELEE HI/NEW-8'	new LF wrap	6	67	0.4	0.3	50	150	150
3195	Muzzy Field	Storage Concession	1	2L8' T12 60w EE/EEMAG	wrap narrow	3	3	123	0.4	2L4' T8 28w/ELEE HI/NEW-8'	new LF wrap	3	67	0.2	0.2	84	500	500
3197	Muzzy Field	Storage Press Box	2	2L8' T12 60w EE/EEMAG	wrap narrow	3	3	123	0.4	2L4' T8 28w/ELEE HI/NEW-8'	new LF wrap	3	67	0.2	0.2	84	500	500
3198	Muzzy Field	Storage Shed	1	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	26	500	500
3200	Ski Lodge	Bath Men	1	26W CF HARDWIRED	square surface mt.	1	1	28	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	6	500	350
3201	Ski Lodge	Exercise Rec	1	2L4' T12 34w EE/EEMAG	wrap wide	5	5	70	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	36	0.2	0.2	86	500	350
3202	Ski Lodge	Storage Tennis	1	2L4' T12 34w EE/EEMAG	wrap	1	1	70	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	17	500	350
3203	Ski Lodge	Bath Women	1	2x60W INCANDESCENTS	square surface mt.	1	1	120	0.1	16 WATT LED/NEW	new LED drum	1	17	0.0	0.1	52	500	350
3205	Page Park Pavilion	Lobby Main	1	22W & 32W CIRCLELINE HARDWIRED	drum	2	2	58	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.1	99	1,200	1,200
3206	Page Park Pavilion	Exercise Mats	1	4L4' T8 32w/EL-8'	wrap	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.2	195	1,200	840
3207	Page Park Pavilion	Exercise Mats	1	60W INCANDESCENT	rectangular	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	124	1,200	840
3208	Page Park Pavilion	Exercise Mats	1	2L4' T12 34w EE/EEMAG	wrap	2	2	70	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.1	82	1,200	840
3209	Page Park Pavilion	Exercise Mats	1	4L4' T8 32w/EL-8'	wrap	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	97	1,200	840
3210	Page Park Pavilion	Storage Boiler	1	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	26	500	350
3211	Page Park Pavilion	Bath Men (2)	1	22W & 32W CIRCLELINE HARDWIRED	drum	2	2	58	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.1	99	1,200	840
3212	Page Park Pavilion	Bath Men (2)	1	2L2' T8 17w/EL	vanity	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	34	1,200	840
3217	Pool	Lobby Main	1	60W INCANDESCENT	square recessed	3	3	60	0.2	8 WATT LED SI	screw in LED Alamp	3	8	0.0	0.2	77	500	500
3218	Pool	Lobby Main	1	2L4' T12 34w EE/EEMAG	vapor tight	2	2	70	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.1	34	500	500
3219	Pool	Lounge Main	1	4L4' T12 34w EE/EEMAG-8'	wrap wide	1	1	140	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.1	34	500	350
3220	Pool	Storage Paint	1	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	26	500	500
3221	Pool	Storage Sink	1	60W INCANDESCENT	square recessed	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	52	500	350
3222	Pool	Locker Boys	1	2x13W CF HARDWIRED	square surface mt.	17	17	30	0.5	16 WATT LED/NEW	new LED drum	17	17	0.3	0.2	112	500	500
3223	Pool	Storage Goals	1	2L4' T12 34w EE/EEMAG	wrap	2	2	70	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.1	34	500	500
3224	Pool	Mechanical Boiler/Chlorine	1	28W CF HARDWIRED	old drum	3	3	30	0.1	16 WATT LED/NEW	new LED drum	3	17	0.1	0.0	20	500	500
3225	Pool	Mechanical Boiler/Chlorine	1	3 WATT LED	specialty application	5		3	0.0	NO RETRO	no change		3	0.0			500	500
3226	Pool	Storage Janitor	1	28W CF HARDWIRED	old drum	1	1	30	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	7	500	500
3227	Pool	Locker Girls	1	28W CF HARDWIRED	square surface mt.	15	15	30	0.5	16 WATT LED/NEW	new LED drum	15	17	0.3	0.2	99	500	500
3228	Pool	Storage Paddle Boards	1	2L4' T12 34w EE/EEMAG	wrap	2	2	70	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.1	34	500	500
3229	Pool	Storage Elect Panel	1	28W CF HARDWIRED	old drum	2	2	30	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.0	13	500	500
3230	Pool	Storage Paint	1	28W CF HARDWIRED	old drum	1	1	30	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	7	500	500
3231	Pool	Office Bench	1	2L4' T12 34w EE/EEMAG	wrap	1	1	70	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	17	500	500
3234	Recreation Building	Locker Equip	1	2L4' T12 34w EE/EEMAG	old industrial	11		70	0.8	NO RETRO	no change per customer		74	0.8			20	14
3235	Recreation Building	Bath Equip	1	60W INCANDESCENT	keyless	1		60	0.1	NO RETRO	no change per customer		63	0.1			20	14
3236	Recreation Building	Storage Garage	1	60W INCANDESCENT	keyless	1		60	0.1	NO RETRO	no change per customer		63	0.1			500	500
3237	Recreation Building	Storage 2Nd Floor	2	60W INCANDESCENT	keyless	3		60	0.2	NO RETRO	no change per customer		63	0.2			500	500

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
3238	Hill Street	Lobby Main	1	2L4' T12 34w EE/EEMAG	wrap	2		70	0.1	NO RETRO	no change per customer		74	0.1				
3239	Hill Street	Bath Men	1	2x13W CF HARDWIRED	drum	1		30	0.0	NO RETRO	no change per customer		32	0.0				
3240	Hill Street	Storage Computers	1	4L4' T12 34w EE/EEMAG	trof acr	3		140	0.4	NO RETRO	no change per customer		147	0.4				
3241	Hill Street	Storage Cases	1	2x60W INCANDESCENTS	drum	1		120	0.1	NO RETRO	no change per customer		126	0.1				
3242	Hill Street	Storage Janitor	1	2x60W INCANDESCENTS	drum	1		120	0.1	NO RETRO	no change per customer		126	0.1				
3243	Hill Street	Bath File	1	4L4' T12 34w EE/EEMAG-8'	wrap	1		140	0.1	NO RETRO	no change per customer		147	0.1				
3244	Hill Street	Storage Printers	1	2x60W INCANDESCENTS	drum	1		120	0.1	NO RETRO	no change per customer		126	0.1				
3245	Hill Street	Storage Tires	1	2L4' T12 34w EE/EEMAG	wrap	1		70	0.1	NO RETRO	no change per customer		74	0.1				
3246	Hill Street	Bath Women	1	2x13W CF HARDWIRED	drum	1		30	0.0	NO RETRO	no change per customer		32	0.0				
3247	Hill Street	Storage Fireplace	b	2L8' T12 60w EE/EEMAG	strip	4		123	0.5	NO RETRO	no change per customer		129	0.5				
3248	Hill Street	Storage Fireplace	b	2L4' T12 34w EE/EEMAG	strip	2		70	0.1	NO RETRO	no change per customer		74	0.1				
3249	Hill Street	Storage Oil Tanks (2)	b	60W INCANDESCENT	keyless	2		60	0.1	NO RETRO	no change per customer		63	0.1				
3251	Remote Pumping Stations	Storage Broad St	1	2L4' T12 34w EE/EEMAG	vapor tight	4	4	70	0.3	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	69	500	500
3252	Remote Pumping Stations	Storage Broad St	1	100W INCANDESCENT	explosion	8	8	100	0.8	15 WATT LED SI	screw in LED Alamp	8	16	0.1	0.7	337	500	500
3253	Remote Pumping Stations	Storage Cherry Hill	1	2L8' T12 60w EE/EEMAG	vapor tight	1	1	123	0.1	2L4' T8 28w/ELEE HI/NEW-8'	new LF vaportight	1	67	0.1	0.1	28	500	500
3254	Remote Pumping Stations	Storage Cherry Hill	1	100W INCANDESCENT	globe	2	2	100	0.2	11 WATT LED SI	screw in LED Alamp	2	12	0.0	0.2	88	500	500
3255	Remote Pumping Stations	Storage Cross	1	2L4' T12 34w EE/EEMAG	vapor tight	3	3	70	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	51	500	500
3259	Remote Pumping Stations	Storage Drayla	1	100W INCANDESCENT	globe	1	1	100	0.1	11 WATT LED SI	screw in LED Alamp	1	12	0.0	0.1	44	500	500
3261	Remote Pumping Stations	Storage East Main	1	2L4' T12 34w EE/EEMAG	vapor tight	2	2	70	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.1	34	500	500
3263	Remote Pumping Stations	Storage Wooster	1	2L4' T12 34w EE/EEMAG	strip	2	2	70	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.1	34	500	500
3265	Remote Pumping Stations	Storage Ivy	1	2L4' T12 34w EE/EEMAG	strip	2	2	70	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.1	34	500	500
3266	Remote Pumping Stations	Storage Ivy	1	100W INCANDESCENT	explosion	1	1	100	0.1	15 WATT LED SI	screw in LED Alamp	1	16	0.0	0.1	42	500	500
3267	Remote Pumping Stations	Storage Julia	1	2L4' T12 34w EE/EEMAG	strip	2	2	70	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.1	34	500	500
3269	Remote Pumping Stations	Storage Lake	1	100W INCANDESCENT	globe	3	3	100	0.3	11 WATT LED SI	screw in LED Alamp	3	12	0.0	0.3	133	500	500
3272	Remote Pumping Stations	Storage Lufkin	1	2L4' T12 34w EE/EEMAG	vapor tight	3	3	70	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	51	500	500
3274	Remote Pumping Stations	Storage Matthews	1	2L4' T12 34w EE/EEMAG	wrap	5	5	70	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	36	0.2	0.2	86	500	500
3276	Remote Pumping Stations	Storage Middle	1	2L4' T12 34w EE/EEMAG	wrap	5	5	70	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	36	0.2	0.2	86	500	500
3278	Remote Pumping Stations	Storage Minor	1	2L4' T12 34w EE/EEMAG	wrap	5	5	70	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	36	0.2	0.2	86	500	500
3280	Remote Pumping Stations	Storage Boivin	1	2L4' T8 32w/EL	vapor tight	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	24	500	500
3281	Remote Pumping Stations	Storage Boivin	1	100W INCANDESCENT	globe	2	2	100	0.2	11 WATT LED SI	screw in LED Alamp	2	12	0.0	0.2	88	500	500
3282	Remote Pumping Stations	Storage Allentown	1	2L4' T12 34w EE/EEMAG	vapor tight	3	3	70	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	51	500	500
3284	Remote Pumping Stations	Storage Tyler	1	2L8' T12 60w EE/EEMAG	vapor tight	2	2	123	0.2	2L4' T8 28w/ELEE HI/NEW-8'	new LF vaportight	2	67	0.1	0.1	56	500	500
3286	Administration Building & Warehouse	Warehouse By Admin Bldg	1	3L4' T8 32w/EL	industrial	19	19	88	1.7	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	19	54	1.0	0.7	1,787	2,730	2,730
3287	Administration Building & Warehouse	Storage Paint	1	100W INCANDESCENT	explosion	1	1	100	0.1	15 WATT LED SI	screw in LED Alamp	1	16	0.0	0.1	42	500	500
3288	Administration Building & Warehouse	Office Paint	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	73	1,800	1,260
3294	Administration Building & Warehouse	Stair Ends (2)	stair	2L2' T8 17w/EL	box acrylic	6	6	33	0.2	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	6	19	0.1	0.1	286	3,380	3,380
3295	Administration Building & Warehouse	Stair Ends (2)	stair	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	191	3,380	3,380
3296	Administration Building & Warehouse	Stair Ends (2)	stair	15W INCANDESCENT	can rec	2	2	15	0.0	8 WATT LED SI	screw in LED par20	2	8	0.0	0.0	45	3,380	3,380
3297	Administration Building & Warehouse	Hall 3Rd	3	2L2' T8 17w/EL	trof acr	10	10	33	0.3	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	10	19	0.2	0.1	477	3,380	3,380
3298	Administration Building & Warehouse	Bath Mens	3	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	57	2,340	2,340
3299	Administration Building & Warehouse	Office Open 35	3	4L4' T8 32w/EL	trof acr	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	1,253	2,340	2,340
3300	Administration Building & Warehouse	Office 35	3	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	0.2	321	1,800	1,800
3301	Administration Building & Warehouse	Office 35 (4)	3	4L4' T8 32w/EL	trof acr	8	8	112	0.9	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	8	53	0.4	0.5	857	1,800	1,800
3302	Administration Building & Warehouse	Storage 36	3	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	60	500	500
3303	Administration Building & Warehouse	Conference 36	3	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	6	53	0.3	0.4	643	1,800	1,800
3304	Administration Building & Warehouse	Office 36	3	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	0.1	107	1,800	1,800
3305	Administration Building & Warehouse	Office 36	3	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	0.2	428	1,800	1,800
3306	Administration Building & Warehouse	Office Open 34	3	4L4' T8 32w/EL	trof acr	5	5	112	0.6	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	5	53	0.3	0.3	808	2,716	1,901
3307	Administration Building & Warehouse	Storage 34	3	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	60	500	350
3308	Administration Building & Warehouse	Office Open 32	3	4L4' T8 32w/EL	trof acr	5	5	112	0.6	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	5	53	0.3	0.3	696	2,340	1,638
3309	Administration Building & Warehouse	Office 32	3	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	214	1,800	1,260
3310	Administration Building & Warehouse	Conference 32	3	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	0.2	321	1,800	1,260
3311	Administration Building & Warehouse	Storage To Roof	3	2x13W CF HARDWIRED	square surface mt.	2	2	30	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.0	13	500	500
3312	Administration Building & Warehouse	Bath Women	3	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	57	2,340	2,340
3313	Administration Building & Warehouse	Auditorium Main	2	300W INCANDESCENT	decorative	8	8	300	2.4	40 WATT LED/KIT	area kit LED	8	42	0.3	2.1	1,032	500	500
3314	Administration Building & Warehouse	Conference Main	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	0.2	321	1,800	1,260
3315	Administration Building & Warehouse	Closet Main	2	150W INCANDESCENT	keyless	1	1	150	0.2	11 WATT LED SI	screw in LED Alamp	1	12	0.0	0.1	69	500	500
3316	Administration Building & Warehouse	Hall 2Nd	2	2L4' T8 32w/EL	trof acr	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	0.2	657	3,380	3,380
3317	Administration Building & Warehouse	Hall 2Nd	2	65W INCANDESCENT	track head	6	6	65	0.4	8 WATT LED SI	screw in LED par20	6	8	0.1	0.3	1,148	3,380	3,380
3318	Administration Building & Warehouse	Hall 2Nd	2	65W INCANDESCENT	can rec	4	4	65	0.3	8 WATT LED SI	screw in LED Alamp	4	8	0.0	0.2	765	3,380	3,380
3319	Administration Building & Warehouse	Hall 2Nd	2	200W INCANDESCENT	decorative	2		200	0.4	NO RETRO	no change -specialized fixture		210	0.4			3,380	3,380
3320	Administration Building & Warehouse	Bath Men	2	2L2' T8 17w/EL	box acrylic	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	66	2,340	1,638
3321	Administration Building & Warehouse	Bath Men	2	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	57	2,340	1,638
3322	Administration Building & Warehouse	Office Open 25	2	4L4' T8 32w/EL	trof acr	18	18	112	2.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	18	53	0.9	1.1	2,506	2,340	1,638
3323	Administration Building & Warehouse	Office 25	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	214	1,800	1,260
3324	Administration Building & Warehouse	Conference 25	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	214	1,800	1,260
3325	Administration Building & Warehouse	Storage Copy	2	4L4' T8 32w/EL-8'	wrap	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	28	350	350
3326	Administration Building & Warehouse	Office Open 26	2	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	6	53	0.3	0.4	1,032	2,891	2,024
3327	Administration Building & Warehouse	Office Open 26	2	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	66	2,340	1,638
3328	Administration Building & Warehouse	Office 26	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	150	1,260	1,260
3329	Administration Building & Warehouse	Office 26	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	214	1,800	1,260
3330	Administration Building & Warehouse	Office 26	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	214	1,800	1,260
3331	Administration Building & Warehouse	Conference 26	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	214	1,800	1,260

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
3332	Administration Building & Warehouse	Office Open 24	2	4L4' T8 32w/EL	trof acr	5	5	112	0.6	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	5	53	0.3	0.3	696	2,340	1,638
3333	Administration Building & Warehouse	Office Open 24	2	4L4' T8 32w/EL-8'	strip	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	190	2,340	1,638
3334	Administration Building & Warehouse	Office Open 24	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	278	2,340	1,638
3335	Administration Building & Warehouse	Office Open 24	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	278	2,340	1,638
3336	Administration Building & Warehouse	Lounge 22	2	2L2' T8 17w/EL	trof acr	6	6	33	0.2	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	6	19	0.1	0.1	161	1,900	1,330
3337	Administration Building & Warehouse	Bath Women	2	2L2' T8 17w/EL	box acrylic	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	66	2,340	1,638
3338	Administration Building & Warehouse	Bath Women	2	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	57	2,340	1,638
3339	Administration Building & Warehouse	Office Open 11	1	2L2' T8 17w/EL	trof acr	1	1	33	0.0	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	19	0.0	0.0	33	2,340	2,340
3340	Administration Building & Warehouse	Office Open 11	1	4L4' T8 32w/EL	trof acr	12	12	112	1.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	12	53	0.6	0.7	1,671	2,340	1,638
3341	Administration Building & Warehouse	Office 11	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	214	1,800	1,260
3342	Administration Building & Warehouse	Office 11	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	214	1,800	1,260
3343	Administration Building & Warehouse	Office 11	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	214	1,800	1,260
3344	Administration Building & Warehouse	Storage Near 11 (2)	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	24	500	500
3345	Administration Building & Warehouse	Hall Back Office	1	2L4' T8 32w/EL	wrap	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	329	3,380	3,380
3346	Administration Building & Warehouse	Hall 1St	1	2L4' T8 32w/EL	box acrylic	9	9	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	36	0.3	0.2	739	3,380	3,380
3347	Administration Building & Warehouse	Hall 1St	1	2L4' T8 32w/EL	trof acr	5	5	60	0.3	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	36	0.2	0.1	411	3,380	3,380
3348	Administration Building & Warehouse	Hall 1St	1	65W INCANDESCENT	track can	14	14	65	0.9	8 WATT LED SI	screw in LED par20	14	8	0.1	0.8	2,678	3,380	3,380
3349	Administration Building & Warehouse	Bath Men	1	2L2' T8 17w/EL	box acrylic	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	66	2,340	2,340
3350	Administration Building & Warehouse	Closet Clean	1	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	26	500	500
3351	Administration Building & Warehouse	Office Open 16	1	3L4' T8 32w/EL	wrap wide	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	322	2,340	2,340
3352	Administration Building & Warehouse	Conference 16	1	3L4' T8 32w/EL	wrap wide	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	124	1,800	1,800
3353	Administration Building & Warehouse	Office 16	1	3L4' T8 32w/EL	wrap wide	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	62	1,800	1,800
3354	Administration Building & Warehouse	Office 16	1	3L4' T8 32w/EL	wrap wide	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	62	1,800	1,800
3355	Administration Building & Warehouse	Storage Books	1	2L2' T8 17w/EL	box acrylic	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	28	1,000	1,000
3356	Administration Building & Warehouse	Office Open 15	1	2L4' T8 32w/EL	strip	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	0.1	341	2,340	2,340
3357	Administration Building & Warehouse	Office Open 15	1	4L4' T8 32w/EL-8'	strip	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	285	2,340	2,340
3358	Administration Building & Warehouse	Office Open 15	1	2L2' T8 17w/EL	box acrylic	1	1	33	0.0	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	19	0.0	0.0	33	2,340	2,340
3359	Administration Building & Warehouse	Office Open 15	1	3L4' T8 32w/EL	wrap wide	3	3	88	0.3	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	54	0.2	0.1	242	2,340	2,340
3360	Administration Building & Warehouse	Office Open 15	1	4L4' T8 32w/EL	wrap wide	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	190	2,340	2,340
3361	Administration Building & Warehouse	Classroom 17	1	3L4' T8 32w/EL	wrap wide	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	358	2,600	1,820
3362	Administration Building & Warehouse	Office Open 14	1	3L4' T8 32w/EL	wrap wide	6	6	88	0.5	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	54	0.3	0.2	471	2,278	1,595
3363	Administration Building & Warehouse	Office Custodian	1	2L4' T8 32w/EL	strip	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	44	1,800	1,800
3364	Administration Building & Warehouse	Office Open 12	1	3L4' T8 32w/EL	wrap wide	8	8	88	0.7	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	54	0.4	0.3	645	2,340	2,340
3365	Administration Building & Warehouse	Office 12	1	3L4' T8 32w/EL	wrap wide	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	62	1,800	1,800
3366	Administration Building & Warehouse	Conference 12	1	3L4' T8 32w/EL	wrap wide	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	124	1,800	1,800
3367	Administration Building & Warehouse	Office 12	1	3L4' T8 32w/EL	wrap wide	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	62	1,800	1,800
3368	Administration Building & Warehouse	Office 12	1	3L4' T8 32w/EL	wrap wide	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	62	1,800	1,800
3369	Administration Building & Warehouse	Bath Women	1	2L2' T8 17w/EL	box acrylic	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	66	2,340	1,638
3370	Stafford ES	Office Open Main	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	433	1,779	1,779
3371	Stafford ES	Office Open Main	1	2L4' T8 32w/EL	valance	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	41	1,680	1,680
3372	Stafford ES	Office Principal	1	65W INCANDESCENT	can rec	7	7	65	0.5	8 WATT LED SI	screw in LED Alamp	7	8	0.1	0.4	792	2,000	1,400
3373	Stafford ES	Office Literacy	1	65W INCANDESCENT	can rec	2	2	65	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	226	2,000	1,400
3374	Stafford ES	Office Literacy	1	2L4' T8 32w U/EL	box acrylic	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	44	2,000	1,400
3375	Stafford ES	Office Literacy	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	49	2,000	1,400
3376	Stafford ES	Hall Main Floor	1	65W INCANDESCENT	can rec	1	1	65	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	170	3,000	3,000
3377	Stafford ES	Hall Main Floor	1	4L4' T8 32w/EL-8'	valance	22	22	112	2.5	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	22	71	1.6	0.9	2,680	3,000	3,000
3378	Stafford ES	Hall Main Floor	1	2L4' T8 32w/EL	valance	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	0.2	583	3,000	3,000
3379	Stafford ES	Hall Main Floor	1	2L4' T8 32w U/EL	box acrylic	16	16	60	1.0	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	16	38	0.6	0.4	1,066	3,000	3,000
3380	Stafford ES	Hall Main Floor	1	3L2' F40 BIAX/EL	decorative	1		102	0.1	NO RETRO	no change -specialized fixture		107	0.1			3,000	3,000
3381	Stafford ES	Hall Main Floor	1	65W INCANDESCENT	can rec	4	4	65	0.3	8 WATT LED SI	screw in LED Alamp	4	8	0.0	0.2	679	3,000	3,000
3382	Stafford ES	Hall Main Floor	1	4L3' T8 25w/EL-6'	valance	12	12	88	1.1	4L3' LED/ELEE LO/RLRB	rlrb LED 3'	12	50	0.6	0.5	1,354	3,000	3,000
3383	Stafford ES	Bath Boys	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	146	3,000	2,100
3384	Stafford ES	Bath Girls	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	146	3,000	2,100
3385	Stafford ES	Bath Handicap	1	1L4' T8 32w/EL	soffit	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	36	3,000	3,000
3386	Stafford ES	Storage 29	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	24	1,000	1,000
3387	Stafford ES	Library Main	1	4L4' T8 32w/EL-8'	box acr 6" wide	8	8	112	0.9	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	71	0.6	0.3	585	1,800	1,260
3388	Stafford ES	Library Main	1	2L4' T8 32w/EL	box acr 6" wide	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	175	1,800	1,260
3389	Stafford ES	Library Main	1	65W INCANDESCENT	can rec 8"	24	24	65	1.6	8 WATT LED SI	screw in LED Alamp	24	8	0.2	1.4	2,445	1,800	1,800
3390	Stafford ES	Library Main	1	15W CF SCREWIN	cylinder surf mt.	3	3	17	0.1	8 WATT LED SI	screw in LED Alamp	3	8	0.0	0.0	46	1,800	1,800
3391	Stafford ES	Library Main	1	2x15W INCANDESCENTS	exit sign	1	1	30	0.0	3 WATT LED/NEW EXIT BATTERY	new LED exit bat	1	3	0.0	0.0	235	8,760	8,760
3392	Stafford ES	Office Lib	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	97	2,000	1,400
3393	Stafford ES	Office Lib	1	2L3' T8 25w/EL	task strip	3	3	47	0.1	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	3	25	0.1	0.1	131	2,000	2,000
3394	Stafford ES	Storage Lib	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	49	1,000	700
3395	Stafford ES	Storage Lib	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	49	1,000	1,000
3396	Stafford ES	Classroom 32	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
3397	Stafford ES	Classroom 32	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	188	1,540	1,540
3398	Stafford ES	Bath 32	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	73	3,000	3,000
3399	Stafford ES	Storage 32	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	500	500
3400	Stafford ES	Classroom 30	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	314	1,288	1,288
3401	Stafford ES	Classroom 30	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	188	1,540	1,540
3402	Stafford ES	Bath 30	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	73	3,000	3,000
3403	Stafford ES	Storage 30	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	500	500
3404	Stafford ES	Storage Across 30	1	2L4' T8 32w/EL	strip	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	24	500	500

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
3405	Stafford ES	Stair To Roof	stair	2L4' T8 32w/EL	strip	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	73	3,000	3,000
3406	Stafford ES	Classroom 27	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
3407	Stafford ES	Classroom 27	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	188	1,540	1,540
3408	Stafford ES	Bath 27	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	73	3,000	3,000
3409	Stafford ES	Storage 27	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	500	500
3410	Stafford ES	Classroom 28	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	314	1,288	1,288
3411	Stafford ES	Classroom 28	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	188	1,540	1,540
3412	Stafford ES	Bath 28	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	73	3,000	3,000
3413	Stafford ES	Storage 28	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	500	500
3414	Stafford ES	Classroom 25	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	344	1,411	1,411
3415	Stafford ES	Classroom 25	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	188	1,540	1,540
3416	Stafford ES	Classroom 26	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	224	920	920
3417	Stafford ES	Classroom 26	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	188	1,540	1,540
3418	Stafford ES	Bath 26	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	73	3,000	3,000
3419	Stafford ES	Storage 26	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	500	500
3420	Stafford ES	Classroom 23	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	389	1,595	1,595
3421	Stafford ES	Classroom 23	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	188	1,540	1,540
3422	Stafford ES	Classroom 24	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
3423	Stafford ES	Classroom 24	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	188	1,540	1,540
3424	Stafford ES	Bath 24	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	73	3,000	3,000
3425	Stafford ES	Storage 24	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	500	500
3426	Stafford ES	Classroom 21	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	254	1,043	1,043
3427	Stafford ES	Classroom 21	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	188	1,540	1,540
3428	Stafford ES	Bath 21	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	73	3,000	3,000
3429	Stafford ES	Storage 21	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	500	500
3430	Stafford ES	Classroom 22	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
3431	Stafford ES	Classroom 22	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	188	1,540	1,540
3432	Stafford ES	Bath 22	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	73	3,000	3,000
3433	Stafford ES	Storage 22	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	500	500
3434	Stafford ES	Bath Staff	1	1L2' T8 17w/EL	soffit	2	2	17	0.0	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	9	0.0	0.0	45	3,000	3,000
3435	Stafford ES	Bath Staff	1	1L2' T8 17w/EL	soffit	2	2	17	0.0	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	9	0.0	0.0	45	3,000	3,000
3436	Stafford ES	Office 19	1	4L4' T8 32w/EL-8'	box acr 6" wide	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	81	2,000	2,000
3437	Stafford ES	Stair To Basement	stair	2L4' T8 32w U/EL	box acrylic	4	4	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	4	38	0.2	0.1	266	3,000	3,000
3438	Stafford ES	Hall To Caf	B	2L4' T8 32w U/EL	box acrylic	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	133	3,000	3,000
3439	Stafford ES	Cafeteria Main	B	3L4' T8 32w/EL	trof acr	23	23	88	2.0	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	23	54	1.2	0.8	943	1,190	1,190
3440	Stafford ES	Cafeteria Main	B	2L2' T8 17w/EL	trof acr	15	15	33	0.5	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	15	19	0.3	0.2	252	1,190	1,190
3441	Stafford ES	Cafeteria Main	B	2L4' T8 32w U/EL	trof acr	20	20	60	1.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	20	38	0.8	0.4	528	1,190	1,190
3442	Stafford ES	Cafeteria Main	B	2L4' T8 32w U/EL	box acrylic	7	7	60	0.4	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	7	38	0.3	0.2	264	1,700	1,700
3443	Stafford ES	Office 36	B	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	49	2,000	1,400
3444	Stafford ES	Kitchen Main	B	2L4' T8 32w/EL	wrap	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	0.2	369	1,900	1,900
3445	Stafford ES	Kitchen Main	B	90W INCANDESCENT	range hood	2	2	90	0.2	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.2	310	1,900	1,900
3446	Stafford ES	Storage Pantry	B	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	49	1,000	700
3447	Stafford ES	Hall Basement Classes	B	2L4' T8 32w U/EL	box acrylic	6	6	60	0.4	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	6	38	0.2	0.1	400	3,000	3,000
3448	Stafford ES	Bath Handicap	B	2L3' T8 25w/EL-6'	soffit	2	2	47	0.1	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	25	0.1	0.0	131	3,000	3,000
3449	Stafford ES	Classroom 35	B	2L4' T8 32w U/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	4	38	0.2	0.1	195	2,200	1,540
3450	Stafford ES	Stair Across Boiler	stair	2L4' T8 32w U/EL	box acrylic	4	4	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	4	38	0.2	0.1	266	3,000	3,000
3451	Stafford ES	Mechanical Boiler	B	2L4' T8 32w/EL	vapor tight	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	12	500	500
3452	Stafford ES	Mechanical Boiler	B	2L4' T12 34w EE/EEMAG	vapor tight	1	1	70	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	17	500	500
3453	Stafford ES	Mechanical Boiler	B	2L4' T8 32w/EL	strip reflector	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	0.1	73	500	500
3454	Stafford ES	Storage Clean	B	2L4' T12 34w EE/EEMAG	strip reflector	1	1	70	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	17	500	500
3455	Stafford ES	Storage Clean	B	2L4' T12 34w EE/EEMAG	strip reflector	1	1	70	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	17	500	500
3456	Stafford ES	Classroom 34	B	2L4' T8 32w U/EL	trof acr	18	18	60	1.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	18	38	0.7	0.4	615	1,540	1,540
3457	Stafford ES	Storage 34	B	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	44	1,000	1,000
3458	Stafford ES	Storage 34	B	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	49	1,000	1,000
3459	Stafford ES	Storage 34	B	2L4' T8 32w/EL	strip	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	24	1,000	1,000
3460	Stafford ES	Storage Large Supply	B	2L4' T12 34w EE/EEMAG	strip reflector	11	11	70	0.8	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	11	36	0.4	0.4	189	500	500
3461	Stafford ES	Storage Large Supply	B	4L4' T8 32w/EL-8'	wrap wide	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	61	500	500
3462	Stafford ES	Classroom 33	B	2L4' T8 32w U/EL	trof acr	17	17	60	1.0	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	17	38	0.6	0.4	581	1,540	1,540
3463	Stafford ES	Storage Music	B	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	24	500	500
3464	Stafford ES	Mechanical Switchgear	B	2L4' T12 34w EE/EEMAG	strip reflector	1	1	70	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	17	500	500
3465	Stafford ES	Storage Old Locker	B	2L4' T12 34w EE/EEMAG	vapor tight	8	8	70	0.6	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	0.3	137	500	500
3466	Stafford ES	Storage Old Locker	B	2L4' T8 32w/EL	strip reflector	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	24	500	500
3467	Stafford ES	Storage Old Locker	B	2L4' T8 32w/EL	vapor tight	11	11	60	0.7	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	11	36	0.4	0.3	134	500	500
3468	Stafford ES	Storage Old Locker	B	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	14	500	500
3469	Stafford ES	Stair By Office	stair	2L4' T8 32w U/EL	box acrylic	3	3	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	3	38	0.1	0.1	200	3,000	3,000
3470	Stafford ES	Classroom 17	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
3471	Stafford ES	Classroom 17	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	188	1,540	1,540
3472	Stafford ES	Classroom 20	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
3473	Stafford ES	Classroom 20	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	188	1,540	1,540
3474	Stafford ES	Classroom 15	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	239	982	982
3475	Stafford ES	Classroom 15	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	188	1,540	1,540
3476	Stafford ES	Bath 15	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	73	3,000	3,000
3477	Stafford ES	Storage 15	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	500	500

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
3478	Stafford ES	Classroom 18	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	269	1,104	1,104
3479	Stafford ES	Classroom 18	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	188	1,540	1,540
3480	Stafford ES	Classroom 13	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	314	1,288	1,288
3481	Stafford ES	Classroom 13	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	188	1,540	1,540
3482	Stafford ES	Bath 13	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	73	3,000	3,000
3483	Stafford ES	Storage 13	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	500	500
3484	Stafford ES	Classroom 16	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
3485	Stafford ES	Classroom 16	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	188	1,540	1,540
3486	Stafford ES	Bath 16	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	73	3,000	3,000
3487	Stafford ES	Storage 16	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	500	500
3488	Stafford ES	Classroom 14	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
3489	Stafford ES	Classroom 14	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	188	1,540	1,540
3490	Stafford ES	Bath Girls	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	146	3,000	2,100
3491	Stafford ES	Bath Boys	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	146	3,000	2,100
3492	Stafford ES	Closet Clean	1	2L4' T8 32w/EL	strip	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	12	500	500
3493	Stafford ES	Classroom 12	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
3494	Stafford ES	Classroom 12	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	188	1,540	1,540
3495	Stafford ES	Classroom 11	1	4L4' T8 32w/EL-8'	box acr 6" wide	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	89	2,200	2,200
3496	Stafford ES	Classroom 11	1	2L4' T8 32w/EL	box acr 6" wide	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	53	2,200	2,200
3497	Stafford ES	Classroom 11	1	2L4' T8 32w/EL	trof acr 6" wide	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	53	2,200	2,200
3498	Stafford ES	Classroom 9&10	1	4L4' T8 32w/EL-8'	valance	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	89	2,200	2,200
3499	Stafford ES	Classroom 9&10	1	2L4' T8 32w/EL	wrap narrow	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	53	2,200	2,200
3500	Stafford ES	Classroom 9&10	1	4L4' T8 32w/EL-8'	box acr 6" wide	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	89	2,200	2,200
3501	Stafford ES	Classroom 9&10	1	2L4' T8 32w/EL	box acr 6" wide	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	53	2,200	2,200
3502	Stafford ES	Classroom 9&10	1	2L4' T8 32w/EL	trof acr 6" wide	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	53	2,200	2,200
3503	Stafford ES	Classroom 8	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	284	1,166	1,166
3504	Stafford ES	Classroom 8	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	188	1,540	1,540
3505	Stafford ES	Classroom 7	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
3506	Stafford ES	Classroom 7	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	188	1,540	1,540
3507	Stafford ES	Gym Main	1	4L4' T5 HO/EL	high bay	24	24	234	5.6	98 WATT LED/NEW	new LED hibay wg	24	103	2.5	3.1	6,293	2,000	1,400
3508	Stafford ES	Storage Gymnasium	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	12	500	500
3509	Stafford ES	Stage Main	1	2L4' T8 32w/EL	strip	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	156	1,600	1,600
3510	Stafford ES	Mechanical Equip	1	90W INCANDESCENT	keyless	3	3	90	0.3	8 WATT LED SI	screw in LED Alamp	3	8	0.0	0.2	122	500	500
3511	Stafford ES	Conference Main	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	97	2,000	1,400
3512	Stafford ES	Lounge Staff	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	87	1,800	1,260
3513	Stafford ES	Lounge Staff	1	2L4' T8 32w/EL	wrap	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	92	1,260	1,260
3514	Stafford ES	Bath Staff	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	73	3,000	3,000
3515	Stafford ES	Bath Handicap	1	4L4' T8 32w/EL-8'	soffit	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	122	3,000	3,000
3516	Stafford ES	Office Open Health	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	58	2,400	2,400
3517	Stafford ES	Office Open Health	1	2L4' T8 32w U/EL	box acrylic	4	4	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	4	38	0.2	0.1	149	1,680	1,680
3518	Stafford ES	Office Open Health	1	3x13W CF HARDWIRED	drum	4	4	45	0.2	16 WATT LED/NEW	new LED drum	4	17	0.1	0.1	271	2,400	2,400
3519	Stafford ES	Bath Health	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	73	3,000	3,000
3520	Stafford ES	Closet Post-Its	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	500	500
3521	Stafford ES	Classroom 6	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
3522	Stafford ES	Classroom 6	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	188	1,540	1,540
3523	Stafford ES	Bath 6	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	73	3,000	3,000
3524	Stafford ES	Storage 6	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	500	500
3525	Stafford ES	Classroom 5	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
3526	Stafford ES	Classroom 5	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	188	1,540	1,540
3527	Stafford ES	Bath 5	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	73	3,000	3,000
3528	Stafford ES	Storage 5	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	500	500
3529	Stafford ES	Classroom 4	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	239	982	982
3530	Stafford ES	Classroom 4	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	188	1,540	1,540
3531	Stafford ES	Bath 4	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	73	3,000	3,000
3532	Stafford ES	Storage 4	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	500	500
3533	Stafford ES	Classroom 3	1	4L4' T8 32w/EL-8'	valance	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
3534	Stafford ES	Classroom 3	1	4L4' T8 32w/EL-8'	box acr 6" wide	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	188	1,540	1,540
3535	Stafford ES	Bath 3	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	73	3,000	3,000
3536	Stafford ES	Storage 3	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	3	500	500
3537	Stafford ES	Classroom 2	1	4L4' T8 32w/EL-8'	valance	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	563	1,540	1,540
3538	Stafford ES	Classroom 2	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	107	2,200	2,200
3539	Stafford ES	Classroom 1	1	2L4' T8 32w/EL	wrap	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
3540	Stafford ES	Storage 1	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	12	500	500
3548	Edgewood ES	Hall Main	1	60W INCANDESCENT	can rec 8"	21	21	60	1.3	8 WATT LED SI	screw in LED par20	21	8	0.2	1.1	2,763	3,000	3,000
3549	Edgewood ES	Hall Main	1	60W INCANDESCENT	square surface mt.	10	10	60	0.6	8 WATT LED SI	screw in LED Alamp	10	8	0.1	0.5	1,316	3,000	3,000
3550	Edgewood ES	Hall Main	1	4L4' T8 32w/EL	strip	15	15	112	1.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	15	71	1.1	0.6	1,553	3,000	3,000
3551	Edgewood ES	Hall Main	1	4L4' T8 32w/EL-8'	soffit	10	10	112	1.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	10	71	0.7	0.4	1,035	3,000	3,000
3552	Edgewood ES	Hall Main	1	4L4' T8 32w/EL-8'	soffit	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	104	3,000	3,000
3553	Edgewood ES	Classroom K-B	1	4L4' T8 32w/EL-8'	box acr 1' wide	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
3554	Edgewood ES	Classroom K-B	1	2L4' T8 32w/EL-8'	cove	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	136	2,200	1,540
3555	Edgewood ES	Classroom K-B	1	60W INCANDESCENT	square surface mt.	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	193	2,200	1,540
3556	Edgewood ES	Bath K-B	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	132	3,000	3,000
3557	Edgewood ES	Storage K-B	1	13W CF HARDWIRED	drum	1	1	15	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	-1	500	500

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
3558	Edgewood ES	Classroom K-A	1	4L4' T8 32w/EL-8'	box acr 1' wide	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
3559	Edgewood ES	Classroom K-A	1	2L4' T8 32w/EL-8'	cove	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	136	2,200	1,540
3560	Edgewood ES	Classroom K-A	1	60W INCANDESCENT	square surface mt.	3	3	60	0.2	8 WATT LED SI	screw in LED Alamp	3	8	0.0	0.2	289	2,200	1,540
3561	Edgewood ES	Bath K-A	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	132	3,000	3,000
3562	Edgewood ES	Storage K-A	1	13W CF HARDWIRED	drum	1	1	15	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	-1	500	500
3563	Edgewood ES	Classroom Art	1	4L4' T8 32w/EL-8'	wrap	11	11	112	1.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	11	71	0.8	0.4	835	2,200	1,540
3564	Edgewood ES	Storage Art	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	21	500	500
3565	Edgewood ES	Classroom 19	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
3566	Edgewood ES	Storage 19	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	21	500	500
3567	Edgewood ES	Storage Av Closet	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	41	1,000	1,000
3568	Edgewood ES	Classroom 18	1	4L4' T8 32w/EL-8'	box acr 1' wide	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
3569	Edgewood ES	Classroom 17	1	4L4' T8 32w/EL-8'	box acr 1' wide	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
3570	Edgewood ES	Classroom 16	1	4L4' T8 32w/EL-8'	box acr 1' wide	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
3571	Edgewood ES	Bath Boys	1	4L4' T8 32w/EL-8'	vanity	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	311	3,000	2,100
3572	Edgewood ES	Bath Boys	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	62	3,000	2,100
3573	Edgewood ES	Bath Boys	1	2L3' T8 25w/EL	vanity	1	1	47	0.0	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	25	0.0	0.0	56	3,000	2,100
3574	Edgewood ES	Storage Kiln	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	10	500	500
3575	Edgewood ES	Shop Custodian	1	4L4' T8 32w/EL-8'	wrap	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	152	2,200	2,200
3576	Edgewood ES	Shop Custodian	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	45	2,200	2,200
3577	Edgewood ES	Bath Staff	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	62	3,000	3,000
3578	Edgewood ES	Storage Clean	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	2	500	500
3579	Edgewood ES	Storage Clean	1	2L4' T8 32w/EL	strip	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	10	500	500
3580	Edgewood ES	Storage Clean	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	10	500	500
3581	Edgewood ES	Mechanical Boiler	1	2L4' T12 34w EE/EEMAG	strip reflector	1	1	70	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	15	500	500
3582	Edgewood ES	Mechanical Boiler	1	2L4' T8 32w/EL	strip reflector	5	5	60	0.3	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	36	0.2	0.1	52	500	500
3583	Edgewood ES	Kitchen Main	1	2L4' T8 32w U/EL	trof acr	13	13	60	0.8	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	13	38	0.5	0.3	466	1,900	1,900
3584	Edgewood ES	Kitchen Main	1	90W INCANDESCENT	range hood	3	3	90	0.3	8 WATT LED SI	screw in LED Alamp	3	8	0.0	0.2	395	1,900	1,900
3585	Edgewood ES	Storage Pantry	1	2L4' T8 32w U/EL	trof acr	3	3	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	3	38	0.1	0.1	57	1,000	700
3586	Edgewood ES	Classroom 15	1	4L4' T8 32w/EL-8'	box acr 1' wide	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
3587	Edgewood ES	Hall 153-146	1	2L4' T8 32w/EL	wrap	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	0.1	372	3,000	3,000
3588	Edgewood ES	Office 153	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	0.1	175	2,000	1,400
3589	Edgewood ES	Office 153	1	1L4' T8 32w/EL	cove	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	21	2,000	1,400
3590	Edgewood ES	Office 153	1	1L3' T8 25w/EL	cove	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	0.0	39	2,000	1,400
3591	Edgewood ES	Office 153	1	1L4' T8 32w/EL	task strip	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	21	2,000	1,400
3592	Edgewood ES	Office 153	1	1L3' T8 25w/EL	task strip	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	0.0	39	2,000	1,400
3593	Edgewood ES	Office 152	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	0.1	175	2,000	1,400
3594	Edgewood ES	Office 152	1	1L4' T8 32w/EL	cove	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	21	2,000	1,400
3595	Edgewood ES	Office 152	1	1L3' T8 25w/EL	cove	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	0.0	39	2,000	1,400
3596	Edgewood ES	Office 152	1	1L4' T8 32w/EL	task strip	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	21	2,000	1,400
3597	Edgewood ES	Office 152	1	1L3' T8 25w/EL	task strip	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	0.0	39	2,000	1,400
3598	Edgewood ES	Office 149	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	0.1	175	2,000	1,400
3599	Edgewood ES	Office 149	1	1L4' T8 32w/EL	cove	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	21	2,000	1,400
3600	Edgewood ES	Office 149	1	1L3' T8 25w/EL	cove	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	0.0	39	2,000	1,400
3601	Edgewood ES	Office 149	1	1L4' T8 32w/EL	task strip	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	21	2,000	1,400
3602	Edgewood ES	Office 149	1	1L3' T8 25w/EL	task strip	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	0.0	39	2,000	1,400
3603	Edgewood ES	Office 148	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	0.1	175	2,000	1,400
3604	Edgewood ES	Office 148	1	1L4' T8 32w/EL	cove	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	21	2,000	1,400
3605	Edgewood ES	Office 148	1	1L3' T8 25w/EL	cove	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	0.0	39	2,000	1,400
3606	Edgewood ES	Office 148	1	1L4' T8 32w/EL	task strip	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	21	2,000	1,400
3607	Edgewood ES	Office 148	1	1L3' T8 25w/EL	task strip	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	0.0	39	2,000	1,400
3608	Edgewood ES	Office 146	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	0.1	175	2,000	1,400
3609	Edgewood ES	Office 146	1	1L4' T8 32w/EL	cove	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	21	2,000	1,400
3610	Edgewood ES	Office 146	1	1L3' T8 25w/EL	cove	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	0.0	39	2,000	1,400
3611	Edgewood ES	Office 146	1	1L4' T8 32w/EL	task strip	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	21	2,000	1,400
3612	Edgewood ES	Office 146	1	1L3' T8 25w/EL	task strip	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	0.0	39	2,000	1,400
3613	Edgewood ES	Office 154	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	0.1	175	2,000	1,400
3614	Edgewood ES	Office 154	1	1L4' T8 32w/EL	cove	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	41	2,000	1,400
3615	Edgewood ES	Office 154	1	1L4' T8 32w/EL	task strip	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	41	2,000	1,400
3616	Edgewood ES	Office 151	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	0.1	175	2,000	1,400
3617	Edgewood ES	Office 151	1	1L4' T8 32w/EL	cove	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	41	2,000	1,400
3618	Edgewood ES	Office 151	1	1L4' T8 32w/EL	task strip	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	41	2,000	1,400
3619	Edgewood ES	Office 147	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	0.1	175	2,000	1,400
3620	Edgewood ES	Office 147	1	2L4' T8 32w/EL-8'	cove	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	83	2,000	1,400
3621	Edgewood ES	Office 147	1	1L3' T8 25w/EL	cove	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	0.0	39	2,000	1,400
3622	Edgewood ES	Office 147	1	2L4' T8 32w/EL-8'	task strip	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	83	2,000	1,400
3623	Edgewood ES	Library Main	1	4L4' T8 32w/EL	trof acr	14	14	112	1.6	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	14	53	0.7	0.8	1,274	1,800	1,260
3624	Edgewood ES	Library Main	1	2L2' T8 17w/EL	trof acr	1	1	33	0.0	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	19	0.0	0.0	22	1,800	1,260
3625	Edgewood ES	Library Main	1	4L4' T8 32w/EL	trof acr	12	12	112	1.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	12	53	0.6	0.7	1,092	1,800	1,260
3626	Edgewood ES	Library Main	1	2x9W CF HARDWIRED	drum	3	3	22	0.1	16 WATT LED/NEW	new LED drum	3	17	0.1	0.0	24	1,800	1,800
3627	Edgewood ES	Storage Near Lib	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	21	1,000	1,000
3628	Edgewood ES	Storage Near Lib	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	44	1,000	1,000
3629	Edgewood ES	Office Lib	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	69	2,000	1,400
3630	Edgewood ES	Office Lib	1	1L4' T12 34w EE/EEMAG	cove	6	6	40	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' tw	3	36	0.1	0.1	226	2,000	1,400

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
3631	Edgewood ES	Office Lib	1	1L4' T12 34w EE/EEMAG	cove	2	2	40	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	75	2,000	1,400
3632	Edgewood ES	Office Lib	1	1L3' T12 25w EE/EEMAG	cove	3	3	38	0.1	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	3	13	0.0	0.1	130	2,000	1,400
3633	Edgewood ES	Closet Lib	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	10	500	500
3634	Edgewood ES	Office Lib	1	1L4' T12 34w EE/EEMAG	cove	4	4	40	0.2	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	18	0.1	0.1	151	2,000	1,400
3635	Edgewood ES	Office Lib	1	1L3' T12 25w EE/EEMAG	cove	2	2	38	0.1	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	0.1	86	2,000	1,400
3636	Edgewood ES	Office Lib	1	1L4' T8 32w/EL	task strip	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	41	2,000	1,400
3637	Edgewood ES	Office Lib	1	1L3' T8 25w/EL	task strip	3	3	24	0.1	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	3	13	0.0	0.0	58	2,000	1,400
3638	Edgewood ES	Cafeteria Main	1	4L4' T5 HO/EL	high bay	12	12	234	2.8	98 WATT LED/NEW	new LED hibay wg	12	103	1.2	1.6	2,273	1,700	1,700
3639	Edgewood ES	Cafeteria Main	1	60W INCANDESCENT	can rec 8"	20	20	60	1.2	8 WATT LED SI	screw in LED par20	20	8	0.2	1.0	1,491	1,700	1,700
3640	Edgewood ES	Office Coach	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	83	2,000	1,400
3641	Edgewood ES	Office Open Main	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	141	2,400	1,680
3642	Edgewood ES	Office Open Main	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	141	2,400	1,680
3643	Edgewood ES	Office Open Main	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	0.1	211	2,400	1,680
3644	Edgewood ES	Hall Main	1	60W INCANDESCENT	can rec 8"	5	5	60	0.3	8 WATT LED SI	screw in LED par20	5	8	0.0	0.3	658	3,000	3,000
3645	Edgewood ES	Office Principal	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	117	2,000	1,400
3646	Edgewood ES	Office Principal	1	1L4' T8 32w/EL	cove	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	41	2,000	1,400
3647	Edgewood ES	Conference Principal	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	117	2,000	1,400
3648	Edgewood ES	Conference Principal	1	1L4' T8 32w/EL	cove	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	41	2,000	1,400
3649	Edgewood ES	Office Small Copier	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	69	2,000	1,400
3650	Edgewood ES	Office Small Copier	1	1L4' T12 34w EE/EEMAG	task strip	1	1	40	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	38	2,000	1,400
3651	Edgewood ES	Office Small Copier	1	1L3' T12 25w EE/EEMAG	task strip	3	3	38	0.1	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	3	13	0.0	0.1	130	2,000	1,400
3652	Edgewood ES	Office Copier	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	69	2,000	1,400
3653	Edgewood ES	Office Copier	1	1L4' T12 34w EE/EEMAG	task strip	6	6	40	0.2	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	18	0.1	0.1	226	2,000	1,400
3654	Edgewood ES	Office Copier	1	1L3' T12 25w EE/EEMAG	task strip	2	2	38	0.1	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	0.1	86	2,000	1,400
3655	Edgewood ES	Office Copier	1	1L4' T12 34w EE/EEMAG	cove	6	6	40	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' tw	3	36	0.1	0.1	226	2,000	1,400
3656	Edgewood ES	Office Copier	1	1L4' T12 34w EE/EEMAG	cove	3	3	40	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	18	0.1	0.1	113	2,000	1,400
3657	Edgewood ES	Lounge Staff	1	60W INCANDESCENT	can rec 8"	8	8	60	0.5	8 WATT LED SI	screw in LED par20	8	8	0.1	0.4	632	1,800	1,260
3658	Edgewood ES	Lounge Staff	1	1L3' T12 25w EE/EEMAG	task strip	5	5	38	0.2	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	5	13	0.1	0.1	194	1,800	1,260
3659	Edgewood ES	Lounge Staff	1	1L4' T12 34w EE/EEMAG	cove	6	6	40	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' tw	3	36	0.1	0.1	203	1,800	1,260
3660	Edgewood ES	Lounge Staff	1	1L4' T12 34w EE/EEMAG	cove	1	1	40	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	34	1,800	1,260
3661	Edgewood ES	Bath Staff	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	62	3,000	3,000
3662	Edgewood ES	Bath Staff	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	62	3,000	3,000
3663	Edgewood ES	Bath Staff	1	60W INCANDESCENT	can rec 8"	9	9	60	0.5	8 WATT LED SI	screw in LED par20	9	8	0.1	0.5	1,184	3,000	2,100
3664	Edgewood ES	Bath Staff	1	60W INCANDESCENT	can rec 8"	4	4	60	0.2	8 WATT LED SI	screw in LED par20	4	8	0.0	0.2	526	3,000	2,100
3665	Edgewood ES	Closet Clean	1	2x9W CF HARDWIRED	drum	1	1	22	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	2	500	500
3666	Edgewood ES	Bath Handicap	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	62	3,000	3,000
3667	Edgewood ES	Office Open Nurse	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	50	2,400	2,400
3668	Edgewood ES	Office Open Nurse	1	4L4' T8 32w/EL-8'	wrap	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	0.1	248	2,400	2,400
3669	Edgewood ES	Office Open Nurse	1	1L4' T12 34w EE/EEMAG	task strip	1	1	40	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	45	2,400	2,400
3670	Edgewood ES	Office Open Nurse	1	2L4' T8 32w/EL	vanity	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	99	2,400	2,400
3671	Edgewood ES	Bath Nurse	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	62	3,000	3,000
3672	Edgewood ES	Office Nurse	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	41	2,000	2,000
3673	Edgewood ES	Office Nurse	1	1L4' T12 34w EE/EEMAG	task strip	2	2	40	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	75	2,000	2,000
3674	Edgewood ES	Bath Boys	1	4L4' T8 32w/EL-8'	vanity	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	104	3,000	2,100
3675	Edgewood ES	Bath Boys	1	2L4' T8 32w/EL	vanity	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	186	3,000	2,100
3676	Edgewood ES	Bath Boys	1	2L3' T8 25w/EL	vanity	1	1	47	0.0	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	25	0.0	0.0	56	3,000	2,100
3677	Edgewood ES	Bath Girls	1	4L4' T8 32w/EL-8'	vanity	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	104	3,000	2,100
3678	Edgewood ES	Bath Girls	1	2L4' T8 32w/EL	vanity	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	186	3,000	2,100
3679	Edgewood ES	Bath Girls	1	2L3' T8 25w/EL	vanity	1	1	47	0.0	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	25	0.0	0.0	56	3,000	2,100
3680	Edgewood ES	Classroom 1	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
3681	Edgewood ES	Bath 1	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	132	3,000	3,000
3682	Edgewood ES	Classroom 2	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
3683	Edgewood ES	Bath 2	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	132	3,000	3,000
3684	Edgewood ES	Classroom 3	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
3685	Edgewood ES	Bath 3	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	132	3,000	3,000
3686	Edgewood ES	Classroom 4	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
3687	Edgewood ES	Bath 4	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	132	3,000	3,000
3688	Edgewood ES	Classroom 5	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
3689	Edgewood ES	Bath 5	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	132	3,000	3,000
3690	Edgewood ES	Classroom 6	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
3691	Edgewood ES	Bath 6	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	132	3,000	3,000
3692	Edgewood ES	Classroom 7	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
3693	Edgewood ES	Bath 7	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	132	3,000	3,000
3694	Edgewood ES	Classroom 8	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
3695	Edgewood ES	Bath 8	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	132	3,000	3,000
3696	Edgewood ES	Classroom 9	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
3697	Edgewood ES	Bath 9	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	132	3,000	3,000
3698	Edgewood ES	Classroom 10	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
3699	Edgewood ES	Bath 10	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	132	3,000	3,000
3700	Edgewood ES	Classroom 11	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
3701	Edgewood ES	Bath 11	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	132	3,000	3,000
3702	Edgewood ES	Classroom 12	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	683	2,200	1,540
3703	Edgewood ES	Bath 12	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	132	3,000	3,000

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
3706	Ivy Drive ES	Mechanical Boiler	1	4L4' T8 32w/EL-8'	industrial	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	122	500	350
3707	Ivy Drive ES	Kitchen Z	1	3L2' T8 17w/EL	box acrylic	3	3	47	0.1	3L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	3	28	0.1	0.1	106	1,900	1,900
3708	Ivy Drive ES	Kitchen Z	1	3L4' T8 32w/EL	trof acr	15	15	88	1.3	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	15	54	0.8	0.5	982	1,900	1,900
3709	Ivy Drive ES	Kitchen Z	1	2L4' T8 32w/EL	range hood	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	185	1,900	1,900
3710	Ivy Drive ES	Storage Dry Good	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	41	1,000	700
3711	Ivy Drive ES	Bath Kit	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	68	2,100	2,100
3712	Ivy Drive ES	Hall Slop Sink	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	196	3,000	2,100
3713	Ivy Drive ES	Office Custodian	1	4L4' T8 32w/EL-8'	wrap	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.2	325	2,000	1,400
3714	Ivy Drive ES	Office Custodian	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	49	2,000	1,400
3715	Ivy Drive ES	Bath Custodian	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	98	3,000	3,000
3716	Ivy Drive ES	Hall Main	1	2L2' 24W T5HO/EL	troffer indirect	15		52	0.8	NO RETRO	no change -specialized fixture		55	0.8			2,100	2,100
3717	Ivy Drive ES	Hall Main	1	2L2' 24W T5HO/EL	troffer indirect	22		52	1.1	NO RETRO	no change -specialized fixture		55	1.1			350	350
3718	Ivy Drive ES	Hall Main	1	26W CF HARDWIRED	can rec	48		28	1.3	NO RETRO	no change		29	1.3			2,100	2,100
3719	Ivy Drive ES	Hall Main	1	2x26W CF HARDWIRED/EL	can rec	23	23	54	1.2	10 WATT LED/KIT	can kit LED Spectrum	23	11	0.2	1.0	2,101	2,100	2,100
3720	Ivy Drive ES	Hall Main	1	2x26W CF HARDWIRED/EL	can rec	11	11	54	0.6	10 WATT LED/KIT	can kit LED Spectrum	11	11	0.1	0.5	167	350	350
3721	Ivy Drive ES	Hall Main	1	2L4' T8 32w/EL-8'	cove	14	14	60	0.8	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	14	36	0.5	0.3	119	350	350
3722	Ivy Drive ES	Hall Main	1	1L4' T8 32w/EL	cove	4	4	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	18	0.1	0.0	17	350	350
3723	Ivy Drive ES	Hall Main	1	2L4' T8 32w/EL-8'	cove	40	40	60	2.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	40	36	1.4	1.0	1,021	2,100	2,100
3724	Ivy Drive ES	Hall Main	1	1L4' T8 32w/EL	cove	17	17	30	0.5	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	17	18	0.3	0.2	217	2,100	2,100
3725	Ivy Drive ES	Hall Main	1	2x26W CF HARDWIRED/EL	sconce	4		54	0.2	NO RETRO	no change		57	0.2			2,100	2,100
3726	Ivy Drive ES	Hall Main	1	3 WATT LED	cove	1		3	0.0	NO RETRO	no change		3	0.0			350	350
3727	Ivy Drive ES	Hall Main	1	75W INCANDESCENT	track head	12	12	75	0.9	8 WATT LED SI	screw in LED par20	12	8	0.1	0.8	1,678	2,100	2,100
3728	Ivy Drive ES	Classroom Music23	1	4L4' T8 32w/EL-8'	wrap narrow	12	12	112	1.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	71	0.9	0.5	750	1,540	1,540
3729	Ivy Drive ES	Office Music23	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	91	1,400	1,400
3730	Ivy Drive ES	Storage Music23	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	14	350	350
3731	Ivy Drive ES	Classroom Art24	1	4L4' T8 32w/EL-8'	wrap narrow	12	12	112	1.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	71	0.9	0.5	750	1,540	1,540
3732	Ivy Drive ES	Office Art24	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	91	1,400	1,400
3733	Ivy Drive ES	Storage Art24	1	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	12	350	350
3734	Ivy Drive ES	Storage Art24	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	14	350	350
3735	Ivy Drive ES	Storage Clean	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	12	500	500
3736	Ivy Drive ES	Storage Electric	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	14	350	350
3737	Ivy Drive ES	Classroom 20	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
3738	Ivy Drive ES	Classroom 20	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
3739	Ivy Drive ES	Classroom 21	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
3740	Ivy Drive ES	Classroom 21	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
3741	Ivy Drive ES	Bath Women	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	68	2,100	2,100
3742	Ivy Drive ES	Bath Men	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	68	2,100	2,100
3743	Ivy Drive ES	Classroom 22	1	4L4' T8 32w/EL-8'	wrap narrow	5	5	112	0.6	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	71	0.4	0.2	313	1,540	1,540
3744	Ivy Drive ES	Classroom 22	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
3745	Ivy Drive ES	Classroom 15	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
3746	Ivy Drive ES	Classroom 15	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
3747	Ivy Drive ES	Classroom 14	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
3748	Ivy Drive ES	Classroom 14	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
3749	Ivy Drive ES	Classroom 13	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
3750	Ivy Drive ES	Classroom 13	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
3751	Ivy Drive ES	Classroom 12	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
3752	Ivy Drive ES	Classroom 12	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
3753	Ivy Drive ES	Office Psychologist	1	4L4' T8 32w/EL-8'	wrap narrow	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.2	227	1,400	1,400
3754	Ivy Drive ES	Office Psychologist	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	61	1,400	1,400
3755	Ivy Drive ES	Storage Equip	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	20	500	500
3756	Ivy Drive ES	Storage Clean	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
3757	Ivy Drive ES	Bath Boys	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	137	2,100	2,100
3758	Ivy Drive ES	Bath Boys	1	4L4' T8 32w/EL-8'	soffit	2	2	112	0.2	4L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	171	2,100	2,100
3759	Ivy Drive ES	Bath Boys	1	2L4' T8 32w/EL	soffit	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	51	2,100	2,100
3760	Ivy Drive ES	Bath Boys	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	91	2,100	2,100
3761	Ivy Drive ES	Bath Girls	1	4L2' T8 17w/EL	trof acr	3	3	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	3	29	0.1	0.1	205	2,100	2,100
3762	Ivy Drive ES	Bath Girls	1	4L4' T8 32w/EL-8'	soffit	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	171	2,100	2,100
3763	Ivy Drive ES	Bath Girls	1	2L4' T8 32w/EL	soffit	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	51	2,100	2,100
3764	Ivy Drive ES	Bath Girls	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	91	2,100	2,100
3765	Ivy Drive ES	Classroom 19	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
3766	Ivy Drive ES	Classroom 19	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
3767	Ivy Drive ES	Classroom 16	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
3768	Ivy Drive ES	Classroom 16	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
3769	Ivy Drive ES	Classroom 18	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
3770	Ivy Drive ES	Classroom 18	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
3771	Ivy Drive ES	Classroom 17	1	4L4' T8 32w/EL-8'	wrap narrow	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	0.4	563	1,540	1,540
3772	Ivy Drive ES	Lounge Staff	1	2L2' 24W T5HO/EL	troffer indirect	12		52	0.6	NO RETRO	no change -specialized fixture		55	0.6			1,260	1,260
3773	Ivy Drive ES	Lounge Staff	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	55	1,260	1,260
3774	Ivy Drive ES	Bath Staff	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	68	2,100	2,100
3775	Ivy Drive ES	Bath Boys	1	4L2' T8 17w/EL	trof acr	3	3	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	3	29	0.1	0.1	205	2,100	2,100
3776	Ivy Drive ES	Bath Boys	1	4L4' T8 32w/EL-8'	soffit	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	171	2,100	2,100
3777	Ivy Drive ES	Bath Boys	1	2L4' T8 32w/EL	soffit	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	51	2,100	2,100
3778	Ivy Drive ES	Bath Girls	1	4L2' T8 17w/EL	trof acr	3	3	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	3	29	0.1	0.1	205	2,100	2,100

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
3779	Ivy Drive ES	Bath Girls	1	4L4' T8 32w/EL-8'	soffit	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	171	2,100	2,100
3780	Ivy Drive ES	Bath Girls	1	2L4' T8 32w/EL	soffit	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	51	2,100	2,100
3781	Ivy Drive ES	Storage Electric	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	14	350	350
3782	Ivy Drive ES	Classroom 10	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
3783	Ivy Drive ES	Classroom 10	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
3784	Ivy Drive ES	Classroom 9	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
3785	Ivy Drive ES	Classroom 9	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
3786	Ivy Drive ES	Classroom 8	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
3787	Ivy Drive ES	Classroom 8	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
3788	Ivy Drive ES	Classroom 7	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
3789	Ivy Drive ES	Classroom 7	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
3790	Ivy Drive ES	Storage Clean	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	12	500	500
3791	Ivy Drive ES	Storage Electric	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	14	350	350
3792	Ivy Drive ES	Storage A	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	20	500	350
3793	Ivy Drive ES	Classroom Kindergartena	1	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	674	1,540	1,540
3794	Ivy Drive ES	Classroom Kindergartena	1	2x26W CF HARDWIRED/EL	can rec	4	4	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	4	11	0.0	0.2	268	1,540	1,540
3795	Ivy Drive ES	Classroom Kindergartena	1	4L4' T8 32w/EL-8'	trof acr 1' wide	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	89	2,200	2,200
3796	Ivy Drive ES	Classroom Kindergartena	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	100	1,540	1,540
3797	Ivy Drive ES	Bath Kindergartena	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	98	3,000	3,000
3798	Ivy Drive ES	Storage Kindergartena	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	44	1,000	1,000
3799	Ivy Drive ES	Classroom Kindergartenb	1	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	674	1,540	1,540
3800	Ivy Drive ES	Classroom Kindergartenb	1	2x26W CF HARDWIRED/EL	can rec	4	4	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	4	11	0.0	0.2	268	1,540	1,540
3801	Ivy Drive ES	Classroom Kindergartenb	1	4L4' T8 32w/EL-8'	trof acr 1' wide	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	89	2,200	2,200
3802	Ivy Drive ES	Classroom Kindergartenb	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	100	1,540	1,540
3803	Ivy Drive ES	Bath Kindergartenb	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	98	3,000	3,000
3804	Ivy Drive ES	Storage Kindergartenb	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	44	1,000	1,000
3805	Ivy Drive ES	Classroom Kindergartenc	1	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	674	1,540	1,540
3806	Ivy Drive ES	Classroom Kindergartenc	1	2x26W CF HARDWIRED/EL	can rec	4	4	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	4	11	0.0	0.2	268	1,540	1,540
3807	Ivy Drive ES	Classroom Kindergartenc	1	4L4' T8 32w/EL-8'	trof acr 1' wide	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	89	2,200	2,200
3808	Ivy Drive ES	Classroom Kindergartenc	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	100	1,540	1,540
3809	Ivy Drive ES	Bath Kindergartenc	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	98	3,000	3,000
3810	Ivy Drive ES	Storage Kindergartenc	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	44	1,000	1,000
3811	Ivy Drive ES	Classroom Kindergartend	1	6L4' T8 32w/EL-8'	indirect/direct	6	6	180	1.1	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	107	0.6	0.4	674	1,540	1,540
3812	Ivy Drive ES	Classroom Kindergartend	1	2x26W CF HARDWIRED/EL	can rec	4	4	54	0.2	10 WATT LED/KIT	can kit LED Spectrum	4	11	0.0	0.2	268	1,540	1,540
3813	Ivy Drive ES	Classroom Kindergartend	1	4L4' T8 32w/EL-8'	trof acr 1' wide	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	89	2,200	2,200
3814	Ivy Drive ES	Classroom Kindergartend	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	100	1,540	1,540
3815	Ivy Drive ES	Bath Kindergartend	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	98	3,000	3,000
3816	Ivy Drive ES	Storage Kindergartend	1	2x26W CF HARDWIRED/EL	can rec	1	1	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.0	44	1,000	1,000
3817	Ivy Drive ES	Classroom 6	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
3818	Ivy Drive ES	Classroom 6	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
3819	Ivy Drive ES	Classroom 3	1	2L2' 24W T5HO/EL	troffer indirect	8		52	0.4	NO RETRO	no change -specialized fixture		55	0.4			1,540	1,540
3820	Ivy Drive ES	Classroom 5	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
3821	Ivy Drive ES	Classroom 5	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
3822	Ivy Drive ES	Classroom 2	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
3823	Ivy Drive ES	Classroom 2	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
3824	Ivy Drive ES	Classroom 2	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
3825	Ivy Drive ES	Classroom 2	1	2L4' T8 32w/EL	wrap narrow	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	112	1,540	1,540
3826	Ivy Drive ES	Classroom 1	1	4L4' T8 32w/EL-8'	wrap narrow	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	375	1,540	1,540
3827	Ivy Drive ES	Classroom 1	1	2L4' T8 32w/EL	wrap narrow	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	75	1,540	1,540
3828	Ivy Drive ES	Storage Speech	1	2L2' 24W T5HO/EL	troffer indirect	2		52	0.1	NO RETRO	no change -specialized fixture		55	0.1			1,000	1,000
3829	Ivy Drive ES	Library Media	1	2x26W CF HARDWIRED/EL	can rec	18	18	54	1.0	10 WATT LED/KIT	can kit LED Spectrum	18	11	0.2	0.8	1,409	1,800	1,800
3830	Ivy Drive ES	Library Media	1	26W CF HARDWIRED	can rec	6		28	0.2	NO RETRO	no change		29	0.2			1,800	1,800
3831	Ivy Drive ES	Library Media	1	2L2' 24W T5HO/EL	troffer indirect	2		52	0.1	NO RETRO	no change -specialized fixture		55	0.1			1,800	1,800
3832	Ivy Drive ES	Library Media	1	6L4' T8 32w/EL-8'	indirect/direct	11	11	180	2.0	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	11	107	1.2	0.8	1,443	1,800	1,800
3833	Ivy Drive ES	Library Media	1	6L4' T8 32w/EL-8'	indirect/direct	4	4	180	0.7	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	107	0.4	0.3	525	1,800	1,800
3834	Ivy Drive ES	Storage Annex	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	0.1	91	700	700
3835	Ivy Drive ES	Storage Head-End	1	2L4' T8 32w/EL-8'	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	17	700	700
3836	Ivy Drive ES	Office Workrm	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	0.1	91	1,400	1,400
3837	Ivy Drive ES	Storage Electric	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	12	500	500
3838	Ivy Drive ES	Bath Men	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	68	2,100	2,100
3839	Ivy Drive ES	Bath Women	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	68	2,100	2,100
3840	Ivy Drive ES	Office Open Workrm	1	2L2' 24W T5HO/EL	troffer indirect	6		52	0.3	NO RETRO	no change -specialized fixture		55	0.3			1,680	1,680
3841	Ivy Drive ES	Office Open Health	1	2L2' 24W T5HO/EL	troffer indirect	7		52	0.4	NO RETRO	no change -specialized fixture		55	0.4			1,680	1,680
3842	Ivy Drive ES	Office Open Health	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	78	2,400	2,400
3843	Ivy Drive ES	Office Open Health	1	1L4' T8 32w/EL	task strip	3	3	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	18	0.1	0.0	87	2,400	2,400
3844	Ivy Drive ES	Bath Health	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	68	2,100	2,100
3845	Ivy Drive ES	Storage 2Nd Equip	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	16	500	500
3846	Ivy Drive ES	Office Open Main	1	2L2' 24W T5HO/EL	troffer indirect	12		52	0.6	NO RETRO	no change -specialized fixture		55	0.6			1,680	1,680
3847	Ivy Drive ES	Office Principal	1	2L2' 24W T5HO/EL	troffer indirect	8		52	0.4	NO RETRO	no change -specialized fixture		55	0.4			1,400	1,400
3848	Ivy Drive ES	Office Open Main	1	2L2' 24W T5HO/EL	troffer indirect	3		52	0.2	NO RETRO	no change -specialized fixture		55	0.2			1,680	1,680
3849	Ivy Drive ES	Office Open Main	1	2x26W CF HARDWIRED/EL	can rec	2	2	54	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	146	1,680	1,680
3850	Ivy Drive ES	Storage Main	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	12	500	500
3851	Ivy Drive ES	Conference Main	1	2L2' 24W T5HO/EL	troffer indirect	6		52	0.3	NO RETRO	no change -specialized fixture		55	0.3			1,400	1,400

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
3852	Ivy Drive ES	Bath Staff	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	68	2,100	2,100
3853	Ivy Drive ES	Bath Staff	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	0.0	68	2,100	2,100
3854	Ivy Drive ES	Cafeteria	1	2L4' T8 32w U/EL	trof acr	5	5	60	0.3	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	5	38	0.2	0.1	189	1,700	1,700
3855	Ivy Drive ES	Cafeteria	1	6L4' T8 32w/EL-8'	indirect/direct	36	36	180	6.5	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	36	107	3.9	2.6	4,461	1,700	1,700
3856	Ivy Drive ES	Gym	1	6L4' T5HO/EL	trof acr dim	28		160	4.5	NO RETRO	no change -specialized fixture		168	4.5			2,000	2,000
3857	Ivy Drive ES	Hall By Stage	1	2L2' 24W T5HO/EL	troffer indirect	2		52	0.1	NO RETRO	no change -specialized fixture		55	0.1			3,000	3,000
3858	Ivy Drive ES	Stage Z	1	4L4' T8 32w/EL-8'	industrial	7	7	112	0.8	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	7	71	0.5	0.3	455	1,600	1,600
3859	Ivy Drive ES	Stage Z	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	65	1,600	1,600
3860	Ivy Drive ES	Stage Z	1	75W INCANDESCENT	dome	9		75	0.7	NO RETRO	no change -low hours		79	0.7			100	100
3861	Ivy Drive ES	Storage B	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	20	500	500
3862	Ivy Drive ES	Office Pe	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	138	2,000	1,400
3867	City Hall & Annex	Mechanical Pent	P	100W INCANDESCENT	keyless	11	11	100	1.1	15 WATT LED SI	screw in LED Alamp	11	16	0.2	0.9	463	500	350
3868	City Hall & Annex	Stair North	S	3x60W INCANDESCENTS	drum	4	4	180	0.7	8 WATT LED SI	screw in LED Alamp	4	8	0.0	0.7	2,677	3,900	3,900
3869	City Hall & Annex	Stair North	S	2L2' T8 17w/EL	box acrylic	6	6	33	0.2	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	6	19	0.1	0.1	330	3,900	3,900
3870	City Hall & Annex	Stair North	S	13W CF HARDWIRED	can rec	8		15	0.1	NO RETRO	no change		16	0.1			3,900	3,900
3871	City Hall & Annex	Stair North	S	2L2' T8 17w/EL	trof acr	8	8	33	0.3	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	8	19	0.2	0.1	440	3,900	3,900
3872	City Hall & Annex	Stair North	S	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	87	3,900	3,900
3873	City Hall & Annex	Stair North	S	1L3' T8 25w/EL	wrap narrow	16	16	24	0.4	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	16	13	0.2	0.2	711	3,900	3,900
3874	City Hall & Annex	Stair South	S	1L3' T8 25w/EL	wrap narrow	12	12	24	0.3	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	12	13	0.2	0.1	534	3,900	3,900
3875	City Hall & Annex	Stair South	S	4L4' T8 32w/EL-8'	wrap	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	317	3,900	3,900
3876	City Hall & Annex	Hall 3Rd	3	2L4' T8 32w/EL-8'	soffit	18	18	60	1.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	18	36	0.6	0.4	1,706	3,900	3,900
3877	City Hall & Annex	Hall 3Rd	3	1L2' T8 17w/EL	soffit	1	1	17	0.0	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	9	0.0	0.0	29	3,900	3,900
3878	City Hall & Annex	Hall 3Rd	3	2x13W CF HARDWIRED	can rec	18		30	0.5	NO RETRO	no change		32	0.5			3,900	3,900
3879	City Hall & Annex	Hall Mis	3	2L2' T8 17w/EL	trof minicube	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	220	3,900	3,900
3880	City Hall & Annex	Office Open Mis	3	3L4' T8 32w/EL	trof minicube	12	12	88	1.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	54	0.6	0.4	1,182	2,860	2,860
3881	City Hall & Annex	Office Open Mis	3	2x9W CF HARDWIRED	exit sign	1	1	22	0.0	3 WATT LED/NEW EXIT BATTERY	new LED exit bat	1	3	0.0	0.0	165	8,760	8,760
3882	City Hall & Annex	Storage Mis (3)	3	1L3' T8 25w/EL	wrap narrow	3	3	24	0.1	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	3	13	0.0	0.0	17	500	500
3883	City Hall & Annex	Office Open Servers	3	4L4' T8 32w/EL	trof minicube	8	8	112	0.9	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	8	53	0.4	0.5	1,361	2,860	2,860
3884	City Hall & Annex	Office Mis	3	2L2' T8 17w/EL	trof minicube	6	6	33	0.2	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	6	19	0.1	0.1	169	2,002	2,002
3885	City Hall & Annex	Office Mis	3	4L4' T8 32w/EL	trof minicube	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	340	2,860	2,860
3886	City Hall & Annex	Office Open Mis	3	4L4' T8 32w/EL	trof minicube	12	12	112	1.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	12	53	0.6	0.7	2,042	2,860	2,860
3887	City Hall & Annex	Office Open Mail	3	3L4' T8 32w/EL	trof acr	6	6	88	0.5	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	54	0.3	0.2	414	2,002	2,002
3888	City Hall & Annex	Storage Electric	3	26W CF SCREWIN	keyless	1	1	28	0.0	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.0	10	500	500
3889	City Hall & Annex	Bath Men	3	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	81	2,002	2,002
3890	City Hall & Annex	Bath Men	3	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	49	2,002	2,002
3891	City Hall & Annex	Bath Men	3	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	49	2,002	2,002
3892	City Hall & Annex	Bath Men	3	13W CF SCREWIN	square surface mt.	1	1	15	0.0	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.0	19	2,860	2,860
3893	City Hall & Annex	Storage Electric	3	26W CF SCREWIN	keyless	1	1	28	0.0	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.0	10	500	500
3894	City Hall & Annex	Bath Women	3	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	81	2,002	2,002
3895	City Hall & Annex	Bath Women	3	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	49	2,002	2,002
3896	City Hall & Annex	Bath Women	3	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	49	2,002	2,002
3897	City Hall & Annex	Bath Women	3	13W CF SCREWIN	square surface mt.	1	1	15	0.0	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.0	19	2,860	2,860
3898	City Hall & Annex	Office Open Probate	3	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	81	2,860	2,002
3899	City Hall & Annex	Office Open Probate	3	4L4' T8 32w/EL	trof acr	8	8	112	0.9	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	8	53	0.4	0.5	1,361	2,860	2,002
3900	City Hall & Annex	Office Probate	3	2L2' T8 17w/EL	trof acr	6	6	33	0.2	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	6	19	0.1	0.1	169	2,002	2,002
3901	City Hall & Annex	Office Probate	3	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	340	2,860	2,860
3902	City Hall & Annex	Office Probate	3	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	81	2,860	2,860
3903	City Hall & Annex	Office Probate	3	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	340	2,860	2,860
3904	City Hall & Annex	Office Probate	3	2L2' T8 17w/EL	trof acr	8	8	33	0.3	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	8	19	0.2	0.1	323	2,860	2,002
3905	City Hall & Annex	Office Probate	3	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	340	2,860	2,002
3906	City Hall & Annex	Conference Probate	3	2L2' T8 17w/EL	trof acr	3	3	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	3	19	0.1	0.0	121	2,860	2,002
3907	City Hall & Annex	Storage Vault	3	4L4' T8 32w/EL-8'	wrap	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.2	464	2,860	2,860
3908	City Hall & Annex	Office Open Comptroller	3	4L4' T8 32w/EL	trof acr	40	40	112	4.5	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	40	53	2.1	2.4	6,807	2,860	2,860
3909	City Hall & Annex	Office Comptroller	3	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	6	53	0.3	0.4	1,021	2,860	2,002
3910	City Hall & Annex	Office Comptroller	3	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	161	2,860	2,002
3911	City Hall & Annex	Storage Vault	3	4L4' T8 32w/EL-8'	wrap	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.2	464	2,860	2,860
3912	City Hall & Annex	Lounge Comptroller	3	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	113	2,002	2,002
3913	City Hall & Annex	Office Cousel	3	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	340	2,860	2,002
3914	City Hall & Annex	Office Cousel	3	2L2' T8 17w/EL	trof acr	1	1	33	0.0	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	19	0.0	0.0	40	2,860	2,002
3915	City Hall & Annex	Conference Cousel	3	2L2' T8 17w/EL	trof acr	6	6	33	0.2	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	6	19	0.1	0.1	169	2,002	2,002
3916	City Hall & Annex	Office Open Cousel	3	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	6	53	0.3	0.4	1,021	2,860	2,860
3917	City Hall & Annex	Office Open Cousel	3	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	81	2,860	2,860
3918	City Hall & Annex	Office Cousel	3	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	0.2	476	2,002	2,002
3919	City Hall & Annex	Office Cousel	3	2L2' T8 17w/EL	trof acr	6	6	33	0.2	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	6	19	0.1	0.1	169	2,002	2,002
3920	City Hall & Annex	Office Cousel	3	2L2' T8 17w/EL	trof acr	6	6	33	0.2	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	6	19	0.1	0.1	169	2,002	2,002
3921	City Hall & Annex	Office Cousel	3	2L2' T8 17w/EL	trof acr	6	6	33	0.2	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	6	19	0.1	0.1	169	2,002	2,002
3922	City Hall & Annex	Office Open Treasurer	3	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	0.2	681	2,860	2,002
3923	City Hall & Annex	Office Open Treasurer	3	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	81	2,860	2,002
3924	City Hall & Annex	Office Treasurer	3	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	161	2,860	2,860
3925	City Hall & Annex	Office Treasurer	3	2L2' T8 17w/EL	trof acr	6	6	33	0.2	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	6	19	0.1	0.1	169	2,002	2,002
3926	City Hall & Annex	Office Open Mayor	3	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	0.2	681	2,860	2,002
3927	City Hall & Annex	Office Open Mayor	3	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	81	2,860	2,002
3928	City Hall & Annex	Storage Mayor	3	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	14	500	500

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
3929	City Hall & Annex	Hall Mayor	3	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	173	3,900	3,900
3930	City Hall & Annex	Bath Mayor	3	3x60W INCANDESCENTS	decorative	1	1	180	0.2	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.2	491	2,860	2,860
3931	City Hall & Annex	Bath Mayor	3	60W INCANDESCENT	exhaust fan light	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	148	2,860	2,860
3932	City Hall & Annex	Conference Mayor	3	3L4' T8 32w/EL	trof minicube	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	394	2,860	2,860
3933	City Hall & Annex	Conference Mayor	3	13W CF SCREWIN	can rec	11		15	0.2	NO RETRO	no change		16	0.2			2,860	2,860
3934	City Hall & Annex	Office Mayor	3	2L2' T8 17w/EL	trof acr	8	8	33	0.3	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	8	19	0.2	0.1	323	2,860	2,002
3935	City Hall & Annex	Office Mayor	3	13W CF SCREWIN	can rec	10		15	0.2	NO RETRO	no change		16	0.2			2,860	2,002
3936	City Hall & Annex	Hall 2Nd	2	2L4' T8 32w/EL-8'	soffit	20	20	60	1.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	20	36	0.7	0.5	1,895	3,900	3,900
3937	City Hall & Annex	Hall 2Nd	2	1L2' T8 17w/EL	soffit	2	2	17	0.0	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	9	0.0	0.0	59	3,900	3,900
3938	City Hall & Annex	Hall 2Nd	2	2x13W CF HARDWIRED	can rec	14		30	0.4	NO RETRO	no change		32	0.4			3,900	3,900
3939	City Hall & Annex	Lounge Staff	2	3L4' T8 32w/EL	trof acr	8	8	88	0.7	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	54	0.4	0.3	552	2,002	2,002
3940	City Hall & Annex	Storage Vault	2	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	20	500	500
3941	City Hall & Annex	Office Open Development	2	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	6	53	0.3	0.4	1,021	2,860	2,002
3942	City Hall & Annex	Office Open Development	2	2L2' T8 17w/EL	trof acr	5	5	33	0.2	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	5	19	0.1	0.1	202	2,860	2,002
3943	City Hall & Annex	Office Development	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	0.2	357	2,002	2,002
3944	City Hall & Annex	Office Development	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	0.2	357	2,002	2,002
3945	City Hall & Annex	Office Development	2	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	0.2	476	2,002	2,002
3946	City Hall & Annex	Conference Development	2	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	6	53	0.3	0.4	715	2,002	2,002
3947	City Hall & Annex	Conference Development	2	2L2' T8 17w/EL	trof acr	1	1	33	0.0	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	19	0.0	0.0	28	2,002	2,002
3948	City Hall & Annex	Office Development	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	0.2	357	2,002	2,002
3949	City Hall & Annex	Office Development	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	0.2	357	2,002	2,002
3950	City Hall & Annex	Office Development	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	0.2	357	2,002	2,002
3951	City Hall & Annex	Storage Development	2	2L2' T8 17w/EL	trof acr	6	6	33	0.2	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	6	19	0.1	0.1	169	2,002	2,002
3952	City Hall & Annex	Storage Electric	2	26W CF SCREWIN	keyless	1	1	28	0.0	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.0	10	500	500
3953	City Hall & Annex	Bath Men	2	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	81	2,002	2,002
3954	City Hall & Annex	Bath Men	2	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	49	2,002	2,002
3955	City Hall & Annex	Bath Men	2	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	49	2,002	2,002
3956	City Hall & Annex	Bath Men	2	13W CF SCREWIN	square surface mt.	1	1	15	0.0	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.0	19	2,860	2,860
3957	City Hall & Annex	Storage Custodian	2	26W CF SCREWIN	keyless	1	1	28	0.0	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.0	10	500	500
3958	City Hall & Annex	Bath Women	2	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	81	2,002	2,002
3959	City Hall & Annex	Bath Women	2	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	49	2,002	2,002
3960	City Hall & Annex	Bath Women	2	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	49	2,002	2,002
3961	City Hall & Annex	Bath Women	2	13W CF SCREWIN	square surface mt.	1	1	15	0.0	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.0	19	2,860	2,860
3962	City Hall & Annex	Office Open Parks	2	4L4' T8 32w/EL	trof acr	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	1,532	2,860	2,002
3963	City Hall & Annex	Office Open Parks	2	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	161	2,860	2,002
3964	City Hall & Annex	Office Parks	2	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	56	2,002	2,002
3965	City Hall & Annex	Office Files	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	238	2,002	2,002
3966	City Hall & Annex	Office Parks	2	4L4' T8 32w/EL	trof acr	5	5	112	0.6	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	5	53	0.3	0.3	851	2,860	2,002
3967	City Hall & Annex	Office Parks	2	2L2' T8 17w/EL	trof acr	1	1	33	0.0	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	19	0.0	0.0	40	2,860	2,002
3968	City Hall & Annex	Office Open Renaissance	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	394	2,860	2,002
3969	City Hall & Annex	Conference Renaissance	2	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	6	53	0.3	0.4	715	2,002	2,002
3970	City Hall & Annex	Office Renaissance	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	276	2,002	2,002
3971	City Hall & Annex	Storage Telecom	2	13W CF SCREWIN	can rec	1		15	0.0	NO RETRO	no change		16	0.0			500	500
3972	City Hall & Annex	Office Open Purchasing	2	4L4' T8 32w/EL	trof acr	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	1,532	2,860	2,860
3973	City Hall & Annex	Storage Purchasing	2	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	12	500	500
3974	City Hall & Annex	Office Purchasing	2	3L4' T8 32w/EL	trof acr	3	3	88	0.3	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	54	0.2	0.1	207	2,002	2,002
3975	City Hall & Annex	Office Purchasing	2	3L4' T8 32w/EL	trof acr	3	3	88	0.3	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	54	0.2	0.1	207	2,002	2,002
3976	City Hall & Annex	Conference Purchasing	2	2L2' T8 17w/EL	trof acr	6	6	33	0.2	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	6	19	0.1	0.1	242	2,860	2,002
3977	City Hall & Annex	Office Open Building	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	0.2	511	2,860	2,860
3978	City Hall & Annex	Office Open Building	2	2L2' T8 17w/EL	trof acr	8	8	33	0.3	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	8	19	0.2	0.1	323	2,860	2,860
3979	City Hall & Annex	Storage Vault	2	4L4' T8 32w/EL-8'	wrap	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.2	81	500	500
3980	City Hall & Annex	Office Building	2	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	0.2	681	2,860	2,860
3981	City Hall & Annex	Office Building	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	340	2,860	2,860
3982	City Hall & Annex	Office Building	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	340	2,860	2,860
3983	City Hall & Annex	Office Building	2	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	113	2,002	2,002
3984	City Hall & Annex	Lounge Building	2	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	56	2,002	2,002
3985	City Hall & Annex	Office Building	2	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	113	2,002	2,002
3986	City Hall & Annex	Conference Building	2	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	6	53	0.3	0.4	1,021	2,860	2,860
3987	City Hall & Annex	Bath Building	2	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	99	2,860	2,002
3988	City Hall & Annex	Office Open Claims	2	3L4' T8 32w/EL	trof acr	3	3	88	0.3	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	54	0.2	0.1	207	2,002	2,002
3989	City Hall & Annex	Office Claims	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	238	2,002	2,002
3990	City Hall & Annex	Storage Claims	2	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	69	2,002	2,002
3991	City Hall & Annex	Storage Claims	2	2L2' T8 17w/EL	trof acr	1	1	33	0.0	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	19	0.0	0.0	28	2,002	2,002
3992	City Hall & Annex	Office Personnel	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	0.2	357	2,002	2,002
3993	City Hall & Annex	Office Open Personnel	2	4L4' T8 32w/EL	trof acr	11	11	112	1.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	11	53	0.6	0.7	1,872	2,860	2,002
3994	City Hall & Annex	Office Open Personnel	2	2L2' T8 17w/EL	trof acr	6	6	33	0.2	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	6	19	0.1	0.1	242	2,860	2,002
3995	City Hall & Annex	Storage Personnel	2	2L4' T8 32w U/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	4	38	0.2	0.1	178	2,002	2,002
3996	City Hall & Annex	Storage Personnel	2	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	26	500	500
3997	City Hall & Annex	Storage Personnel	2	4L4' T8 32w/EL-8'	wrap	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	232	2,860	2,860
3998	City Hall & Annex	Conference Personnel	2	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	0.2	476	2,002	2,002
3999	City Hall & Annex	Office Personnel	2	4L4' T8 32w/EL	trof acr	5	5	112	0.6	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	5	53	0.3	0.3	596	2,002	2,002
4000	City Hall & Annex	Office Personnel	2	3L4' T8 32w/EL	trof acr	3	3	88	0.3	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	54	0.2	0.1	207	2,002	2,002
4001	City Hall & Annex	Hall 1St	1	2L4' T8 32w/EL-8'	soffit	18	18	60	1.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	18	36	0.6	0.4	1,706	3,900	3,900

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
4002	City Hall & Annex	Hall 1St	1	1L2' T8 17w/EL	soffit	1	1	17	0.0	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	9	0.0	0.0	29	3,900	3,900
4003	City Hall & Annex	Hall 1St	1	2x13W CF HARDWIRED	can rec	16		30	0.5	NO RETRO	no change		32	0.5			3,900	3,900
4004	City Hall & Annex	Hall 1St	1	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	110	3,900	3,900
4005	City Hall & Annex	Office Open Clerk	1	3L4' T8 32w/EL	trof acr	13	13	88	1.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	13	54	0.7	0.4	1,281	2,860	2,002
4006	City Hall & Annex	Office Open Clerk	1	2L2' T8 17w/EL	trof acr	5	5	33	0.2	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	5	19	0.1	0.1	202	2,860	2,002
4007	City Hall & Annex	Storage File Vault	1	4L4' T8 32w/EL	trof acr	11	11	112	1.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	11	53	0.6	0.7	1,872	2,860	2,860
4008	City Hall & Annex	Storage File Vault	1	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	0.2	511	2,860	2,860
4009	City Hall & Annex	Hall Clerk	1	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	154	2,730	2,730
4010	City Hall & Annex	Hall Clerk	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	0.1	162	2,730	2,730
4011	City Hall & Annex	Office Clerk	1	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	113	2,002	2,002
4012	City Hall & Annex	Office Clerk	1	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	161	2,860	2,002
4013	City Hall & Annex	Office Clerk	1	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	161	2,860	2,002
4014	City Hall & Annex	Office Open Tax	1	4L4' T8 32w/EL	trof acr	16	16	112	1.8	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	16	53	0.8	1.0	2,723	2,860	2,002
4015	City Hall & Annex	Office Open Tax	1	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	81	2,860	2,002
4016	City Hall & Annex	Office Open Tax	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	340	2,860	2,860
4017	City Hall & Annex	Office Tax	1	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	161	2,860	2,002
4018	City Hall & Annex	Office Tax	1	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	113	2,002	2,002
4019	City Hall & Annex	Storage Tax	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	24	500	500
4020	City Hall & Annex	Office Open Assessor	1	4L4' T8 32w/EL	trof acr	15	15	112	1.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	15	53	0.8	0.9	2,553	2,860	2,002
4021	City Hall & Annex	Office Open Assessor	1	2L2' T8 17w/EL	trof acr	5	5	33	0.2	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	5	19	0.1	0.1	202	2,860	2,002
4022	City Hall & Annex	Storage Assessor	1	4L4' T8 32w/EL-8'	wrap	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	232	2,860	2,860
4023	City Hall & Annex	Storage Assessor	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	139	2,860	2,860
4024	City Hall & Annex	Office Assessor	1	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	113	2,002	2,002
4025	City Hall & Annex	Office Assessor	1	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	0.1	113	2,002	2,002
4026	City Hall & Annex	Conference Assessor	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	340	2,860	2,002
4027	City Hall & Annex	Storage Electric	1	26W CF SCREWIN	keyless	1	1	28	0.0	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.0	10	500	500
4028	City Hall & Annex	Bath Men	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	116	2,860	2,002
4029	City Hall & Annex	Bath Men	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	69	2,860	2,002
4030	City Hall & Annex	Bath Men	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	69	2,860	2,002
4031	City Hall & Annex	Bath Men	1	13W CF SCREWIN	square surface mt.	1	1	15	0.0	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.0	19	2,860	2,860
4032	City Hall & Annex	Storage Electric	1	26W CF SCREWIN	keyless	1	1	28	0.0	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.0	10	500	500
4033	City Hall & Annex	Bath Women	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	116	2,860	2,002
4034	City Hall & Annex	Bath Women	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	69	2,860	2,002
4035	City Hall & Annex	Bath Women	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	69	2,860	2,002
4036	City Hall & Annex	Bath Women	1	13W CF SCREWIN	square surface mt.	1	1	15	0.0	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.0	19	2,860	2,860
4037	City Hall & Annex	Office Open Registrar	1	4L4' T8 32w/EL	trof acr	10	10	112	1.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	10	53	0.5	0.6	1,702	2,860	2,002
4038	City Hall & Annex	Storage Registrar	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	238	2,002	2,002
4039	City Hall & Annex	Office Registrar	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	238	2,002	2,002
4040	City Hall & Annex	Office Registrar	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	238	2,002	2,002
4041	City Hall & Annex	Office Registrar	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	238	2,002	2,002
4042	City Hall & Annex	Office Registrar	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	238	2,002	2,002
4043	City Hall & Annex	Office Open Army	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	0.1	170	2,860	2,860
4044	City Hall & Annex	Office Open Army	1	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	0.2	681	2,860	2,860
4045	City Hall & Annex	Office Open Army	1	40W INCANDESCENT	can rec	2		40	0.1	NO RETRO	no change		42	0.1			2,860	2,860
4046	City Hall & Annex	Office Open Army	1	2L2' T8 17w/EL	trof acr	1	1	33	0.0	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	19	0.0	0.0	40	2,860	2,860
4047	City Hall & Annex	Storage Army	1	2L2' T8 17w/EL	trof acr	1	1	33	0.0	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	19	0.0	0.0	40	2,860	2,860
4048	City Hall & Annex	Office Army	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	340	2,860	2,002
4049	City Hall & Annex	Office Army	1	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	0.2	681	2,860	2,002
4050	City Hall & Annex	Office Army	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	238	2,002	2,002
4051	City Hall & Annex	Hall Executive	1	2x13W CF HARDWIRED	can rec	4		30	0.1	NO RETRO	no change		32	0.1			3,900	2,730
4052	City Hall & Annex	Conference Mtg Rm	1	4L4' T8 32w/EL	trof acr	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	1,532	2,860	2,002
4053	City Hall & Annex	Conference Mtg Rm	1	2x13W CF HARDWIRED	can rec	2		30	0.1	NO RETRO	no change		32	0.1			2,860	2,002
4054	City Hall & Annex	Conference Executive	1	3L4' T8 32w/EL	trof parabolic	5	5	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	54	0.3	0.2	345	2,002	2,002
4055	City Hall & Annex	Bath Executive	1	4x40W INCANDESCENTS	decorative	1	1	160	0.2	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.2	434	2,860	2,860
4056	City Hall & Annex	Office Open Chambers	1	4L4' T8 32w/EL-8'	cove	16	16	112	1.8	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	16	71	1.1	0.6	1,858	2,860	2,860
4057	City Hall & Annex	Office Open Chambers	1	6L2' F40 BIAX/EL	decorative	9		204	1.8	NO RETRO	no change -specialized fixture		214	1.8			2,860	2,860
4058	City Hall & Annex	Hall Ground	G	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	87	3,900	3,900
4059	City Hall & Annex	Hall Ground	G	2L4' T8 32w/EL-8'	soffit	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	0.2	758	3,900	3,900
4060	City Hall & Annex	Hall Ground	G	1L4' T8 32w/EL	soffit	3	3	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	18	0.1	0.0	142	3,900	3,900
4061	City Hall & Annex	Hall Ground	G	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	6	53	0.3	0.4	1,392	3,900	3,900
4062	City Hall & Annex	Hall Ground	G	2x13W CF HARDWIRED	can rec	4		30	0.1	NO RETRO	no change		32	0.1			3,900	3,900
4063	City Hall & Annex	Office Open Facilities	G	4L4' T8 32w/EL	trof acr	57	57	112	6.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	57	53	3.0	3.4	9,700	2,860	2,860
4064	City Hall & Annex	Office Open Facilities	G	2L4' T8 32w/EL-8'	soffit	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	0.1	417	2,860	2,860
4065	City Hall & Annex	Office Open Facilities	G	1L4' T8 32w/EL	soffit	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	0.0	69	2,860	2,860
4066	City Hall & Annex	Office Open Facilities	G	2x13W CF HARDWIRED	can rec	4		30	0.1	NO RETRO	no change		32	0.1			2,860	2,860
4067	City Hall & Annex	Office Drawings	G	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	56	2,002	2,002
4068	City Hall & Annex	Office Mgr	G	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	238	2,002	2,002
4069	City Hall & Annex	Office Director	G	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	0.2	357	2,002	2,002
4070	City Hall & Annex	Office Engr	G	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	238	2,002	2,002
4071	City Hall & Annex	Office Plotter	G	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	6	53	0.3	0.4	715	2,002	2,002
4072	City Hall & Annex	Office Plotter	G	4L4' T8 32w/EL	trof acr	8	8	112	0.9	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	8	53	0.4	0.5	953	2,002	2,002
4073	City Hall & Annex	Office Vault	G	2L4' T8 32w/EL	wrap	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	0.1	417	2,860	2,860
4074	City Hall & Annex	Office Open Landuse	G	4L4' T8 32w/EL	trof acr	8	8	112	0.9	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	8	53	0.4	0.5	1,361	2,860	2,002

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
4075	City Hall & Annex	Office Open Landuse	G	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	0.2	476	2,002	2,002
4076	City Hall & Annex	Conference Landuse	G	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	0.2	357	2,002	2,002
4077	City Hall & Annex	Office Pw Analyst	G	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	81	2,860	2,860
4078	City Hall & Annex	Bath Women	G	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	0.1	119	2,002	2,002
4079	City Hall & Annex	Bath Women	G	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	49	2,002	2,002
4080	City Hall & Annex	Bath Men	G	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	238	2,002	2,002
4081	City Hall & Annex	Bath Men	G	2L4' T8 32w/EL	vanity	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	97	2,002	2,002
4082	City Hall & Annex	Storage Files	G	4L4' T8 32w/EL-8'	industrial	8	8	112	0.9	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	71	0.6	0.3	162	500	500
4083	City Hall & Annex	Storage Files	G	2L4' T8 32w/EL	industrial	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	36	500	500
4084	City Hall & Annex	Storage Recycle Bins	G	4L4' T8 32w/EL-8'	industrial	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	122	500	500
4085	City Hall & Annex	Storage Pistol	G	4L4' T8 32w/EL-8'	wrap	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	28	350	350
4086	City Hall & Annex	Storage Pistol	G	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	17	350	350
4087	City Hall & Annex	Bath Pistol	G	2x60W INCANDESCENTS	decorative	1	1	120	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	319	2,860	2,860
4088	City Hall & Annex	Bath Pistol	G	60W INCANDESCENT	can rec	1		60	0.1	NO RETRO	no change		63	0.1			2,860	2,860
4089	City Hall & Annex	Office Pistol	G	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	127	2,860	2,860
4090	City Hall & Annex	Office Pistol	G	3L4' T8 32w/EL	trof acr	3	3	88	0.3	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	54	0.2	0.1	296	2,860	2,860
4091	City Hall & Annex	Office Pistol	G	4L4' T8 32w/EL-8'	strip	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	232	2,860	2,860
4092	City Hall & Annex	Office Pistol	G	75W INCANDESCENT	flood	32	32	75	2.4	17 WATT LED SI	screw in LED par38	32	18	0.6	1.8	5,230	2,860	2,860
4093	City Hall & Annex	Storage Custodian	G	2L4' T8 32w/EL	industrial	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	0.2	556	2,860	2,002
4094	City Hall & Annex	Office Open Maintenance	G	2L4' T8 32w/EL	strip	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	69	2,860	2,860
4095	City Hall & Annex	Office Open Maintenance	G	1L8' T12 60w EE/STD	strip	2	2	83	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho 4' strip kit	2	38	0.1	0.1	259	2,860	2,860
4096	City Hall & Annex	Office Open Maintenance	G	60W INCANDESCENT	keyless	3	3	60	0.2	8 WATT LED SI	screw in LED Alamp	3	8	0.0	0.2	443	2,860	2,860
4097	City Hall & Annex	Office Open Maintenance	G	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	81	2,860	2,860
4098	City Hall & Annex	Storage Vault	G	4L4' T8 32w/EL	wrap wide	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	0.2	697	2,860	2,860
4099	City Hall & Annex	Storage Vault	G	1L8' T12 60w EE/STD	strip	2	2	83	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho 4' strip kit	2	38	0.1	0.1	259	2,860	2,860
4100	City Hall & Annex	Mechanical Boiler	G	26W CF HARDWIRED	drum	1		28	0.0	NO RETRO	no change		29	0.0			500	500
4101	City Hall & Annex	Mechanical Boiler	G	26W CF HARDWIRED	dome	12		28	0.3	NO RETRO	no change		29	0.3			500	500
4102	City Hall & Annex	Mechanical Elevator	G	13W CF HARDWIRED	jar	2		15	0.0	NO RETRO	no change		16	0.0			500	500
4103	City Hall & Annex	Storage Electric	G	13W CF HARDWIRED	jar	1		15	0.0	NO RETRO	no change		16	0.0			500	500
4104	City Hall & Annex	Storage Telecom	G	2L4' T12 34w EE/EEMAG	wrap	2	2	70	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.1	196	2,860	2,860
4105	City Hall & Annex	Storage Telecom	G	4L4' T12 34w EE/EEMAG	wrap wide	2	2	140	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	0.1	392	2,860	2,860
4106	City Hall & Annex	Hall Bridge To Police	3	2L4' T8 32w/EL-8'	strip	15	15	60	0.9	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	15	36	0.5	0.4	1,422	3,900	3,900
4107	City Hall & Annex	Hall Bridge To Police	3	1L4' T8 32w/EL	strip	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	47	3,900	3,900
4108	City Hall & Annex	Storage Annex	1	2L4' T8 32w/EL	industrial	9	9	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	36	0.3	0.2	625	2,860	2,860
4109	City Hall & Annex	Storage Annex	1	15W CF SCREWIN	keyless	2	2	17	0.0	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.0	49	2,860	2,860
4112	Police Court & Parking Garage	Lobby 4Th	4	23W CF SCREWIN	can rec	19	19	25	0.5	8 WATT LED SI	screw in LED par20	19	8	0.2	0.3	2,763	8,760	8,760
4113	Police Court & Parking Garage	Stair Z	S	23W CF SCREWIN	can rec	24	24	25	0.6	8 WATT LED SI	screw in LED par20	24	8	0.2	0.4	3,490	8,760	8,760
4114	Police Court & Parking Garage	Lobby 3Rd	3	23W CF SCREWIN	can rec	20	20	25	0.5	8 WATT LED SI	screw in LED par20	20	8	0.2	0.3	2,908	8,760	8,760
4115	Police Court & Parking Garage	Mechanical Parking	3	2L4' T8 32w/EL	wrap	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	49	500	500
4116	Police Court & Parking Garage	Mechanical Parking	3	2L4' T8 32w/EL	wrap	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	49	500	500
4117	Police Court & Parking Garage	Lobby 2Nd	2	2L2' T8 17w/EL	troffer indirect	8	8	33	0.3	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	8	19	0.2	0.1	988	8,760	8,760
4118	Police Court & Parking Garage	Hall Courts	2	23W CF SCREWIN	can rec	96	96	25	2.4	8 WATT LED SI	screw in LED par20	96	8	0.8	1.6	13,960	8,760	8,760
4119	Police Court & Parking Garage	Hall Courts	2	2L4' T8 32w/EL	valance	20	20	60	1.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	20	36	0.7	0.5	4,257	8,760	8,760
4120	Police Court & Parking Garage	Office Open Court3	2	4L4' T8 32w/EL	trof acr	12	12	112	1.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	12	53	0.6	0.7	2,042	2,860	2,002
4121	Police Court & Parking Garage	Office Open Court2	2	2L4' T8 32w/EL-8'	cove	16	16	60	1.0	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	16	36	0.6	0.4	1,112	2,860	2,860
4122	Police Court & Parking Garage	Office Open Court2	2	1L4' T8 32w/EL	cove	4	4	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	18	0.1	0.0	139	2,860	2,860
4123	Police Court & Parking Garage	Office Open Court2	2	4L3' T8 25w/EL	trof acr 3x3	24	24	88	2.1	4L3' LED/ELEE LO/RLRB	rlrb LED 3'	24	50	1.2	0.9	2,581	2,860	2,860
4124	Police Court & Parking Garage	Office Open Court2	2	26W CF HARDWIRED	can rec	8		28	0.2	NO RETRO	no change		29	0.2			2,860	2,860
4125	Police Court & Parking Garage	Office Open Court2	2	2x9W CF HARDWIRED	exit sign	3	3	22	0.1	3 WATT LED/NEW EXIT BATTERY	new LED exit bat	3	3	0.0	0.1	495	8,760	8,760
4126	Police Court & Parking Garage	Hall To Judge	2	2L4' T8 32w U/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	4	38	0.2	0.1	778	8,760	8,760
4127	Police Court & Parking Garage	Office Judge	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	238	2,002	2,002
4128	Police Court & Parking Garage	Office Judge	2	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	0.0	56	2,002	2,002
4129	Police Court & Parking Garage	Office Judge	2	2L4' T8 32w/EL	trof acr 1' wide	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	49	2,002	2,002
4130	Police Court & Parking Garage	Bath Judge	2	3x40W INCANDESCENTS	decorative	1	1	120	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	319	2,860	2,860
4131	Police Court & Parking Garage	Hall To Holding	2	2L4' T8 32w U/EL	trof acr	3	3	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	3	38	0.1	0.1	583	8,760	8,760
4132	Police Court & Parking Garage	Cell Women	2	2L4' T8 32w/EL	wrap	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	0.1	208	2,860	2,860
4133	Police Court & Parking Garage	Cell Women	2	2L4' T8 32w U/EL	box acrylic	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	63	2,860	2,860
4134	Police Court & Parking Garage	Cell Men	2	90W INCANDESCENT	square surface mt.	3	3	90	0.3	15 WATT LED SI	screw in LED Alamp	3	16	0.0	0.2	637	2,860	2,860
4135	Police Court & Parking Garage	Office Open Court1	2	2L4' T8 32w/EL-8'	cove	22	22	60	1.3	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	22	36	0.8	0.5	1,529	2,860	2,860
4136	Police Court & Parking Garage	Office Open Court1	2	1L4' T8 32w/EL	cove	4	4	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	18	0.1	0.0	139	2,860	2,860
4137	Police Court & Parking Garage	Office Open Court1	2	4L3' T8 25w/EL	trof acr 3x3	45	45	88	4.0	4L3' LED/ELEE LO/RLRB	rlrb LED 3'	45	50	2.3	1.7	4,839	2,860	2,860
4138	Police Court & Parking Garage	Office Open Court1	2	26W CF HARDWIRED	can rec	10		28	0.3	NO RETRO	no change		29	0.3			2,860	2,860
4139	Police Court & Parking Garage	Office Open Court1	2	2x9W CF HARDWIRED	exit sign	3	3	22	0.1	3 WATT LED/NEW EXIT BATTERY	new LED exit bat	3	3	0.0	0.1	495	8,760	8,760
4140	Police Court & Parking Garage	Office Judge	2	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	6	53	0.3	0.4	1,021	2,860	2,002
4141	Police Court & Parking Garage	Office Judge	2	3x60W INCANDESCENTS	decorative	1	1	180	0.2	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.2	491	2,860	2,860
4142	Police Court & Parking Garage	Office Marshall	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	197	2,860	2,860
4143	Police Court & Parking Garage	Office Marshall	2	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	63	2,860	2,860
4144	Police Court & Parking Garage	Office 201	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	197	2,860	2,860
4145	Police Court & Parking Garage	Office 201	2	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	63	2,860	2,860
4146	Police Court & Parking Garage	Office 202	2	3L4' T8 32w/EL	trof acr	3	3	88	0.3	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	54	0.2	0.1	207	2,002	2,002
4147	Police Court & Parking Garage	Office 202	2	2L2' T8 17w/EL	trof acr	1	1	33	0.0	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	19	0.0	0.0	28	2,002	2,002
4148	Police Court & Parking Garage	Bath Women	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	89	2,002	2,002
4149	Police Court & Parking Garage	Bath Women	2	3x40W INCANDESCENTS	decorative	3	3	120	0.4	8 WATT LED SI	screw in LED Alamp	3	8	0.0	0.3	670	2,002	2,002

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
4150	Police Court & Parking Garage	Bath Men	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	89	2,002	2,002
4151	Police Court & Parking Garage	Bath Men	2	3x40W INCANDESCENTS	decorative	3	3	120	0.4	8 WATT LED SI	screw in LED Alamp	3	8	0.0	0.3	670	2,002	2,002
4152	Police Court & Parking Garage	Office Public Defender	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	238	2,002	2,002
4153	Police Court & Parking Garage	Office Public Defender	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	89	2,002	2,002
4154	Police Court & Parking Garage	Office Public Defender	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	238	2,002	2,002
4155	Police Court & Parking Garage	Office Public Defender	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	89	2,002	2,002
4156	Police Court & Parking Garage	Office Open 203	2	4L4' T8 32w/EL	trof acr	5	5	112	0.6	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	5	53	0.3	0.3	851	2,860	2,860
4157	Police Court & Parking Garage	Office Open 203	2	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	63	2,860	2,860
4158	Police Court & Parking Garage	Storage 203	2	13W CF HARDWIRED	dome	1		15	0.0	NO RETRO	no change		16	0.0			500	500
4159	Police Court & Parking Garage	Storage 203	2	2x13W CF HARDWIRED	drum	1		30	0.0	NO RETRO	no change		32	0.0			500	500
4160	Police Court & Parking Garage	Office 203	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	0.2	357	2,002	2,002
4161	Police Court & Parking Garage	Office 203	2	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	44	2,002	2,002
4162	Police Court & Parking Garage	Office 203	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	238	2,002	2,002
4163	Police Court & Parking Garage	Office 203	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	89	2,002	2,002
4164	Police Court & Parking Garage	Office 203	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	238	2,002	2,002
4165	Police Court & Parking Garage	Office 203	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	89	2,002	2,002
4166	Police Court & Parking Garage	Office Open 204	2	4L4' T8 32w/EL	trof acr	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	1,532	2,860	2,002
4167	Police Court & Parking Garage	Office Open 204	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	238	2,002	2,002
4168	Police Court & Parking Garage	Office Open 204	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	89	2,002	2,002
4169	Police Court & Parking Garage	Office Open 204	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	238	2,002	2,002
4170	Police Court & Parking Garage	Office Open 204	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	89	2,002	2,002
4171	Police Court & Parking Garage	Office Open 205	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	0.2	357	2,002	2,002
4172	Police Court & Parking Garage	Office Open 205	2	2L4' T8 32w U/EL	trof acr	3	3	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	3	38	0.1	0.1	133	2,002	2,002
4173	Police Court & Parking Garage	Office 205	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	238	2,002	2,002
4174	Police Court & Parking Garage	Office 205	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	89	2,002	2,002
4175	Police Court & Parking Garage	Lounge Staff	2	4L4' T8 32w/EL	trof acr	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	0.5	1,072	2,002	2,002
4176	Police Court & Parking Garage	Bath Women	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	89	2,002	2,002
4177	Police Court & Parking Garage	Bath Women	2	3x40W INCANDESCENTS	decorative	3	3	120	0.4	8 WATT LED SI	screw in LED Alamp	3	8	0.0	0.3	670	2,002	2,002
4178	Police Court & Parking Garage	Bath Men	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	89	2,002	2,002
4179	Police Court & Parking Garage	Bath Men	2	3x40W INCANDESCENTS	decorative	3	3	120	0.4	8 WATT LED SI	screw in LED Alamp	3	8	0.0	0.3	670	2,002	2,002
4180	Police Court & Parking Garage	Office Open Jury	2	4L4' T8 32w/EL	trof acr	15	15	112	1.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	15	53	0.8	0.9	2,553	2,860	2,002
4181	Police Court & Parking Garage	Office Open Jury	2	2L4' T8 32w/EL	trof acr 1' wide	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	0.0	139	2,860	2,002
4182	Police Court & Parking Garage	Office Open Jury	2	2x9W CF HARDWIRED	exit sign	1	1	22	0.0	3 WATT LED/NEW EXIT BATTERY	new LED exit bat	1	3	0.0	0.0	165	8,760	8,760
4183	Police Court & Parking Garage	Bath Jury	2	3x40W INCANDESCENTS	decorative	3	3	120	0.4	8 WATT LED SI	screw in LED Alamp	3	8	0.0	0.3	958	2,860	2,860
4184	Police Court & Parking Garage	Bath Jury	2	3x40W INCANDESCENTS	decorative	3	3	120	0.4	8 WATT LED SI	screw in LED Alamp	3	8	0.0	0.3	958	2,860	2,860
4185	Police Court & Parking Garage	Storage Electric	2	26W CF HARDWIRED	dome	1		28	0.0	NO RETRO	no change		29	0.0			500	500
4186	Police Court & Parking Garage	Storage Files	2	4L4' T8 32w/EL	trof acr	14	14	112	1.6	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	14	53	0.7	0.8	417	500	350
4187	Police Court & Parking Garage	Storage Custodian	2	3x60W INCANDESCENTS	drum	1	1	180	0.2	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.2	86	500	500
4188	Police Court & Parking Garage	Mechanical Airh	2	150W INCANDESCENT	dome	10	10	150	1.5	15 WATT LED SI	screw in LED Alamp	10	16	0.2	1.3	671	500	500
4189	Police Court & Parking Garage	Hall Behind Courts	2	2L4' T8 32w U/EL	trof acr	17	17	60	1.0	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	17	38	0.6	0.4	3,306	8,760	8,760
4190	Police Court & Parking Garage	Classroom Training	2	4L4' T8 32w/EL	trof acr	28	28	112	3.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	28	53	1.5	1.7	4,765	2,860	2,002
4191	Police Court & Parking Garage	Office Training	2	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	0.1	119	2,002	2,002
4192	Police Court & Parking Garage	Office Training	2	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	0.1	119	2,002	2,002
4193	Police Court & Parking Garage	Hall To Narc	2	2L4' T8 32w U/EL	trof acr	9	9	60	0.5	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	9	38	0.3	0.2	1,750	8,760	8,760
4194	Police Court & Parking Garage	Office Interview	2	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	0.2	476	2,002	2,002
4195	Police Court & Parking Garage	Office Narc	2	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	6	53	0.3	0.4	1,021	2,860	2,002
4196	Police Court & Parking Garage	Office Narc	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	238	2,002	2,002
4197	Police Court & Parking Garage	Mechanical Narc	2	32W CF SCREWIN	dome	4		34	0.1	NO RETRO	no change		36	0.1			500	500
4198	Police Court & Parking Garage	Hall Reporter	2	2L4' T8 32w U/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	4	38	0.2	0.1	778	8,760	8,760
4199	Police Court & Parking Garage	Hall Reporter	2	2L4' T8 32w/EL	trof acr 1' wide	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	213	8,760	8,760
4200	Police Court & Parking Garage	Office Reporter	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	0.2	357	2,002	2,002
4201	Police Court & Parking Garage	Office Reporter	2	2L4' T8 32w U/EL	trof acr	3	3	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	3	38	0.1	0.1	133	2,002	2,002
4202	Police Court & Parking Garage	Storage Reporter	2	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	0.1	21	350	350
4203	Police Court & Parking Garage	Office Open Court Clerk	2	4L4' T8 32w/EL	trof acr	26	26	112	2.9	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	26	53	1.4	1.5	4,424	2,860	2,860
4204	Police Court & Parking Garage	Office Open Court Clerk	2	2L4' T8 32w U/EL	trof acr	8	8	60	0.5	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	8	38	0.3	0.2	508	2,860	2,860
4205	Police Court & Parking Garage	Office Open Court Clerk	2	4L4' T8 32w/EL-8'	trof acr 1' wide	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	116	2,860	2,860
4206	Police Court & Parking Garage	Storage Court Clerk	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	340	2,860	2,860
4207	Police Court & Parking Garage	Storage Court Clerk	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	127	2,860	2,860
4208	Police Court & Parking Garage	Office Court Clerk	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	0.2	357	2,002	2,002
4209	Police Court & Parking Garage	Office Court Clerk	2	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	0.0	44	2,002	2,002
4210	Police Court & Parking Garage	Storage Court Clerk	2	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	17	500	500
4211	Police Court & Parking Garage	Office Open State Atty	2	4L4' T8 32w/EL	trof acr	12	12	112	1.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	12	53	0.6	0.7	2,042	2,860	2,002
4212	Police Court & Parking Garage	Office State Atty	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	238	2,002	2,002
4213	Police Court & Parking Garage	Office State Atty	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	89	2,002	2,002
4214	Police Court & Parking Garage	Office State Atty	2	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	0.2	476	2,002	2,002
4215	Police Court & Parking Garage	Storage State Atty	2	2x13W CF HARDWIRED	drum	1		30	0.0	NO RETRO	no change		32	0.0			500	500
4216	Police Court & Parking Garage	Office State Atty	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	0.1	238	2,002	2,002
4217	Police Court & Parking Garage	Office State Atty	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	89	2,002	2,002
4218	Police Court & Parking Garage	Hall 1St	1	2x13W CF HARDWIRED	can rec	19		30	0.6	NO RETRO	no change		32	0.6			8,760	8,760
4219	Police Court & Parking Garage	Lobby Police	1	2x13W CF HARDWIRED	can rec	24		30	0.7	NO RETRO	no change		32	0.7			8,760	8,760
4220	Police Court & Parking Garage	Bath Police Lobby	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	197	2,860	2,002
4221	Police Court & Parking Garage	Bath Police Lobby	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	197	2,860	2,002
4222	Police Court & Parking Garage	Hall Z	1	2L2' F40 BIAX/EL	trof parabolic	7	7	72	0.5	36 WATT LED/KIT	trof kit LED	7	38	0.3	0.2	2,097	8,760	8,760

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
4223	Police Court & Parking Garage	Office Reception	1	3L4' T8 32w/EL	trof para dbl switch	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	2	54	0.1	0.1	197	2,860	2,002
4224	Police Court & Parking Garage	Office Interviewb	1	3L4' T8 32w/EL	trof para dbl switch	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	2	54	0.1	0.1	138	2,002	2,002
4225	Police Court & Parking Garage	Office Interviewa	1	3L4' T8 32w/EL	trof para dbl switch	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	2	54	0.1	0.1	138	2,002	2,002
4226	Police Court & Parking Garage	Hall Z	1	2L2' F40 BIAX/EL	trof parabolic	42	42	72	3.0	36 WATT LED/KIT	trof kit LED	42	38	1.6	1.4	12,583	8,760	8,760
4227	Police Court & Parking Garage	Office Open Detective	1	3L4' T8 32w/EL	trof para dbl switch	16	16	88	1.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	16	54	0.9	0.6	1,576	2,860	2,002
4228	Police Court & Parking Garage	Office Open Detective	1	3L4' T8 32w/EL	trof para dbl switch	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	2	54	0.1	0.1	138	2,002	2,002
4229	Police Court & Parking Garage	Office Open Detective	1	3L4' T8 32w/EL	trof para dbl switch	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	2	54	0.1	0.1	197	2,860	2,002
4230	Police Court & Parking Garage	Lounge Detective	1	2L2' F40 BIAX/EL	trof parabolic	2	2	72	0.1	36 WATT LED/KIT	trof kit LED	2	38	0.1	0.1	196	2,860	2,002
4231	Police Court & Parking Garage	Office Detective	1	3L4' T8 32w/EL	trof para dbl switch	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	2	54	0.1	0.1	138	2,002	2,002
4232	Police Court & Parking Garage	Office Detective	1	3L4' T8 32w/EL	trof para dbl switch	3	3	88	0.3	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	3	54	0.2	0.1	296	2,860	2,002
4233	Police Court & Parking Garage	Storage Electric	1	1L4' T8 32w/EL	wrap	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	35	2,860	2,860
4234	Police Court & Parking Garage	Hall Polygraph	1	2L2' F40 BIAX/EL	trof parabolic	3	3	72	0.2	36 WATT LED/KIT	trof kit LED	3	38	0.1	0.1	899	8,760	8,760
4235	Police Court & Parking Garage	Office Cyber	1	3L4' T8 32w/EL	trof para dbl switch	3	3	88	0.3	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	3	54	0.2	0.1	296	2,860	2,860
4236	Police Court & Parking Garage	Office Poly	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	127	2,860	2,860
4237	Police Court & Parking Garage	Mechanical Poly	1	3L4' T8 32w/EL	trof para dbl switch	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	2	54	0.1	0.1	24	350	350
4238	Police Court & Parking Garage	Office Poly	1	3L4' T8 32w/EL	trof parabolic	3	3	88	0.3	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	54	0.2	0.1	296	2,860	2,002
4239	Police Court & Parking Garage	Office Open Evidence	1	3L4' T8 32w/EL	trof parabolic	6	6	88	0.5	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	54	0.3	0.2	591	2,860	2,002
4240	Police Court & Parking Garage	Office Evidence	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	138	2,002	2,002
4241	Police Court & Parking Garage	Office Evidence	1	3L4' T8 32w/EL	trof parabolic	10	10	88	0.9	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	10	54	0.5	0.3	985	2,860	2,860
4242	Police Court & Parking Garage	Office Report	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	138	2,002	2,002
4243	Police Court & Parking Garage	Office Across Squad	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	138	2,002	2,002
4244	Police Court & Parking Garage	Office Open Squad	1	3L4' T8 32w/EL	trof parabolic	6	6	88	0.5	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	54	0.3	0.2	591	2,860	2,002
4245	Police Court & Parking Garage	Office Sergeant	1	3L4' T8 32w/EL	trof parabolic	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	394	2,860	2,002
4246	Police Court & Parking Garage	Storage Electric	1	1L4' T8 32w/EL	wrap	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	6	500	500
4247	Police Court & Parking Garage	Lounge Staff	1	3L4' T8 32w/EL	trof para dbl switch	6	6	88	0.5	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	6	54	0.3	0.2	591	2,860	2,002
4248	Police Court & Parking Garage	Office Shift Lt	1	3L4' T8 32w/EL	trof para dbl switch	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	4	54	0.2	0.1	276	2,002	2,002
4249	Police Court & Parking Garage	Office Schedule Lt	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	138	2,002	2,002
4250	Police Court & Parking Garage	Office Ert	1	3L4' T8 32w/EL	trof para dbl switch	6	6	88	0.5	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	6	54	0.3	0.2	591	2,860	2,002
4251	Police Court & Parking Garage	Office 117	1	3L4' T8 32w/EL	trof para dbl switch	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	1	54	0.1	0.0	99	2,860	2,860
4252	Police Court & Parking Garage	Locker Women	1	3L4' T8 32w/EL	trof parabolic	7	7	88	0.6	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	7	54	0.4	0.2	690	2,860	2,002
4253	Police Court & Parking Garage	Locker Women	1	4L4' T8 32w/EL-8'	wrap narrow	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	116	2,860	2,002
4254	Police Court & Parking Garage	Locker Women	1	2L4' T8 32w/EL	vapor tight	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	69	2,860	2,860
4255	Police Court & Parking Garage	Office Open Holding	1	3L4' T8 32w/EL	trof acr	11	11	88	1.0	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	11	54	0.6	0.4	1,084	2,860	2,860
4256	Police Court & Parking Garage	Hall Female	1	3L4' T8 32w/EL	trof acr	3	3	88	0.3	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	54	0.2	0.1	905	8,760	8,760
4257	Police Court & Parking Garage	Cell Female (4)	1	2L4' T8 32w/EL	corner secure	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	278	2,860	2,860
4258	Police Court & Parking Garage	Cell Female (4)	1	13W CF HARDWIRED	corner secure	4		15	0.1	NO RETRO	no change -specialized fixture		16	0.1			2,860	2,860
4259	Police Court & Parking Garage	Storage Clean	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	9	350	350
4260	Police Court & Parking Garage	Hall Male	1	3L4' T8 32w/EL	trof acr	6	6	88	0.5	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	54	0.3	0.2	1,811	8,760	8,760
4261	Police Court & Parking Garage	Cell Male (7)	1	2L4' T8 32w/EL	corner secure	7	7	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	7	36	0.2	0.2	486	2,860	2,860
4262	Police Court & Parking Garage	Cell Male (7)	1	13W CF HARDWIRED	corner secure	7		15	0.1	NO RETRO	no change -specialized fixture		16	0.1			2,860	2,860
4263	Police Court & Parking Garage	Office Intox	1	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	99	2,860	2,860
4264	Police Court & Parking Garage	Office Interview	1	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	99	2,860	2,860
4265	Police Court & Parking Garage	Cell Holding	1	3L4' T8 32w/EL	trof acrylic secure	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	197	2,860	2,860
4266	Police Court & Parking Garage	Cell Decon	1	2L4' T8 32w/EL	corner secure	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	69	2,860	2,860
4267	Police Court & Parking Garage	Cell Decon	1	13W CF HARDWIRED	corner secure	1		15	0.0	NO RETRO	no change -specialized fixture		16	0.0			2,860	2,860
4268	Police Court & Parking Garage	Parking Garage Sallyport	1	4L4' T8 32w/EL-8'	industrial	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	0.2	711	4,380	4,380
4269	Police Court & Parking Garage	Storage Custodianb	1	1L4' T8 32w/EL	wrap	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	6	500	500
4270	Police Court & Parking Garage	Locker Mens	1	3L4' T8 32w/EL	trof parabolic	22	22	88	1.9	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	22	54	1.2	0.8	2,168	2,860	2,002
4271	Police Court & Parking Garage	Locker Mens	1	4L4' T8 32w/EL-8'	wrap narrow	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	116	2,860	2,002
4272	Police Court & Parking Garage	Locker Mens	1	4L4' T8 32w/EL-8'	vapor tight	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	0.0	116	2,860	2,860
4273	Police Court & Parking Garage	Storage Armorer	1	3L4' T8 32w/EL	trof parabolic	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	48	350	350
4274	Police Court & Parking Garage	Storage Armorer	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	34	500	500
4275	Police Court & Parking Garage	Storage E	1	1L4' T8 32w/EL	wrap	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	35	2,860	2,860
4276	Police Court & Parking Garage	Office Comm	1	4L4' T8 32w/EL-8'	indirect/direct dim	5		112	0.6	NO RETRO	no change -dimming		118	0.6			2,860	2,860
4277	Police Court & Parking Garage	Office Comm	1	2L4' T8 32w/EL	indirect/direct dim	2		60	0.1	NO RETRO	no change -dimming		63	0.1			2,860	2,860
4278	Police Court & Parking Garage	Office Comm	1	3L4' T8 32w/EL	trof para dbl switch	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	4	54	0.2	0.1	394	2,860	2,002
4279	Police Court & Parking Garage	Lounge Comm	1	3L4' T8 32w/EL	trof para dbl switch	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	2	54	0.1	0.1	138	2,002	2,002
4280	Police Court & Parking Garage	Bath Comm	1	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	69	2,002	2,002
4281	Police Court & Parking Garage	Storage Comm	1	1L4' T8 32w/EL	wrap	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	4	350	350
4282	Police Court & Parking Garage	Storage Electricd	1	1L4' T8 32w/EL	wrap	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	6	500	500
4283	Police Court & Parking Garage	Office Id Lab	1	3L4' T8 32w/EL	trof parabolic	5	5	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	54	0.3	0.2	493	2,860	2,002
4284	Police Court & Parking Garage	Office Id Lab	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	0.0	127	2,860	2,002
4285	Police Court & Parking Garage	Storage Id Lab	1	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	17	500	500
4286	Police Court & Parking Garage	Bath Women	1	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	69	2,002	2,002
4287	Police Court & Parking Garage	Bath Men	1	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	69	2,002	2,002
4288	Police Court & Parking Garage	Office Training	1	3L4' T8 32w/EL	trof parabolic	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	0.1	276	2,002	2,002
4289	Police Court & Parking Garage	Storage F	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	24	350	350
4290	Police Court & Parking Garage	Office Open Traffic	1	3L4' T8 32w/EL	trof parabolic	6	6	88	0.5	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	54	0.3	0.2	591	2,860	2,002
4291	Police Court & Parking Garage	Office Traffic	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	197	2,860	2,002
4292	Police Court & Parking Garage	Office Traffic	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	138	2,002	2,002
4293	Police Court & Parking Garage	Office Open Admin	1	2L2' F40 BIAX/EL	trof parabolic	10	10	72	0.7	36 WATT LED/KIT	trof kit LED	10	38	0.4	0.3	978	2,860	2,002
4294	Police Court & Parking Garage	Storage Admin	1	13W CF HARDWIRED	can rec	1		15	0.0	NO RETRO	no change		16	0.0			500	500
4295	Police Court & Parking Garage	Storage Admin	1	13W CF HARDWIRED	can rec	1		15	0.0	NO RETRO	no change		16	0.0			500	500

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
4296	Police Court & Parking Garage	Storage Electric	1	1L4' T8 32w/EL	wrap	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	4	350	350
4297	Police Court & Parking Garage	Office Admin Cmdr	1	3L4' T8 32w/EL	trof para dbl switch	3	3	88	0.3	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	3	54	0.2	0.1	296	2,860	2,002
4298	Police Court & Parking Garage	Conference Z	1	3L4' T8 32w/EL	trof para dbl switch	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	4	54	0.2	0.1	394	2,860	2,002
4299	Police Court & Parking Garage	Office Op Cmdr	1	3L4' T8 32w/EL	trof para dbl switch	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	4	54	0.2	0.1	276	2,002	2,002
4300	Police Court & Parking Garage	Office Admin Assist	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	138	2,002	2,002
4301	Police Court & Parking Garage	Office Chief	1	3L4' T8 32w/EL	trof para dbl switch	6	6	88	0.5	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	6	54	0.3	0.2	591	2,860	2,002
4302	Police Court & Parking Garage	Storage Chief	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	0.0	12	500	500
4303	Police Court & Parking Garage	Bath Chief	1	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	69	2,002	2,002
4304	Police Court & Parking Garage	Office Community	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	0.1	197	2,860	2,002
4305	Police Court & Parking Garage	Storage Clean	1	1L4' T8 32w/EL	wrap	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	0.0	6	500	500
4306	Police Court & Parking Garage	Office Open Records	1	3L4' T8 32w/EL	trof para dbl switch	16	16	88	1.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	16	54	0.9	0.6	1,576	2,860	2,002
4307	Police Court & Parking Garage	Bath Women	1	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	0.0	69	2,002	2,002
4308	Police Court & Parking Garage	Storage G	1	3L4' T8 32w/EL	trof para dbl switch	6	6	88	0.5	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	6	54	0.3	0.2	591	2,860	2,002
4309	Police Court & Parking Garage	Lounge Z	1	3L4' T8 32w/EL	trof parabolic	3	3	88	0.3	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	54	0.2	0.1	207	2,002	2,002
4310	Police Court & Parking Garage	Office Records Lt	1	3L4' T8 32w/EL	trof para dbl switch	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	2	54	0.1	0.1	197	2,860	2,002
4311	Police Court & Parking Garage	Office School Res	1	3L4' T8 32w/EL	trof para dbl switch	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	4	54	0.2	0.1	276	2,002	2,002
4318	Police Court & Parking Garage	Parking Garage Basement	B	2L4' T8 32w/EL	wrap	35	35	60	2.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	35	36	1.2	0.9	3,725	4,380	4,380
4319	Police Court & Parking Garage	Parking Garage Basement	B	2L4' T8 32w/EL-8'	strip reflector	15	15	60	0.9	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	15	36	0.5	0.4	1,597	4,380	4,380
4320	Police Court & Parking Garage	Mechanical Basement	B	25W CF SCREWIN	dome	10	10	27	0.3	8 WATT LED SI	screw in LED Alamp	10	8	0.1	0.2	93	500	500
4321	Police Court & Parking Garage	Mechanical Basement	B	2L4' T8 32w/EL	strip reflector	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	0.1	49	500	500
4322	Police Court & Parking Garage	Stair All (2)	S	2L4' T8 32w/EL	wrap	16	16	60	1.0	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	16	36	0.6	0.4	3,406	8,760	8,760
Totals						**20,757**	**18,518**					**18,509**				**1,561,427**		

Appendix for ESM 1:
Lighting System Improvements - Interior

II. Manufacturer Specification Sheets

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

OCTRON® 800 XP® SUPERSAVER® ECOLOGIC®3

EXtended Performance Fluorescent Lamps



The OCTRON 800 XP SUPERSAVER T8 fluorescent offering includes a full complement of lengths and wattages, ensuring there is an energy-saving lamp to satisfy nearly all applications. These lamps operate on standard T8 instant start systems and provide up to 22 percent energy savings over 32 Watt lamps. At 11¢/kWh and 4000 hours of operation per year, the 22 percent energy savings translate to a savings of $12.32 per fixture per year for a 4-lamp fixture. The initial lumen output, lumen maintenance and high color rendering of the OCTRON 800 XP SUPERSAVER/ECO3 lamps help ensure that lighting quality is maintained while energy is saved. These lamps pass the Federal TCLP test, classifying them as non-hazardous waste in most states and feature lead-free glass, bases and manufacturing process, reducing overall environmental impact.

For optimal performance and system warranty, pair with QUICKTRONIC® electronic ballast systems.

Key Features & Benefits

- Energy savings compared to standard 32W T8 lamp
  - 22% with the 25W XP/SS
  - 12% with the 28W XP/SS
  - 6% with the 30W XP/SS
- 94% mean lumens
- Lead free
- Made in the USA
- Dimmable (see application note 5)
- TCLP and RoHS compliant
- Meets CEE Standards
- Retrofit lamp for existing T8 instant start systems
  - 40,000 hours rated life @ 12 hours per start
- Increased life on SYLVANIA QUICKTRONIC® PROStart® PSX and PSN programmed rapid start ballasts
  - 42,000 hours rated life @ 12 hours per start
- QUICK 60+® system warranty when lamps are paired with QUICKTRONIC electronic ballasts

SYLVANIA OCTRON ECOLOGIC3 T8 fluorescent lamps pass the Federal Toxic Characteristic Leaching Procedure (TCLP)[1] criteria for classification as non-hazardous waste in most states[2].

ECOLOGIC3 represents a more comprehensive approach to sustainability encompassing high efficiency, long life and RoHS/TCLP compliance.

1. TCLP test results are based on NEMA LL Series standards and are available on request.
2. Lamp disposal regulations may vary; check your local & state regulations.

MADE IN USA

LEAD-FREE

RoHS compliant
This light source meets restrictions on hazardous substances.

ecologic3

Product Offering

Lamp Type	Wattage	CCT
FO17/15W/800XP/SS/ECO3	15	3000K, 3500K, 4100K
FO25/21W/800XP/SS/ECO3	21	3500K, 4100K
FO32/25W/800XP/SS/ECO3	25	3000K, 3500K, 4100K, 5000K
FO28/800XP/SS/ECO3	28	3000K, 3500K, 4100K, 5000K
FO30/800XP/SS/ECO3	30	3000K, 3500K, 4100K, 5000K
FO96/50W/800/XP/SS/ECO3	50	3500K, 4100K
FO96/54W/800/XP/SS/ECO3	54	3500K, 4100K, 5000K

Application Information

Applications

- Cove
- Direct/indirect luminaires
- Recessed troffers
- Schools
- Valance

Application Notes

1. FO25, FO28 and FO30 SUPERSAVER lamps are recommended to be used on F32T8 instant start ballast with minimum open circuit voltage of 550V RMS at the lamp.
   a. Electronically ballasted fixture configurations which operate lamps remotely, such as Master/Satellite applications, can cause reduction of lamp open circuit voltage, in the remote fixture, below the minimum required for reliable lamp starting. For more information, please call 1-800-LIGHTBULB and ask for Ballast Technical Assistance or call your fixture manufacturer.
   b. Not recommended to be used: (1) in remotely ballasted fixtures with lamp open circuit voltages below 550V, (2) in air handling fixtures, (3) on low power factor ballasts or (4) inverter operated emergency lighting systems unless any of the above equipment is specifically listed for SUPERSAVER (SS) lamps. Any of the above situations could result in lamp starting and stabilization problems, or system compatibility issues.
2. FO96 SUPERSAVER lamps are recommended to be used on F96T8 instant start ballast with minimum open circuit voltage of 725V.
3. If a 28W SUPERSAVER lamp is exposed to drafts or the ambient temperature falls below 60°F (70°F for 25W), striation (a rhythmic pulsing pattern of light running down the tube) and/or reduction in lamp brightness may occur. While visually disconcerting, neither behavior is damaging to the lamp and removing the cause (draft or temperature) will return the lamp to normal operation.
4. Fixture must conform to ANSI C78.81–2005 requirements for luminaire design.
5. FO96 types are not dimmable. For all other types, contact OSRAM SYLVANIA for approved dimming ballasts.

SEE THE WORLD IN A NEW LIGHT SYLVANIA

Specification Data

Fixture Description:	Type
Project/Job:	
SYLVANIA lamp:	
SYLVANIA ballast:	
Notes:	

Ordering Information

Item Number	Ordering Abbreviation	Watts	Nominal Length (in)	Initial Lumens	Mean Lumens[1]	Lumens per Watt	Average Rated Life: Instant Start 3 hrs/ start	Instant Start 12 hrs/ start	Prog. Rapid Start 3 hrs/ start	Prog. Rapid Start 12 hrs/ start	CCT	CRI
OCTRON® 800 XP® SUPERSAVER®												
22405	F017/15W/830/XP/SS/ECO3	15	24	1200	1130	80	24,000	40,000	40,000	42,000	3000K	85
22406	F017/15W/835/XP/SS/ECO3	15	24	1200	1130	80	24,000	40,000	40,000	42,000	3500K	85
22407	F017/15W/841/XP/SS/ECO3	15	24	1200	1130	80	24,000	40,000	40,000	42,000	4100K	85
22395	F025/21W/835/XP/SS/ECO3	21	36	1925	1810	92	24,000	40,000	40,000	42,000	3500K	85
22396	F025/21W/841/XP/SS/ECO3	21	36	1925	1810	92	24,000	40,000	40,000	42,000	4100K	85
22232	F032/25W/830/XP/SS/ECO3	25	48	2500	2350	100	24,000	40,000	40,000	42,000	3000K	85
22233	F032/25W/835/XP/SS/ECO3	25	48	2500	2350	100	24,000	40,000	40,000	42,000	3500K	85
22234	F032/25W/841/XP/SS/ECO3	25	48	2500	2350	100	24,000	40,000	40,000	42,000	4100K	85
22235	F032/25W/850/XP/SS/ECO3	25	48	2500	2350	100	24,000	40,000	40,000	42,000	5000K	81
22177	F028/830/XP/SS/ECO3	28	48	2725	2560	97	24,000	40,000	40,000	42,000	3000K	85
22178	F028/835/XP/SS/ECO3	28	48	2725	2560	97	24,000	40,000	40,000	42,000	3500K	85
22179	F028/841/XP/SS/ECO3	28	48	2725	2560	97	24,000	40,000	40,000	42,000	4100K	85
22184	F028/850/XP/SS/ECO3	28	48	2725	2560	97	24,000	40,000	40,000	42,000	5000K	81
22063	F030/830/XP/SS/ECO3	30	48	2850	2680	95	24,000	40,000	40,000	42,000	3000K	85
22060	F030/835/XP/SS/ECO3	30	48	2850	2680	95	24,000	40,000	40,000	42,000	3500K	85
22062	F030/841/XP/SS/ECO3	30	48	2850	2680	95	24,000	40,000	40,000	42,000	4100K	85
22202	F030/850/XP/SS/ECO3	30	48	2850	2680	95	24,000	40,000	40,000	42,000	5000K	81
OCTRON F096 XP SUPERSAVER												
22420	F096/50W/835/XP/SS/ECO3	50	96	5400	5075	108	24,000	36,000			3500K	85
22421	F096/50W/841/XP/SS/ECO3	50	96	5400	5075	108	24,000	36,000			4100K	85
22100	F096/54W/835/XP/SS/ECO3	54	96	5700	5360	106	24,000	36,000			3500K	85
22101	F096/54W/841/XP/SS/ECO3	54	96	5700	5360	106	24,000	36,000			4100K	85
22347	F096/54W/850/XP/SS/ECO3	54	96	5700	5360	106	24,000	36,000			5000K	81

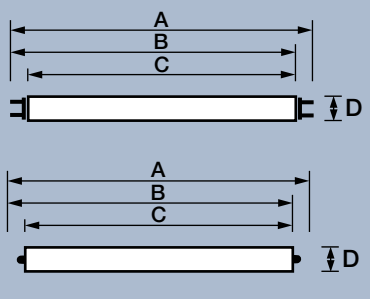
1. Measured at 40% of rated life.

Ordering Guide

FO	30	/	8	35	XP	/	SS	/	ECO3
Fluorescent OCTRON	Actual Wattage 15, 21,25, 28, 30, 50 and 54		Actual CRI 80 or 85	Color Temperature 30 = 3000K CCT, 35 = 3500K CCT 41 = 4100K CCT, 50 = 5000K CCT	XP=EXtended Performance		SUPERSAVER		ECOLOGIC3

Lamp Dimensions

Lamp Type	(A) Max. Overall Length (in.)	(B) Base Face to Opposite Pin (in.)	(C) Max. Base Face to Base Face (in.)	(D) Max. Outside Diameter (in.)
F017	23.78	Min. 23.41 Max. 23.50	23.22	1.1
F025	35.78	Min. 35.40 Max. 35.50	35.22	1.1
F032 F032/25W F028 F030	47.78	Min. 47.41 Max. 47.50	47.22	1.1
F096	94.00	Min. 93.42 Max. 93.65	93.30	1.1



Related Literature

For maximum energy savings consider pairing with the following electronic ballasts:

Ballast Technology Applications & Specification Guide (Literature code: ECS-SPECGUIDE2013)
QUICKTRONIC® High Efficiency NEMA Premium Guide (Literature code: ECS112)
QUICK 60+® System Warranty (Literature code: ECS140)

Sample Specification

Lamp shall be OCTRON® 800 XP® SUPERSAVER® ECOLOGIC®3 (15W, 21W, 25W, 28W, 30W, 50W, 54W) lamp having medium bi-pin bases or 50W and 54W lamp having single pin bases. Lamp shall be designed to pass the Federal TCLP test in force at the time of manufacture. Lamps shall have initial lumens of (1200, 1925, 2500, 2725, 2850, 5400, 5700), mean lumens of (1130, 1810, 2325, 2560, 2680, 5075, 5360) and a correlated color temperature of (3000, 3500, 4100) Kelvin. Lamp shall have an average rated life of (24,000, 40,000, 42,000) on (instant start, programmed rapid start) ballasts, 94% or 96% lumen maintenance at 40% of rated life and a CRI of (85, 81). The OCTRON XP SUPERSAVER ECOLOGIC3 lamp shall be operated on QUICKTRONIC® electronic, high frequency ballasts with complete system warranty from the manufacturer covering lamps and ballast.

United States
OSRAM SYLVANIA
100 Endicott Street
Danvers, MA 01923
1-800-LIGHTBULB

Trade
Phone: 800-255-5042
Fax: 800-255-5043

National Accounts
Phone: 800-562-4671
Fax: 800-562-4674

OEM/Special Markets
Phone: 800-762-7191
Fax: 800-762-7192

Retail
Phone: 800-842-7010
Fax: 800-842-7011

SYLVANIA Lighting Services
Phone: 800-323-0572
Fax: 800-537-0784

Display/Optic
Phone: 888-677-2627
Fax: 855-543-1043

Canada
OSRAM SYLVANIA LTD.
2001 Drew Road
Mississauga, ON L5S 1S4
1-800-LIGHTBULB

Trade
Phone: 800-263-2852
Fax: 800-667-6772

OEM/Special Markets/Display/Optic
Phone: 800-265-2852
Fax: 800-667-6772

Retail
Phone: 800-720-2852
Fax: 800-667-6772

SYLVANIA Lighting Services
Phone: 800-663-4268
Fax: 866-239-1278

Mexico
OSRAM MEXICO
Tultitlan/Edo de Mexico
Phone: 011-52-55-58-99-18-50

ENCELIUM Technologies
United States
Phone: 201-928-2400
Fax: 201-928-4028

Canada
Phone: 905-731-7678
Fax: 905-731-1401

www.sylvania.com

/sylvania /sylvania

SYLVANIA, ECOLOGIC, OCTRON, QUICK 60+, SUPERSAVER and XP are registered trademarks of OSRAM SYLVANIA Inc.
SEE THE WORLD IN A NEW LIGHT is a registered trademark of OSRAM SYLVANIA Inc.
QUICKTRONIC is a registered trademark of OSRAM GmbH.
Specifications subject to change without notice.

© 2013 OSRAM SYLVANIA 1-13 Photography © /P.I.Corp

QUICKTRONIC® T8 Instant Start Universal Voltage Systems

NEMA Premium

RoHS compliant

Type CC
Lamp Striation Control
Low Ballast Factor

High Efficiency Series

QHE T8 ISL CC

Lamp / Ballast Guide

32W T8 – OCTRON® lamps
1-lamp QHE1x32T8/UNV-ISL-SC-1
2-lamp QHE2x32T8/UNV-ISL-SC-1
3-lamp QHE3x32T8/UNV-ISL-SC-1
4-lamp QHE4x32T8/UNV-ISL-SC-1
Also operates:
FBO32, FBO31, FO25, FBO24, FO17, FBO16, FO30/SS (30W), FBO30/SS (30W), FBO29/SS (29W), FO28/SS (28W) & FO25/SS (25W)
Display lamps:
FO13, FO14, FO21 & FO28
Preheat lamps:
F15T8, F25T8 & F30T8
F40T8 operation:
1 lamp on 2L ballast; 2 lamps on 3L ballast; 3 lamps on 4L ballast

Key System Features

- High Efficiency Systems over 90% efficient
- NEMA Premium Electronic Ballast Program compliant
- **UL Type CC Rated** (Commercial Cabinet)
- **Lamp Striation Control (LSC)**
- Min. Starting Temp:
  - -20°F(-29°C) for T8 lamps
  - 60°F (16°C) for Energy Saving T8 lamps
  - 0°F (-18°C) for FO40T8 lamps
- Flexible De-Lamp Combinations — see wiring diagrams on next page
- 30-50% Energy savings
- RoHS compliant
- Lead-free solder and manufacturing process

Application Information

SYLVANIA QUICKTRONIC High Efficiency (QHE) ballasts are ideally suited for:

UL Type CC
- Refrigerated cases*
- Walk-in coolers*
- Commercial cabinets
- Display cases
- Applications that could expose lamp and sockets to vibration and potential movement

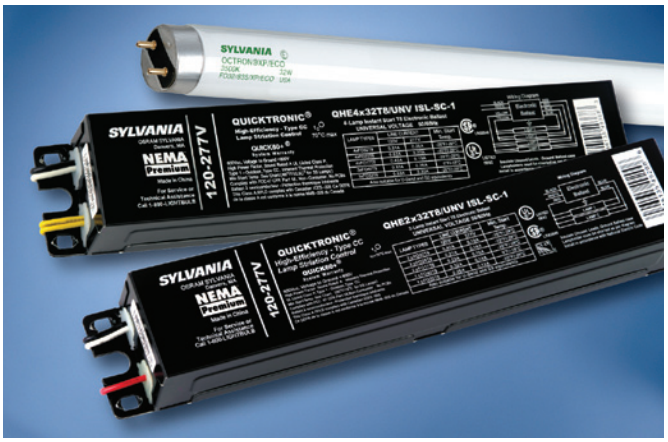
*T8 energy saving lamps should not be used in applications below 60°F lamp ambient.

Lamp Striation Control, (LSC)
- General lighting applications where energy saving T8 lamps may striate, particularly for the F25 energy saving T8 lamps.

SYLVANIA QUICKTRONIC High Efficiency, (QHE) Type CC energy saving electronic T8 ballasts offer **four** major advantages:

1. **Same Light, Less Power!**
   - **Up to 6% in energy savings** compared to standard T8 low power electronic ballasts without compromising light output
   - **Maximum energy savings** when compared to F40T12 magnetically ballasted systems
2. **UL Type CC compliant:** ballasts utilize a micro-controller based circuit to reduce arcing caused by loose connections or improper lamp pin to socket connections.
3. **Lamp Striation Control (LSC):** T8 energy saving lamps should be operated above 60°F, but under certain conditions the lamps may striate. LSC circuitry may minimize or eliminate this condition; however there are limited applications where LSC circuitry may not entirely mitigate lamp striations. (Please consult lamp manufacturers for additional details.)
4. **NEMA Premium Electronic Ballast Program compliant.** The program promotes the use of high efficiency T8 electronic ballasts by meeting or exceeding the Ballast Efficiency Factors, (BEF) established by the CEE, (Consortium for Energy Efficiency). For additional information on this program go to: ***www.cee1.org or www.nema.org***

These ballasts are also RoHS compliant and feature lead-free solder and manufacturing process.

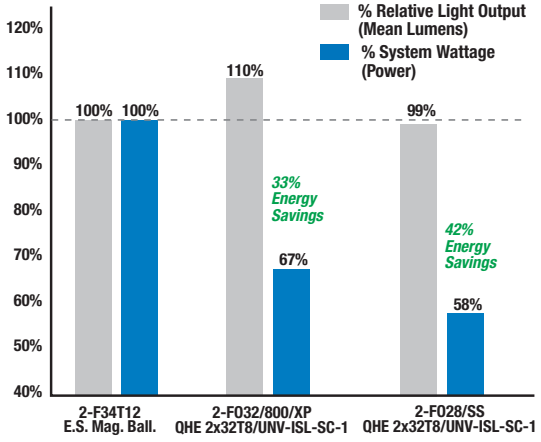


System Information

SYLVANIA QUICKTRONIC High Efficiency (QHE) System advantages:

- Operate from 120V through 277V
  - Eliminates "wrong voltage" errors
  - Reduces inventory by 50%
- Utilizes Instant Start operation for
  - Highest System Efficacy
  - Low temperature starting capability
  - Parallel circuity - keeps remaining lamps lit if one or more go out
- Very low harmonic distortion (<10%)THD
- Operate at >42 kHz to reduce potential interference with infrared control systems

System Type (2 lamp)	Input Power (W)	Initial System Lumens	System Efficacy (lm/W)	Mean System Lumens	Relative Mean Light Output	% Energy Savings
2-F34T12 E.S. Magnetic Ballast	72	4665	65	3965	Baseline	Baseline
2-FO32/800/XP® QHE 2x32T8/UNV ISL-SC-1	48	4620	96	4345	110%	33%
2-FO28/SS QHE 2x32T8/UNV ISL-SC-1	42	4195	100	3945	99%	42%



SEE THE WORLD IN A NEW LIGHT SYLVANIA

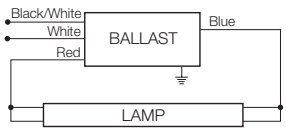
SPECIFICATION DATA

Catalog #	Date	Type
Project	Prepared by	
Comments		

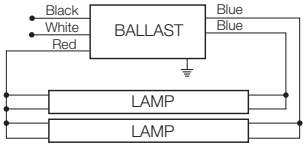
High Efficiency UNV (120-277V) Type CC & Lamp Striation Control

Item Number	OSRAM SYLVANIA Description	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	Initial System Lumens	Mean System Lumens	Input Power (W)	System Efficacy (lm/W)	BEF[1]
49199	QHE1x32T8/UNV ISL-SC-1 *Banded Pack*	0.21/0.093	F032/700	2600	1	0.77	2000	1840	25	80	3.08
		0.21/0.093	F032XP®	3000	1	0.77	2310	2170	25	92	3.08
		0.20/0.087	F030SS	2850	1	0.77	2195	2065	24	91	3.21
		0.18/0.081	**F028SS**	**2725**	**1**	**0.77**	**2100**	**1970**	**22**	**95**	**3.52**
		0.16/0.073	F025SS	2475	1	0.77	1905	1790	21	91	3.67
49200	QHE2x32T8/UNV ISL-SC-1 *Banded Pack*	0.40/0.18	F032/700	2600	2	0.77	4005	3680	48	83	1.60
		0.40/0.18	F032XP	3000	2	0.77	4620	4345	48	96	1.60
		0.38/0.17	F030SS	2850	2	0.77	4390	4125	45	98	1.71
		0.35/0.16	**F028SS**	**2725**	**2**	**0.77**	**4195**	**3945**	**42**	**100**	**1.83**
		0.31/0.14	F025SS	2475	2	0.77	3810	3585	38	100	2.03
49367	QHE3x32T8/UNV ISL-SC-1 *Banded Pack*	0.60/0.26	F032/700	2600	3	0.77	6005	5520	73	82	1.05
		0.60/0.26	F032XP	3000	3	0.77	6930	6515	73	95	1.05
		0.56/0.24	F030SS	2850	3	0.77	6585	6190	68	96	1.13
		0.53/0.23	**F028SS**	**2725**	**3**	**0.77**	**6295**	**5915**	**64**	**98**	**1.20**
		0.47/0.20	F025SS	2475	3	0.77	5715	5375	57	100	1.35
49368	QHE4x32T8/UNV ISL-SC-1 *Banded Pack*	0.81/0.35	F032/700	2600	4	0.77	8000	7360	96	83	0.80
		0.81/0.35	F032XP	3000	4	0.77	9240	8685	96	96	0.80
		0.76/0.33	F030SS	2850	4	0.77	8780	8250	90	98	0.86
		0.71/0.31	**F028SS**	**2725**	**4**	**0.77**	**8395**	**7890**	**85**	**99**	**0.91**
		0.63/0.27	F025SS	2475	4	0.77	7625	7165	76	100	1.01

Banded Pack contains 10 pieces, (add "-B" to Description).
1 Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).

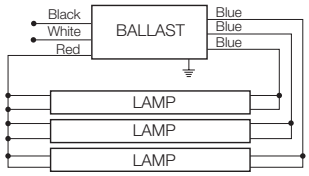


QUICKTRONIC 1x32



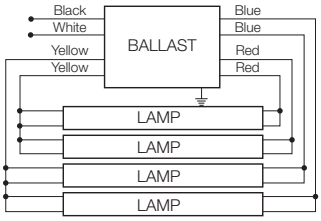
Note: For one lamp application, cap any blue lead. Insulate to 600 volts.

QUICKTRONIC 2x32



Note: For two lamp application, cap any blue lead. For one lamp application, cap any two blue leads. Insulate to 600 volts.

QUICKTRONIC 3x32



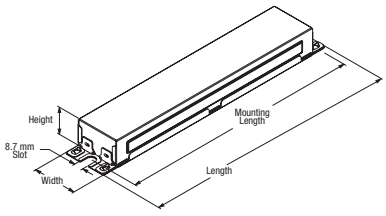
Note: For three lamp application, cap any unused blue lead. For two lamp application, cap two blue leads individually. For one lamp application, cap two blue leads, one red and one yellow lead individually. Insulate to 600 volts.

QUICKTRONIC 4x32

Dimensions:
Overall: 9.5" L x 1.68" W x 1.18" H
Mounting: 8.90"

Product Weight:
1.6 lbs each (approx.)

Wiring:
Leads only (no connectors provided)



Item Number — **49200 QHE 2 x 32T8 / UNV ISL - SC - 1** — UL Type CC
QUICKTRONIC High Efficiency — Case Size
Number of Lamps — Starting/Ballast Factor
Primary Lamp Wattage — Line Voltage (120-277V)

Low Ballast Factor

T8 Instant Start

High Efficiency

Performance Guide

Data based upon SYLVANIA OCTRON® lamps shown. QUICKTRONIC® QHE Instant Start ballasts are also compatible with other manufacturers equivalent lamp types that meet ANSI specifications.

QHE Instant Start ballasts will also operate F17, F25, F32 and the U-Bend equivalent & energy saving T8 lamps. Complete performance data is available in the QUICKSYSTEMS section of the SYLVANIA Ballast Technology & Specification Guide.

Specifications

Data based on F32T8

Starting Method: Instant Start
Ballast Factor: 0.77
Circuit Type: Parallel
Lamp Frequency: >42 kHz
Lamp CCF: Less than 1.7
Starting Temp:[2]
-20°F (-29°C) for OCTRON T8 lamps;
60°F (16°C) for SUPERSAVER® T8 lamps
0°F (-18°C) for FO40T8
Input Frequency: 50/60 Hz
Low THD: <10%
Power Factor: >98%
Voltage Range: ±10% of 120-277V rated line (108-305V)
UL Listed Class P, Type 1 Outdoor

UL Type CC Rated
CSA Certified
70°C Max Case Temperature
FCC 47 CFR Part 18 Non-Consumer
Class A Sound Rating
RoHS Compliant[3]
ANSI 62.41 Cat. A Transient Protection
GFCI compatible
Emergency ballast compatible
Remote Mounting (Max. wire length from ballast case to lampholder):
- 20 ft: full wattage T8s
- 10 ft: energy saving T8s
- 4 ft: 25W energy saving T8s

2 Operation below 50°F (10°C) may affect light output or lamp operation – see "Low Temp. Starting" definition.

3 Complies with European Union Restriction of Hazardous Substances Directive (Directive EC 2002/95)

System Life / Warranty

QUICKTRONIC products are covered by the QUICK 60+® warranty, a comprehensive lamp and ballast system warranty. For additional details, refer to the QUICK 60+ warranty bulletin.

OSRAM SYLVANIA
National Customer
Service and Sales Center
1-800-LIGHTBULB
(1-800-544-4828)
www.sylvania.com

Specifications subject to change without notice.

QHE T8 ISL CC

©2013 OSRAM SYLVANIA

SYLVANIA, the system solution, OCTRON, XP, SUPERSAVER, and QUICK 60+ are registered trademarks of OSRAM SYLVANIA Inc.
SEE THE WORLD IN A NEW LIGHT is a trademark of OSRAM SYLVANIA Inc. QUICKTRONIC is a registered trademark of OSRAM GmbH.

the system solution®

Easily upgrade to LED from fluorescent.

PHILIPS INSTANTFIT LED T8 LAMPS

Philips InstantFit LED T8 Lamps are an ideal energy saving choice for existing linear fluorescent fixtures.

Perfect for a wide range of applications

- Full light output in spaces with temperatures down to -4˚F (-20˚C)
- Perfect for applications with frequent "on/off" switching cycles
- Buildings that desire to be mercury free

Easy to experience

- Instant on, no flicker or buzz
- Fits into existing linear fixtures
- Optimized performance with Instant Start Ballasts[1]
- Compatible with select Program Start Ballasts[1]
- Eliminates the need for rewiring and allows the fixture to maintain original UL and CSA compliance[2]

Energy savings

- 41% energy savings vs F32T8 electronic instant start systems[3]

Sustainable lighting solution

- No mercury allowing for non-hazardous waste disposal
- Emits virtually no UV rays or IR
- Glass-free for use in food areas and refrigerated food displays
- 5 year limited warranty[4]

(1, 2, 3, 4 See page 3 for footnotes)



InstantFit T8 2'



InstantFit T8 3'



InstantFit T8 4'



InstantFit T8 U-Bent

PHILIPS

Ordering, Electrical and Technical Data (Subject to change without notice)

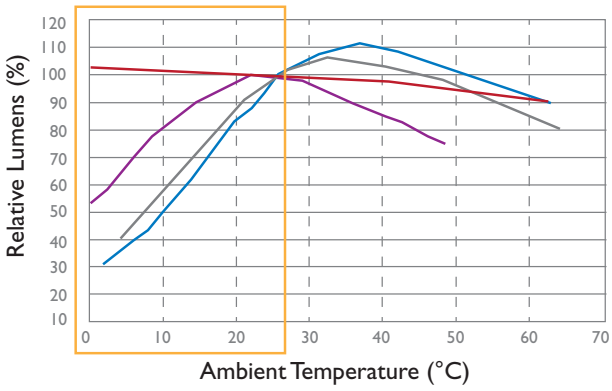
	Product No.	Model No.	Ordering Code	Volts (Depending on Ballast)	Base	CRI	Color Temp. (K)	Pkg Qty	Rated Avg. Life[5]	MOL (In.)	Beam Angle
	LED InstantFit T8 - 4 ' Low Wattage										
●	453605	9290011241	12T8/48-4000 IF 10/1	100-277, 347	G13	82	4000	10	50,000	48	160
●	453613	9290011242	12T8/48-5000 IF 10/1	100-277, 347	G13	82	5000	10	50,000	48	160
	LED InstantFit T8 - 4 '										
	433060	9290002840	14.5T8/48-3000 IF 10/1	120-277, 347	G13	82	3000	10	50,000	48	160
	433268	9290002862	14.5T8/48-3500 IF 10/1	120-277, 347	G13	82	3500	10	50,000	48	160
	LED InstantFit T8 - 4 ' High Output										
●	434860	9290002880	16.5T8/48-3000 IF 10/1	120-277, 347	G13	82	3000	10	50,000	48	160
●	434878	9290002881	16.5T8/48-3500 IF 10/1	120-277, 347	G13	82	3500	10	50,000	48	160
●	434886	9290002882	16.5T8/48-4000 IF 10/1	120-277, 347	G13	82	4000	10	50,000	48	160
●	434894	9290002883	16.5T8/48-5000 IF 10/1	120-277, 347	G13	82	5000	10	50,000	48	160
	LED InstantFit T8 - 3'										
	452052	9290011183	10.5T8/36-3000 IF 10/1	120-277, 347	G13	82	3000	10	50,000	36	160
	452060	9290011184	10.5T8/36-3500 IF 10/1	120-277, 347	G13	82	3500	10	50,000	36	160
	452078	9290011185	10.5T8/36-4000 IF 10/1	120-277, 347	G13	82	4000	10	50,000	36	160
	452086	9290011186	10.5T8/36-5000 IF 10/1	120-277, 347	G13	82	5000	10	50,000	36	160
	LED InstantFit T8 - 2' High Output										
○	452011	9290011179	8.5T8/24-3000 IF 10/1	120-277, 347	G13	82	3000	10	50,000	24	160
○	452029	9290011180	8.5T8/24-3500 IF 10/1	120-277, 347	G13	82	3500	10	50,000	24	160
○	452037	9290011181	8.5T8/24-4000 IF 10/1	120-277, 347	G13	82	4000	10	50,000	24	160
●	452045	9290011182	8.5T8/24-5000 IF 10/1	120-277, 347	G13	82	5000	10	50,000	24	160
	LED InstantFit T8 U-Bent- 6" High Output										
	452664	9290011196	16.5T8/22.5-3000 IF-6U 10/1	120-277, 347	G13	82	3000	10	50,000	22.5	160
	452672	9290011197	16.5T8/22.5-3500 IF-6U 10/1	120-277, 347	G13	82	3500	10	50,000	22.5	160
	452680	9290011198	16.5T8/22.5-4000 IF-6U 10/1	120-277, 347	G13	82	4000	10	50,000	22.5	160
	452698	9290011199	16.5T8/22.5-5000 IF-6U 10/1	120-277, 347	G13	82	5000	10	50,000	22.5	160

Ballast Compatibility Guide

Please refer to www.philips.com/instantfit for instant start ballasts details and the latest ballast compatibility guide.

Relative Light Output vs. Ambient Temperature

4' T8 Lamps - 0.88 BF Ballast



25W 28W 32W T8 14.5W InstantFit TLED

Relative light output with respect to 25°C rated temperature

Suitable for use in fixtures where ambient temperature is between -4°F (-20°C) and 113°F (45°C).

Warning: Philips LED T8 InstantFit lamps will only operate properly on compatible instant-start ballasts. Please refer to the Philips LED T8 InstantFit Installation Guide, which can be obtained through your local Philips Sales Representative, or visit www.philips.com/instantfit

PHILIPS INSTANTFIT LED T8 LAMPS

Product No.	Bare Lamp Watts (W)			Average System Watts (W)			Initial Lumens[6]		
	Low Ballast Factor (0.78)	Normal Ballast Factor (0.88)	High Ballast Factor (1.18)	Low Ballast Factor (0.78)	Normal Ballast Factor (0.88)	High Ballast Factor (1.18)	Low Ballast Factor (0.78)	Normal Ballast Factor (0.88)	High Ballast Factor (1.18)
LED InstantFit T8 - 4 ' Low Wattage									
453605	10.5	12	14.5	12.5	14.5	18.5	1400	1600	1850
453613	10.5	12	14.5	12.5	14.5	18.5	1450	1650	2000
LED InstantFit T8 - 4 '									
433060	12.5	14.5	20	14.5	16.5	22	1300	1500	1900
433268	12.5	14.5	20	14.5	16.5	22	1300	1500	1900
LED InstantFit T8 - 4 ' High Output									
434860	14	16.5	21	17.5	19	25.5	1800	2000	2700
434878	14	16.5	21	17.5	19	25.5	1800	2000	2700
434886	14	16.5	21	17.5	19	25.5	1900	2100	2800
434894	14	16.5	21	17.5	19	25.5	1950	2150	2900
LED InstantFit T8 - 3'									
452052	9.5	10.5	13.5	12.5	13	17	1000	1100	1330
452060	9.5	10.5	13.5	12.5	13	17	1050	1160	1400
452078	9.5	10.5	13.5	12.5	13	17	1080	1200	1440
452086	9.5	10.5	13.5	12.5	13	17	1150	1270	1550
LED InstantFit T8 - 2' High Output									
452011	7.5	8.5	10.5	10	11	14.5	860	950	1110
452029	7.5	8.5	10.5	10	11	14.5	900	1000	1170
452037	7.5	8.5	10.5	10	11	14.5	930	1050	1200
452045	7.5	8.5	10.5	10	11	14.5	1000	1100	1290
LED InstantFit T8 U-Bent- 6" High Output									
452664	14	16.5	21	17.5	19	25.5	1800	2000	2700
452672	14	16.5	21	17.5	19	25.5	1800	2000	2700
452680	14	16.5	21	17.5	19	25.5	1900	2100	2800
452698	14	16.5	21	17.5	19	25.5	1950	2150	2900

1. Compatibility subject to change as additional ballasts are tested. If you do not see your ballast on the list, please contact Philips.
2. Must follow guidelines for installation from Philips Quick Installation Guide included with lamp shipment.
3. (2) Lamp F32T8 Electronic Instant Start System with 0.88 Ballast Factor= 58 SystemWatts (2) Philips LED T8 InstantFit = 34 SystemWatts 58 - 34 = 24 SystemWatts Saved 24 / 58 = 41.4% Energy Saved
4. See warranty for terms and conditions.
5. Tested to B50 L70 requirement.
6. Photometric testing consistent with IES LM-79.

◯ This lamp is currently in DLC testing.
● This lamp is DLC qualified.

System Power Compatibility Guide

This chart shows the measured system wattage of the Philips InstantFit TLED versus a comparable linear fluorescent lamp when used with the reference ballast.

	Reference Ballast	ICN-1P32-N	ICN-2P32-N	ICN-3P32-N	ICN-4P32-N
	Ballast Factor	**0.88**	**0.88**	**0.88**	**0.88**
	Number of Lamps	**1**	**2**	**3**	**4**
	Lamp Type	**System Power (W)***			
Specification	F32T8	31	59	85	112
	InstantFit 14.5 W	16.5	33	49.5	66
	InstantFit 16.5 W	19	38	57	76

* Variance <10%

PHILIPS INSTANTFIT LED T8 LAMPS





© 2014 Koninklijke Philips N.V.
All rights reserved.
Specifications are subject to change without notice.

PLt-1309BN 10/14

Philips Lighting
North America Corporation
200 Franklin Square Drive
Somerset, NJ 08873
Phone: 855-486-2216

Imported by:
Philips Lighting, a division of Philips Electronics Ltd.
281 Hillmount Rd, Markham, ON L6C 2S3
Tel. 800-668-9008

Easily upgrade to LED from fluorescent.

PHILIPS INSTANTFIT LED T8 LAMPS

Philips InstantFit LED T8 Lamps are an ideal energy saving choice for existing linear fluorescent fixtures.

Perfect for a wide range of applications

- Full light output in spaces with temperatures down to -4˚F (-20˚C)
- Perfect for applications with frequent "on/off" switching cycles
- Buildings that desire to be mercury free

Easy to experience

- Instant on, no flicker or buzz
- Fits into existing linear fixtures
- Optimized performance with Instant Start Ballasts[1]
- Compatible with select Program Start Ballasts[1]
- Eliminates the need for rewiring and allows the fixture to maintain original UL and CSA compliance[2]

Energy savings

- 41% energy savings vs F32T8 electronic instant start systems[3]

Sustainable lighting solution

- No mercury allowing for non-hazardous waste disposal
- Emits virtually no UV rays or IR
- Glass-free for use in food areas and refrigerated food displays
- 5 year limited warranty[4]

(1, 2, 3, 4 See page 3 for footnotes)



InstantFit T8 2'



InstantFit T8 3'



InstantFit T8 4'



InstantFit T8 U-Bent

PHILIPS

Ordering, Electrical and Technical Data (Subject to change without notice)

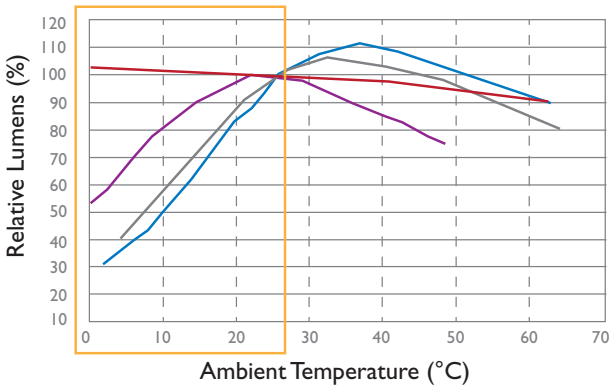
	Product No.	Model No.	Ordering Code	Volts (Depending on Ballast)	Base	CRI	Color Temp. (K)	Pkg Qty	Rated Avg. Life[5]	MOL (In.)	Beam Angle
	LED InstantFit T8 - 4 ' Low Wattage										
●	453605	9290011241	12T8/48-4000 IF 10/1	100-277, 347	G13	82	4000	10	50,000	48	160
●	453613	9290011242	12T8/48-5000 IF 10/1	100-277, 347	G13	82	5000	10	50,000	48	160
	LED InstantFit T8 - 4 '										
	433060	9290002840	14.5T8/48-3000 IF 10/1	120-277, 347	G13	82	3000	10	50,000	48	160
	433268	9290002862	14.5T8/48-3500 IF 10/1	120-277, 347	G13	82	3500	10	50,000	48	160
	LED InstantFit T8 - 4 ' High Output										
●	434860	9290002880	16.5T8/48-3000 IF 10/1	120-277, 347	G13	82	3000	10	50,000	48	160
●	434878	9290002881	16.5T8/48-3500 IF 10/1	120-277, 347	G13	82	3500	10	50,000	48	160
●	434886	9290002882	16.5T8/48-4000 IF 10/1	120-277, 347	G13	82	4000	10	50,000	48	160
●	434894	9290002883	16.5T8/48-5000 IF 10/1	120-277, 347	G13	82	5000	10	50,000	48	160
	LED InstantFit T8 - 3'										
	452052	9290011183	10.5T8/36-3000 IF 10/1	120-277, 347	G13	82	3000	10	50,000	36	160
	452060	9290011184	10.5T8/36-3500 IF 10/1	120-277, 347	G13	82	3500	10	50,000	36	160
	452078	9290011185	10.5T8/36-4000 IF 10/1	120-277, 347	G13	82	4000	10	50,000	36	160
	452086	9290011186	10.5T8/36-5000 IF 10/1	120-277, 347	G13	82	5000	10	50,000	36	160
	LED InstantFit T8 - 2' High Output										
○	452011	9290011179	8.5T8/24-3000 IF 10/1	120-277, 347	G13	82	3000	10	50,000	24	160
○	452029	9290011180	8.5T8/24-3500 IF 10/1	120-277, 347	G13	82	3500	10	50,000	24	160
○	452037	9290011181	8.5T8/24-4000 IF 10/1	120-277, 347	G13	82	4000	10	50,000	24	160
●	452045	9290011182	8.5T8/24-5000 IF 10/1	120-277, 347	G13	82	5000	10	50,000	24	160
	LED InstantFit T8 U-Bent- 6" High Output										
	452664	9290011196	16.5T8/22.5-3000 IF-6U 10/1	120-277, 347	G13	82	3000	10	50,000	22.5	160
	452672	9290011197	16.5T8/22.5-3500 IF-6U 10/1	120-277, 347	G13	82	3500	10	50,000	22.5	160
	452680	9290011198	16.5T8/22.5-4000 IF-6U 10/1	120-277, 347	G13	82	4000	10	50,000	22.5	160
	452698	9290011199	16.5T8/22.5-5000 IF-6U 10/1	120-277, 347	G13	82	5000	10	50,000	22.5	160

Ballast Compatibility Guide

Please refer to www.philips.com/instantfit for instant start ballasts details and the latest ballast compatibility guide.

Relative Light Output vs. Ambient Temperature

4' T8 Lamps - 0.88 BF Ballast



25W 28W 32W T8 14.5W InstantFit TLED

Relative light output with respect to 25°C rated temperature

Suitable for use in fixtures where ambient temperature is between -4°F (-20°C) and 113°F (45°C).

Warning: Philips LED T8 InstantFit lamps will only operate properly on compatible instant-start ballasts. Please refer to the Philips LED T8 InstantFit Installation Guide, which can be obtained through your local Philips Sales Representative, or visit www.philips.com/instantfit

PHILIPS INSTANTFIT LED T8 LAMPS

Product No.	Bare Lamp Watts (W)			Average System Watts (W)			Initial Lumens[6]		
	Low Ballast Factor (0.78)	Normal Ballast Factor (0.88)	High Ballast Factor (1.18)	Low Ballast Factor (0.78)	Normal Ballast Factor (0.88)	High Ballast Factor (1.18)	Low Ballast Factor (0.78)	Normal Ballast Factor (0.88)	High Ballast Factor (1.18)
LED InstantFit T8 - 4 ' Low Wattage									
453605	10.5	12	14.5	12.5	14.5	18.5	1400	1600	1850
453613	10.5	12	14.5	12.5	14.5	18.5	1450	1650	2000
LED InstantFit T8 - 4 '									
433060	12.5	14.5	20	14.5	16.5	22	1300	1500	1900
433268	12.5	14.5	20	14.5	16.5	22	1300	1500	1900
LED InstantFit T8 - 4 ' High Output									
434860	14	16.5	21	17.5	19	25.5	1800	2000	2700
434878	14	16.5	21	17.5	19	25.5	1800	2000	2700
434886	14	16.5	21	17.5	19	25.5	1900	2100	2800
434894	14	16.5	21	17.5	19	25.5	1950	2150	2900
LED InstantFit T8 - 3'									
452052	9.5	10.5	13.5	12.5	13	17	1000	1100	1330
452060	9.5	10.5	13.5	12.5	13	17	1050	1160	1400
452078	9.5	10.5	13.5	12.5	13	17	1080	1200	1440
452086	9.5	10.5	13.5	12.5	13	17	1150	1270	1550
LED InstantFit T8 - 2' High Output									
452011	7.5	8.5	10.5	10	11	14.5	860	950	1110
452029	7.5	8.5	10.5	10	11	14.5	900	1000	1170
452037	7.5	8.5	10.5	10	11	14.5	930	1050	1200
452045	7.5	8.5	10.5	10	11	14.5	1000	1100	1290
LED InstantFit T8 U-Bent- 6" High Output									
452664	14	16.5	21	17.5	19	25.5	1800	2000	2700
452672	14	16.5	21	17.5	19	25.5	1800	2000	2700
452680	14	16.5	21	17.5	19	25.5	1900	2100	2800
452698	14	16.5	21	17.5	19	25.5	1950	2150	2900

1. Compatibility subject to change as additional ballasts are tested. If you do not see your ballast on the list, please contact Philips.
2. Must follow guidelines for installation from Philips Quick Installation Guide included with lamp shipment.
3. (2) Lamp F32T8 Electronic Instant Start System with 0.88 Ballast Factor= 58 SystemWatts (2) Philips LED T8 InstantFit = 34 SystemWatts 58 - 34 = 24 SystemWatts Saved 24 / 58 = 41.4% Energy Saved
4. See warranty for terms and conditions.
5. Tested to B50 L70 requirement.
6. Photometric testing consistent with IES LM-79.

◯ This lamp is currently in DLC testing.
● This lamp is DLC qualified.

System Power Compatibility Guide

This chart shows the measured system wattage of the Philips InstantFit TLED versus a comparable linear fluorescent lamp when used with the reference ballast.

	Reference Ballast	ICN-1P32-N	ICN-2P32-N	ICN-3P32-N	ICN-4P32-N
	Ballast Factor	**0.88**	**0.88**	**0.88**	**0.88**
	Number of Lamps	**1**	**2**	**3**	**4**
	Lamp Type	**System Power (W)***			
Specification	F32T8	31	59	85	112
	InstantFit 14.5 W	16.5	33	49.5	66
	InstantFit 16.5 W	19	38	57	76

* Variance <10%

PHILIPS INSTANTFIT LED T8 LAMPS





© 2014 Koninklijke Philips N.V.
All rights reserved.
Specifications are subject to change without notice.

PLt-1309BN 10/14

Philips Lighting
North America Corporation
200 Franklin Square Drive
Somerset, NJ 08873
Phone: 855-486-2216

Imported by:
Philips Lighting, a division of Philips Electronics Ltd.
281 Hillmount Rd, Markham, ON L6C 2S3
Tel. 800-668-9008

Ballast Compatibility Guide

Philips InstantFit LED T8 Lamps



Applicable Philips Part Numbers

9290002840 (433060), 9290002841(433078), 9290002842 (433086), 9290002862 (433268), 9290008964, 9290008965

Manufacturer	Model	System Certified[1]	Compatible [2]
Qualified Instant-Start Ballasts			
Philips - Advance	ICN-1P32-N	✓	
Philips - Advance	ICN-2P32-N	✓	
Philips - Advance	IOPA-2P32-N	✓	
Philips - Advance	IOPA-3P32-N	✓	
Philips - Advance	IOPA-4P32-LW-N	✓	
Philips - Advance	IOPA-1P32-HL-N	✓	
Philips - Advance	IOP-2P32-N	✓	
Philips - Advance	IOP-3P32-N	✓	
Philips - Advance	IOP-4P32-N	✓	
Philips - Advance	IOP-3P32-LW-N	✓	
Philips - Advance	IOP-1P32-HL-SC	✓	
Philips - Advance	GOPA-1P32-SC	✓	
Philips - Advance	GOPA-2P32-SC	✓	
Philips - Advance	GOPA-3P32-SC	✓	
Philips - Advance	GOPA-4P32-SC	✓	
Philips - Advance	GOPA-1P32-LW-SC	✓	
Philips - Advance	GOPA-2P32-LW-SC	✓	
Philips - Advance	GOPA-3P32-LW-SC	✓	
Philips - Advance	GOPA-4P32-LW-SC	✓	
Philips - Advance	RES-2P32-N	✓	
Philips - Advance	REB-2P32-SC	✓	
Philips - Advance	ICN-3P32-N	✓	
Philips - Advance	ICN-4P32-N	✓	
Philips - Advance	IOPA-4P32-N	✓	
Philips - Advance	IOPA-2P32-LW-N	✓	
Philips - Advance	IOPA-3P32-LW-N	✓	
Philips - Advance	IOPA-4P32-HL-SC	✓	
Philips - Advance	IOPA-4P32-HL-90C-G	✓	
Philips - Advance	IOP-4P32-LW-N	✓	
Philips - Advance	IOP-1P32-LW-N	✓	
Philips - Advance	IOP-2P32-LW-N	✓	

Manufacturer Qualified Instant-Start Ballasts	Model	System Certified[1]	Compatible[2]
Universal Lighting Technologies	B132IUNVHP-N		✓
Universal Lighting Technologies	B232IUNVHP-N		✓
Universal Lighting Technologies	B332IUNVHP-A		✓
Universal Lighting Technologies	B432IUNVHP-A		✓
Universal Lighting Technologies	B132IUNVHE-A		✓
Universal Lighting Technologies	B232IUNVHE-A		✓
Universal Lighting Technologies	B332IUNVHE-A		✓
Universal Lighting Technologies	B132IUNVE L-A		✓
Universal Lighting Technologies	B232IUNVE L-A		✓
Universal Lighting Technologies	B332IUNVEL-A		✓
Universal Lighting Technologies	B232I347HP-A		✓
Universal Lighting Technologies	B432I347HP		✓
Universal Lighting Technologies	B432I277HEH		✓
General Electric	GE-132-MV-N		✓
General Electric	GE-232-MV-N		✓
General Electric	GE-332-MV-N		✓
General Electric	GE-232-MV-N-DIY		✓
General Electric	GE-332-MV-N-DIY		✓
General Electric	GE-432-MV-N-DIY		✓
General Electric	GE132MAX-N/ULTRA		✓
General Electric	GE232MAX-N/ULTRA		✓
General Electric	GE132MAX-L/ULTRA		✓
General Electric	GE232MAX-L/ULTRA		✓
General Electric	GE332MAX-L/ULTRA		✓
General Electric	GE432MAX-L/ULTRA		✓
General Electric	GE132MAX-H/ULTRA		✓
General Electric	GE332MAX-H/ULTRA		✓
General Electric	GE432MAX-H/ULTRA		✓
General Electric	GE232MAX347-N		✓
General Electric	GE432MAX347-N		✓
General Electric	GE232-120RES-DIY		✓
General Electric	GE432-120RES-DIY		✓
OSRAM SYLVANIA	QTP 1X32T8/UNV ISN-SC		✓
OSRAM SYLVANIA	QTP 2X32T8/UNV ISN-SC		✓
OSRAM SYLVANIA	QTP 3X32T8/UNV ISN-SC		✓
OSRAM SYLVANIA	QHE 1x32T8/UNV ISN-SC		✓

Manufacturer	Model	System Certified[1]	Compatible[2]
Qualified Instant-Start Ballasts			
OSRAM SYLVANIA	QHE 2X32T8/UNV ISN-SC		✓
OSRAM SYLVANIA	QHE 3x32T8/UNV ISN-SC		✓
OSRAM SYLVANIA	QHE 4X32T8/UNV ISN-SC		✓
OSRAM SYLVANIA	QHE 1x32T8/UNV ISL-SC		✓
OSRAM SYLVANIA	QHE 2X32T8/UNV ISL-SC		✓
OSRAM SYLVANIA	QHE 3x32T8/UNV ISL-SC		✓
OSRAM SYLVANIA	QHE 4X32T8/UNV ISL-SC		✓
OSRAM SYLVANIA	QHE 1x32T8/UNV ISH-SC		✓
OSRAM SYLVANIA	QHE 3x32T8/UNV ISH-SC		✓
OSRAM SYLVANIA	QHE 1X32T8/UNV ISH HT SC		✓
OSRAM SYLVANIA	QHE 2X32T8/UNV ISH HT SC		✓
OSRAM SYLVANIA	QHE 1X32T8/UNV ISN-SC-I		✓
OSRAM SYLVANIA	QHE 2X32T8/UNV ISN-SC-I		✓
OSRAM SYLVANIA	QHE 3x32T8/UNV ISN-SC-I		✓
OSRAM SYLVANIA	QHE 4x32T8/UNV ISN-SC-I		✓
OSRAM SYLVANIA	QHE 2x32T8/UNV ISL-SC-I		✓
OSRAM SYLVANIA	QHE 4x32T8/UNV ISL-SC-I		✓
UltraSave	UT232347		✓
UltraSave	UT432347		✓

Manufacturer	Model	Number of Lamps in Emergency
Qualified Emergency Ballasts		
Philips - Bodine	LP600	1
Philips - Bodine	LP600STU	1
Philips - Chloride	DEB-6LP	1

1. Philips InstantFit LED T8 and Philips Advance Ballasts have passed internal compatibility tests. Certified compatibility from Philips.
2. Philips InstantFit LED T8 and third party ballasts have passed internal compatibility tests. Certified compatibility from lamp manufacturer only.

* UL, RoHS, CSA and NSF logos applicable to InstantFit products only (9290002840, 9290002841, 9290002842, 9290002862, 9290008964, 9290008965). They do not apply to listed ballasts. Restrictions on Hazardous Substances (RoHS) is a European directive (2002/95/EC) designed to limit the content of 6 substances [lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB), and polybrominated diphenyl ethers (PBDE)] in electrical and electronic products. For products used in North America compliance to RoHS is voluntary and self-certified.

Tested to B50 L70 requirement. For systems using a low (0.78) or normal (0.88 or less) ballast factor, InstantFit lamps are rated for 50,000 hours. For systems using a high ballast factor (greater than 0.88), InstantFit products are rated for 40,000 hours. Based on usage of 12 hrs/day.

Energy Savings based on average wattage for 2 lamp F32T8 Electronic Instant Start System with 0.88 Ballast Factor (58 System Watts) versus average wattage for 2 lamp Philips InstantFit LED T8 system (34 System Watts). 58 - 34 = 24 System Watts Saved. 24/58 = 41.4% Energy Saved. Actual savings may vary depending on type of lamp and ballast used.

Please contact Philips for questions about third party ballasts that are not on this list.

© 2014 Koninklijke Philips N.V.
All rights reserved.
Specifications are subject to change without notice.

Philips Lighting
North America Corporation
200 Franklin Square Drive
Somerset, NJ 08873
Phone: 855-486-2216

Philips Lighting Company
281 Hillmount Road
Markham ON, Canada L6C 2S3
Phone: 800-668-9008

www.sylvania.com

QUICKTRONIC® POWERSENSE® T8 Universal Voltage Dimming Systems

NEMA Premium

RoHS compliant

Fluorescent Controllable Lighting Systems

High Efficiency Series

POWERSENSE T8 DIM

Lamp / Ballast Guide

32W T8 - SYLVANIA OCTRON® lamps
1-lamp QTP1x32T8/UNV DIM
2-lamp QTP2x32T8/UNV DIM
3-lamp QTP3x32T8/UNV DIM
4-lamp QTP4x32T8/UNV DIM

Primary Lamp Types
F032, FB032 & FB031

Also operates:
F030/SS, F028/SS, F025/SS, F025, F017, FB024 & FB016

Key System Features

- Industry's first ballast that combines dimming inputs from 0-10V and/or two-wire AC dimming providing maximum flexibility
- Compatible with low voltage and power line fluorescent dimmers
- High Efficiency
- NEMA Premium Electronic Ballast Program compliant
- Lamp Detection Technology
- Universal voltage (120-277V)
- 100 - 5% Dimming Range
- PROStart® Programmed Rapid Start
- Anti-flash circuitry - turns on in dimmed mode
- Operates at >42kHz
- QUICK 60+ ballast and lamp warranty
- RoHS compliant
- Lead-free solder and manufacturing process



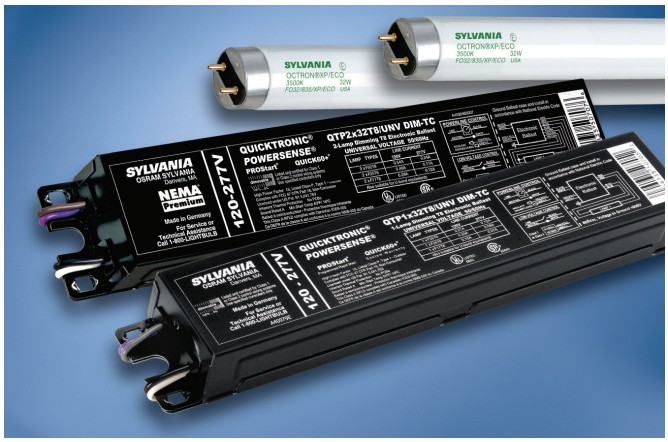
Application Information

SYLVANIA QUICKTRONIC POWERSENSE ballasts
are ideally suited for:

- Occupancy sensors
- Daylight harvesting
- Energy management
- Load shedding
- New construction
- Retrofit

SYLVANIA QUICKTRONIC High Efficiency, POWERSENSE T8 electronic ballasts offer several advantages:

- **Wide Dimming Range:** operate linear fluorescent T8 lamps over a 100-5% dimming range and provide true versatility in controls selection.
- **Industry's Most Adaptable Dimming Ballast:** ballasts feature micro-controller technology for compatibility with:
  - low voltage controls
  - power line fluorescent dimmers
  - any line voltage from 120V to 277V
- **Unmatched Performance:** patented lamp detection technology that virtually eliminates variations in brightness from lamp-to-lamp and provides uniform lighting throughout the dimming range. At light levels of >75% unnecessary lamp-coil power is turned off, delivering energy efficiences comparable to non-dimming Instant start electronic ballast. This technology also eases installation and troubleshooting by recognizing failed lamps, faulty wiring or loose connections, and shutting down.



When the problem is corrected, the system restarts automatically.

- **NEMA Premium Electronic Ballast Program compliant.** This program promotes the use of high efficiency T8 electronic ballasts by meeting or exceeding the Ballast Efficiency Factors, (BEF) established by the CEE, (Consortium for Energy Efficiency). For additional information on this program go to: *www.cee1.org or www.nema.org*

These ballasts are RoHS compliant and feature lead-free solder and manufacturing process.

Setting the standard for quality, QUICKTRONIC POWERSENSE ballasts are covered by the QUICK 60+® warranty, the first and most comprehensive lamp & ballast system warranty in the industry.

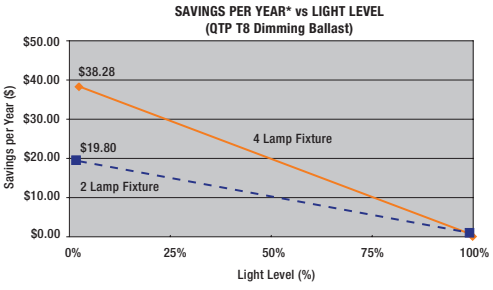
System Information

QUICKTRONIC POWERSENSE ballasts operate from standard low voltage (0-10VDC) fluorescent controllers or compatible 2-wire power line fluorescent dimmers, making them ideal for individual office lighting or automated building applications, both in new construction and retrofit projects.

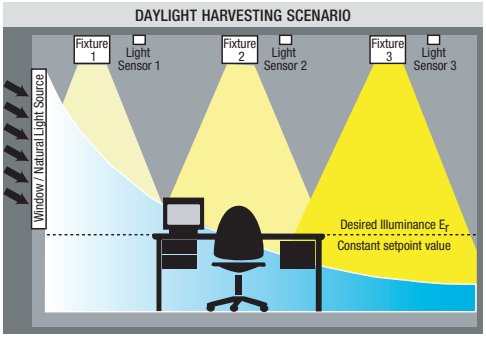
For the individual office or conference room, installation can be streamlined by using a 2-wire power line fluorescent dimmer; eliminating the need for additional control wires.

For more advanced systems, such as daylight harvesting or building automation applications, standard low voltage devices (0-10VDC, Class 1 or 2) are used to control the lighting system. In this daylight harvesting example, each lighting fixture (or fixture row) is controlled by it's own photosensor; regulating the light output to compensate for changes in natural daylight. Depending upon the specific application, energy savings of up to 60% compared to fixed output T8 electronic systems can be realized.

All QUICKTRONIC POWERSENSE ballasts include a line voltage protection circuit, which protects the ballast in the event that line voltage is inadvertently applied to the low voltage control inputs.



* F032/XP lamps with QUICKTRONIC T8 POWERSENSE ballast
* Based on 4000 hrs/yr, $0.11/kWh, and 120V operation
* Savings per Year (@Light Level) = Cost of operation (100% Light Level) - Cost of operation (@Light Level)



SEE THE WORLD IN A NEW LIGHT SYLVANIA

POWERSENSE CONTROLS

SPECIFICATION DATA

Catalog #	Date	Type
Project	Prepared by	
Comments		

QUICKTRONIC® POWERSENSE® Controls Information

Controls Manufacturer	Fluorescent Powerline Controllers	0-10 VDC Controllers	Photo Cells	Occupancy Sensors	Building Management Systems
Sylvania www.sylvania.com/controls	X	X	X	X	X
Acuity Brand Controls www.acuitybrandscontrols.com	X	X	X	X	X
Blue Ridge Technologies www.brtint.com	X	X	X	X	X
Cooper Greengate http://greengate.coopercontrol.com		X	X	X	X
Encelium www.encelium.com		X	X	X	X
Hunt Dimming www.huntdimming.com	X	X			X
Lehigh Electric Products www.lehighdim.com	X	X			X
Leviton www.leviton.com	X	X	X	X	
Sensor Switch www.sensorswitch.com			X	X	
Siemens Building Technology http://sbt.siemens.com					X
Starfield Controls www.starfieldcorp.com		X	X	X	X
Watt Stopper www.wattstopper.com	X	X	X	X	X

Please contact controls manfacturer to order/specify controls. For the latest controls list go to www.sylvania.com
Also, for more information, refer to the LCA (Lighting Controls Association) site: http://lightingcontrolsassociation.org

Dimensions:

1 & 2 lamp enclosure

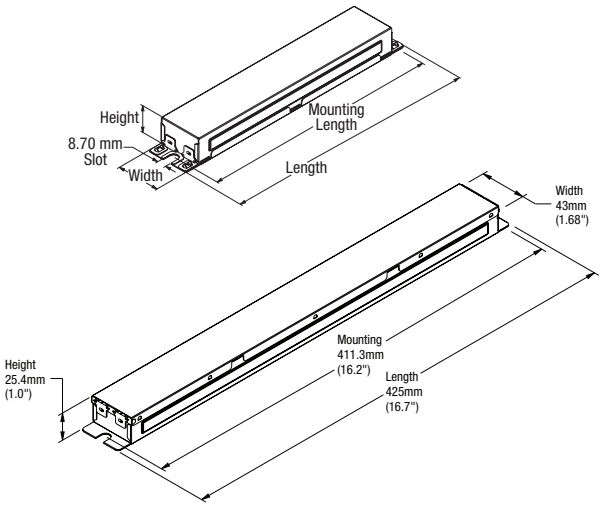
Overall: 9.5" L x 1.68" W x 1.0" H (241 x 43 x 25 mm)
Mounting: 8.90" (226 mm)
Weight: 1.1 lbs each (500 g)

3 & 4 lamp enclosure

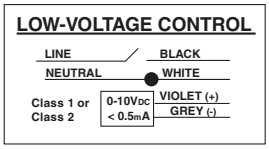
Overall: 16.7" L x 1.68" W x 1.0" H (425 x 43 x 25 mm)
Mounting:16.2" (411 mm)
Weight: 2.1 lbs each (950 g)

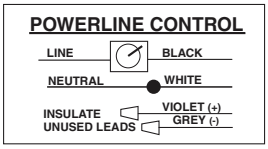
Wiring:

Leads Only



Input & Control Wiring Options:



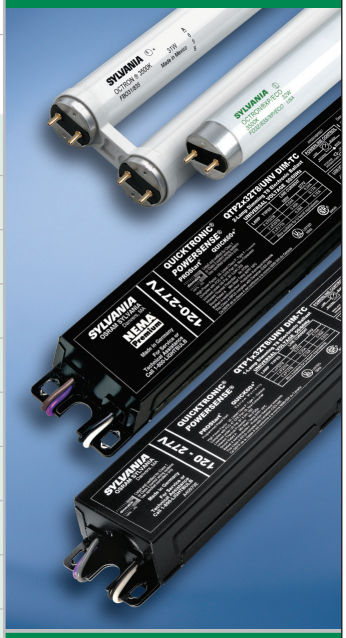


Control Specifications/model numbers may change.
Please consult manufacturers listed for their latest control models and to order their controls.

T8 POWERSENSE

High Efficiency

Controls Guide



Warning

Install and wire these ballast and controls in accordance with the National Electrical Code (NEC), all applicable Federal, State and local electrical codes, as well as the specific instructions provided with the compatible control that you purchased. Installation should be performed by qualified personnel only.

These instructions are guidelines only. Installation may vary for different controls/ fixtures/applications. Be sure to follow the control instructions and all applicable codes and standards when installing dimming systems.

Please contact controls manufacturer listed in the OSRAM SYLVANIA Inc. controls cross reference for compatible controls and instruction wiring.

NOTES:

1. Dimming ballasts source < 0.5mA (0-10VDC control input).
2. Powerline controls must be rated for the type (e.g. Fluorescent Phase-control) and size (e.g. 600W, 1000W, 1500W & 2000W etc.) of the connected load. Do NOT use incandescent powerline controls; incandescent dimmers are not rated for fluorescent loads and are NOT compatible with POWERSENSE ballasts.

OSRAM SYLVANIA
National Customer
Service and Sales Center
1-800-LIGHTBULB
(1-800-544-4828)
www.sylvania.com

Specifications subject to change without notice.

SPECIFICATION DATA

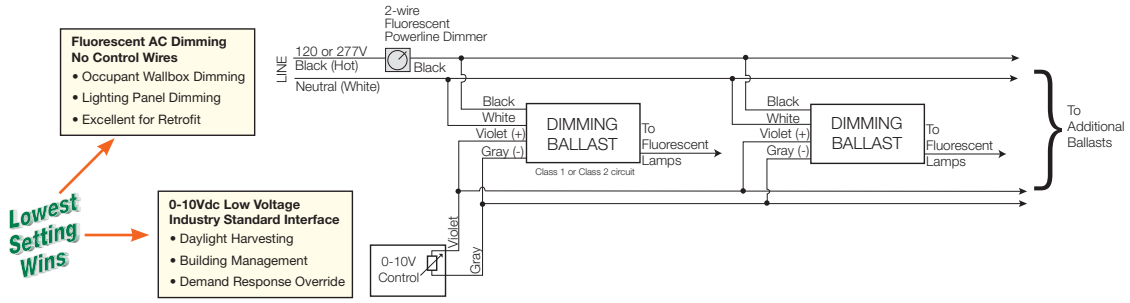
Catalog #	Date	Type
Project	Prepared by	
Comments		

T8 POWERSENSE
High Efficiency

QUICKTRONIC® POWERSENSE® T8 Dimming UNV - Dimming Control Wiring Examples

Industry's 1st Ballast That Allows POWERLINE Fluorescent Control *AND* 0-10Vdc Control Input Simultaneously

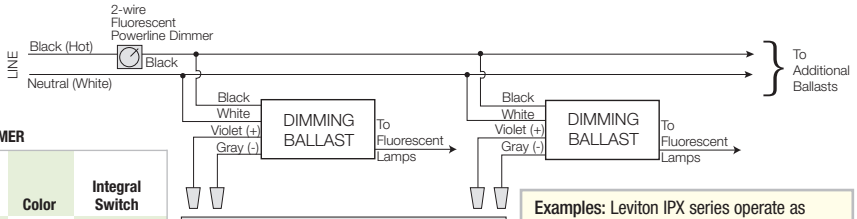
2-wire Powerline *AND* 0-10Vdc Control with POWERSENSE Ballasts



Wallbox Style 2-wire Powerline Control Wiring Example

Powerline Control Specs:
Specification-grade controls are available for 120V or 277V operation of controllable analog electronic fluorescent ballasts. Controls must be suitably rated for both the type (e.g. Fluorescent Phase-control) and size (e.g. 600W) of the connected load.

2-wire Powerline Control with POWERSENSE Ballasts



CAUTION:
For 2-wire Powerline wiring, individually insulate (cap-off) all unused Violet & Gray leads as shown.

ELOGIC™ MANUAL CONTROL SLIDE FLUORESCENT PHASE CUT DIMMER

Item Number	OSRAM SYLVANIA Description	Maximum Input Current (A) (# of gangs) Single	Double	Triple	Input Voltage (V)	Color	Integral Switch
45045	ELMC-SL-FLPCWALL/120-WH	5.0A	4.5A	4.0A	120	White	Single Pole
45046	ELMC-SL-FLPCWALL/277-WH	2.2A	2.0A	1.7A	277	White	

Examples: Leviton IPX series operate as single pole or 3-way models. Available in 120V and 277V models. Leviton 6668-1W (white) 120V single pole fluorescent dimmer.

Wallbox Style 0-10V Control with Power Switch Wiring Example

0-10V DC Control with POWERSENSE Ballasts

Examples: Lithonia model ISD BC or Leviton IP 710 Series (These 0-10V dc, 120/277V models can be wired for single pole application (shown); these models can also be wired for 3-way applications.)

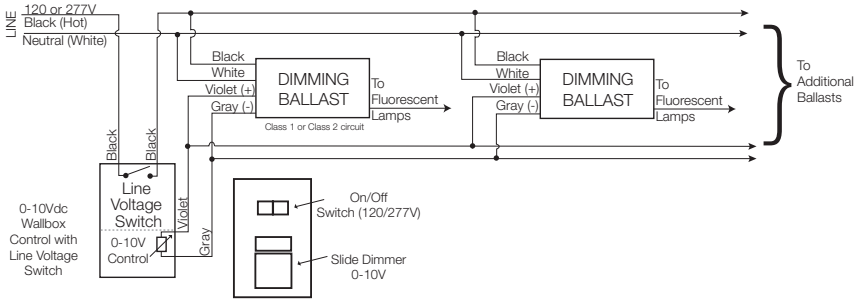
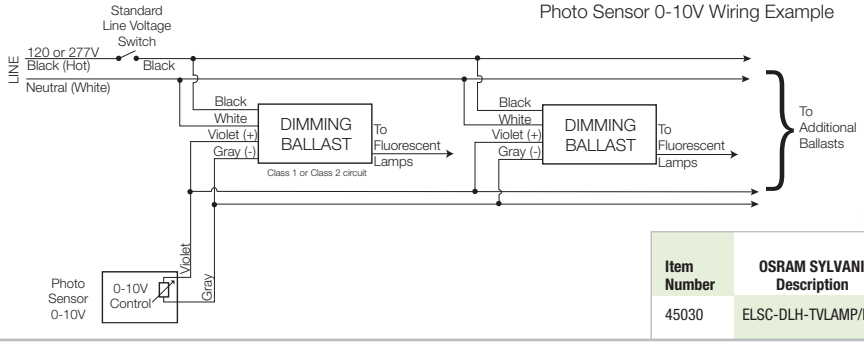
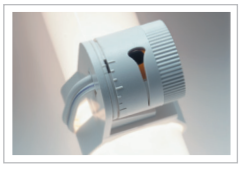


Photo Sensor 0-10V Wiring Example

0-10V DC Control with POWERSENSE Ballasts

Photo Sensor 0-10V Wiring Example





ELOGIC DAYLIGHT SENSOR ORDERING INFORMATION

Item Number	OSRAM SYLVANIA Description	Type	Ballast Control Method	Output Voltage (VDC)	Max. Input Current (mA)	Lamp Type
45030	ELSC-DLH-TVLAMP/BUS	Sensor & Control for Daylight Harvesting	Analog	0-10V	6	T8 or T5 or T5HO

POWERSENSE T8 DIM

SPECIFICATION DATA

Catalog #	Date	Type
Project	Prepared by	
Comments		

High Efficiency, T8 Controllable Lighting Systems, UNV (120-277V)

RoHS compliant

NEMA Premium

Item Number	OSRAM SYLVANIA Description	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Power (W) 120V	Input Power (W) 277V	System[1] Efficacy (lm/W)	BEF[2]
50705	QTP 1x32T8/UNV DIM-TC	**0.27/0.12**	**F032XP**	**3000**	**1**	**0.88 0.05**	**2640 150**	**2480 140**	**30 8**	**30 8**	**88**	**2.93**
		0.24/0.11	F030/SS	2850	1	0.88 0.05	2510 145	2360 135	28 8	28 8	90	3.14
		0.22/0.10	F028/SS	2725	1	0.88 0.05	2400 135	2255 130	25 8	25 8	96	3.52
		0.20/0.09	F025/SS	2475	1	0.88 0.05	2180 125	2045 115	23 7	23 7	95	3.83
50707	QTP 2x32T8/UNV DIM-TC	**0.51/0.24**	**F032XP**	**3000**	**2**	**0.88 0.05**	**5280 300**	**4965 280**	**59 14**	**57 14**	**93**	**1.54**
		0.48/0.20	F030/SS	2850	2	0.88 0.05	5015 285	4715 270	55 14	53 14	95	1.66
		0.43/0.18	F028/SS	2725	2	0.88 0.05	4795 275	4510 255	51 13	49 13	98	1.80
		0.39/0.16	F025/SS	2475	2	0.88 0.05	4355 250	4095 235	45 13	44 13	99	2.00
50714	QTP 3x32T8/UNV DIM-TCL	**0.73/0.30**	**F032XP**	**3000**	**3**	**0.88 0.05**	**7920 450**	**7445 425**	**87 20**	**84 20**	**94**	**1.05**
		0.68/0.30	F030/SS	2850	3	0.88 0.05	7525 430	7075 400	81 20	78 20	96	1.13
		0.62/0.26	F028/SS	2725	3	0.88 0.05	7195 410	6760 385	73 19	72 19	100	1.22
		0.56/0.24	F025/SS	2475	3	0.88 0.05	6535 370	6140 350	67 19	66 19	99	1.33
50716	QTP 4x32T8/UNV DIM-TCL	**0.96/0.40**	**F032XP**	**3000**	**4**	**0.88 0.05**	**10,560 600**	**9925 565**	**114 27**	**110 27**	**96**	**0.80**
		0.92/0.39	F030/SS	2850	4	0.88 0.05	10,030 570	9430 535	107 26	104 26	96	0.85
		0.82/0.35	F028/SS	2725	4	0.88 0.05	9590 545	9015 510	98 25	95 25	101	0.93
		0.74/0.32	F025/SS	2475	4	0.88 0.05	8710 495	8190 465	91 24	89 24	98	0.99

Products are all 10-pack. **Striation might occur with SUPERSAVER lamps.*

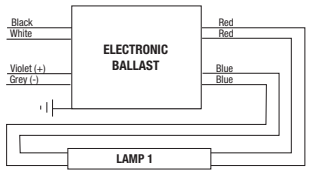
1: System Efficacy calculation based on lowest input power value.

2: Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).

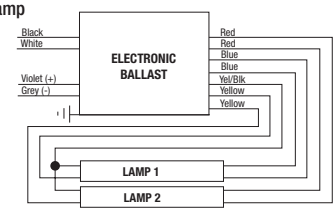
Wiring Diagrams

Output Wiring: Lamp wiring for dimming ballasts can differ significantly from non-dimming ballasts and from other manufacturers dimming ballasts. Take care to connect lamp lead wires as shown on the applicable ballast diagram. **Lamp Seasoning:** For optimal performance, fluorescent lamps may require seasoning for up to 12 hours prior to low temperature starting & low level dimming. Refer to NEMA LSD 23-2002 Lighting Systems Division: Recommended Practice — Lamp Seasoning for Fluorescent Dimming Systems

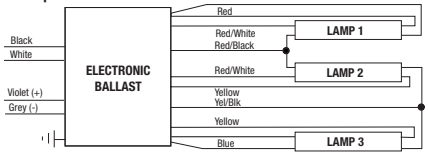
1 lamp



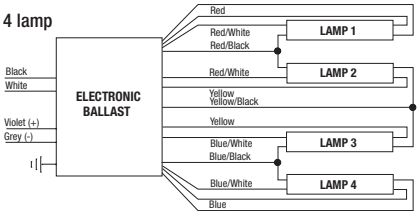
2 lamp



3 lamp



4 lamp



Item Number — **50707 QTP 2 x 32T8 / UNV DIM-TC** — System Type - DIMMING/Case Size

QUICKTRONIC — Line Voltage (120-277V)

Number of Lamps (1, 2, 3, 4) — Primary Lamp Wattage

T8 POWERSENSE®

High Efficiency

Performance Guide

Data based on SYLVANIA OCTRON® lamps shown. QUICKTRONIC® POWERSENSE ballasts are also compatible with other manufacturers equivalent lamp types that meet ANSI specifications, including F17, F25, F32, U-Bend equivalent lamps and SUPERSAVER lamps.

Specifications

Data based on F32T8

Starting Method: Programmed Rapid Start
Circuit Type: Series
Lamp Frequency: >40 kHz
Lamp CCF: Less than 1.7
Starting Temp: 50°F/10°C minimum for OCTRON T8 lamps
Input Voltage: 120-277V, ±10%
Input Frequency: 50/60 Hz
THD: <10% @ Full Output
Power Factor: >98% @ Full Output
UL Listed Class P, Type 1 Outdoor
CSA or C/UL Certified
70°C Max Case Temperature
FCC 47CFR Part 18 Non-Consumer Class A Sound Rating
RoHS compliant[3]
ANSI C62.41 Cat. A Transient Protection
Remote mounting (Max. wire length from ballast case to lampholder)

- up to 8ft for full wattage T8s
- no remote mounting for SUPERSAVER

3 Complies with European Union Restriction of Hazardous Substances Directive (Directive EC 2002/95)

Control Information

QUICKTRONIC POWERSENSE ballasts are compatible with a wide range of low voltage (0-10VDC) and power line fluorescent controllers available from various manufacturers.
Low Voltage Control Specs: Ballast will source up to 0.5mA for 0-10VDC control purposes. May be wired as a Class 1 or Class 2 circuit-consult Local and National Electrical Codes.
Power Line Control Specs: Specification-grade fluorescent controls are available for 120V or 277V operation of controllable analog electronic fluorescent ballasts. Controls must be suitably rated for both the type (e.g. Fluorescent Phasecontrol) and size (e.g. 600W) of the connected load.

System Life / Warranty

QUICKTRONIC products are covered by the QUICK 60+® warranty, a comprehensive lamp and ballast system warranty. For additional details, refer to the QUICK 60+ warranty bulletin.

OSRAM SYLVANIA
National Customer
Service and Sales Center
1-800-LIGHTBULB
(1-800-544-4828)
www.sylvania.com

Specifications subject to change without notice.

©2011 OSRAM SYLVANIA

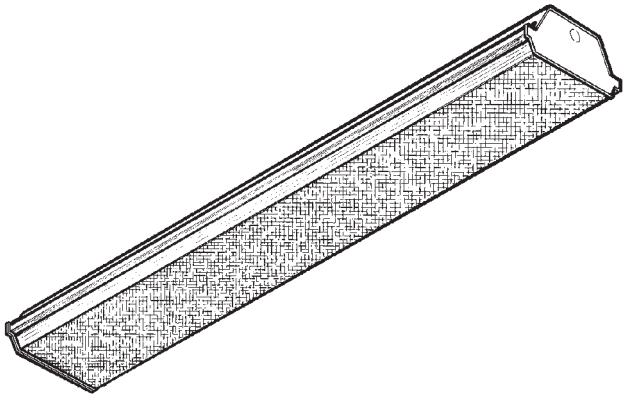
SYLVANIA, the system solution, QUICK60+, POWERSENSE, See the World in a New Light, PROStart, OCTRON and SUPERSAVER are registered trademarks of OSRAM SYLVANIA Inc.
ELOGIC is a trademark of OSRAM SYLVANIA Inc. QUICKTRONIC is a registered trademark of OSRAM AG. NEMA Premium is a registered trademark of National Electrical Manufacturers Association.

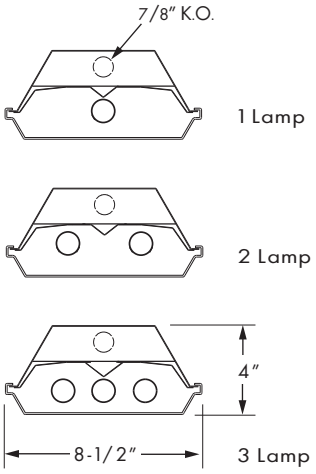
the system solution®

EFFICIENCY **WRAP AROUND**

EW

VOLTAGE TYPE JOB SERIES





SPECIFICATIONS

- HOUSING — 22-gauge die-formed C.R.S.
- REFLECTIVE SURFACES — Highly-specular, multi-faceted aluminum reflector standard, 92% average reflectance white powder coat reflector optional.
- SHIELDING — Self-captive extruded clear acrylic prismatic diffuser with 30% DR high-impact additive.
- FINISH — 92% minimum average reflective white powder coat with multi-stage iron/phosphate prepared metal.
- ELECTRICAL — Electronic ballast standard, instant start T8, rated Class P.
- LABELS — UL/CUL listed as fluorescent luminaire suitable for dry or damp locations.
- MOUNTING — Surface or suspended.

FEATURES

- Over 90% efficient.
- Highly-specular multi-faceted reflector provides wide distribution for uniform illumination.
- Balanced fixture requires only two mounting points for all lamp configurations.
- Individual or continuous row mounting.
- Available in 2 ft., 4 ft., and 8 ft. lengths.
- Diffuser may be replaced without the use of tools.
- Wireway is accessible without the use of tools.
- Ballast secured by two captive bolts and nuts to ensure a tight, reliable fit for maximum heat dissipation and minimal ballast noise.
- All parts painted after fabrication to facilitate installation, increase efficiency, and inhibit corrosion.
- This fixture is proudly made in the USA.

SUBMITTAL INFORMATION

LUMINAIRE SERIES

NOMINAL LENGTH
2 = 2 ft.
4 = 4 ft.
8 = 8 ft.

EM7A = Emergency battery pack (B70A) or equivalent

EW–4–232–A–OPTIONS–EB2–120

For more options, accessories, and product details, refer to Information Section.

TOTAL LAMPS
1, 2, 3, 4, or 6

LAMP WATTAGE/TYPE
17 = 2', 17-watt T8
32 = 4', 32-watt T8

SHIELDING
A = Clear acrylic prismatic diffuser

BALLAST TYPE (dependent on specified lamp type)
EB1 = 1-lamp electronic ballast
EB2 = 2-lamp electronic ballast
EB3 = 3-lamp electronic ballast

VOLTAGE
120 = 120V
277 = 277V

Williams®
FLUORESCENT LIGHTING

EW SERIES

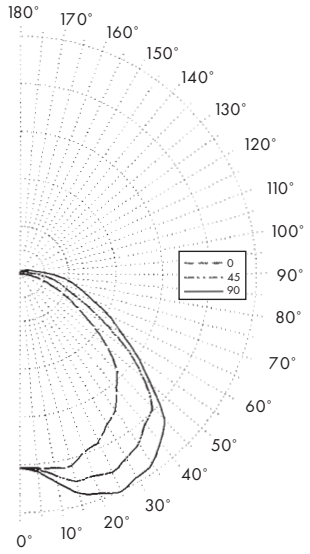
PHOTOMETRY INFORMATION

Williams Catalog #EW-4-132-A-EB1
Test Report #10207.0, Dated 2/11/99

Lamp Type: F32T8/835/RS
Lamp Quantity: 1

CANDLEPOWER DISTRIBUTION

VERT. ANG.	HORIZONTAL ANGLE 0	45	90	ZONAL LUMENS
0	714.	714.	714.	
5	718.	724.	732.	69.3
15	732.	790.	835.	223.1
25	683.	803.	881.	367.1
35	613.	763.	852.	470.4
45	506.	693.	758.	512.1
55	324.	487.	533.	405.4
65	178.	267.	360.	265.0
75	80.	160.	236.	173.2
85	24.	90.	156.	102.6
95	0.	40.	80.	44.2



LUMEN SUMMARY

ZONE	LUMENS	% LAMP	% FIXTURE
0 - 30	659.	22.7	24.3
0 - 40	1130.	39.0	41.6
0 - 60	2047.	70.6	75.5
0 - 90	2588.	89.2	95.4

TOTAL LUMINAIRE
OPTICAL **EFFICIENCY = 93.6 %**
SPACING CRITERIA: ACROSS= 1.7 ALONG= 1.3

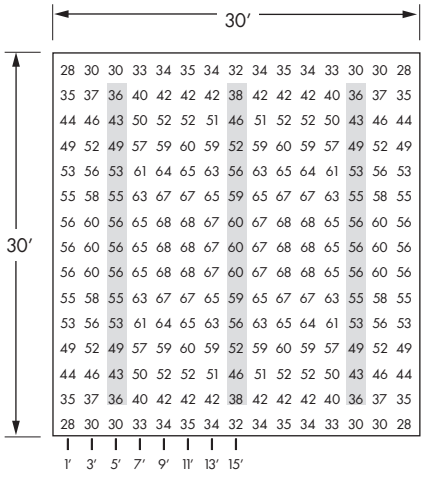
ZONAL CAVITY COEFFICIENTS

EFFECTIVE FLOOR CAVITY REFL. = .20

CEILING	.80			.70			.50		
WALL RCR	.70	.50	.30	.70	.50	.30	.50	.30	.10
0	1.10	1.10	1.10	1.07	1.07	1.07	1.02	1.02	1.02
1	1.01	.96	.92	.98	.94	.90	.89	.86	.83
2	.92	.85	.79	.89	.83	.77	.79	.74	.70
3	.85	.75	.68	.82	.73	.67	.70	.64	.59
4	.78	.67	.59	.75	.65	.58	.62	.56	.51
5	.71	.59	.51	.69	.58	.50	.55	.49	.43
6	.65	.53	.45	.63	.52	.44	.50	.43	.38
7	.60	.47	.39	.58	.46	.39	.44	.38	.33
8	.55	.42	.34	.53	.41	.34	.40	.33	.28
9	.50	.38	.30	.49	.37	.29	.35	.29	.24
10	.47	.34	.27	.45	.33	.26	.32	.26	.21

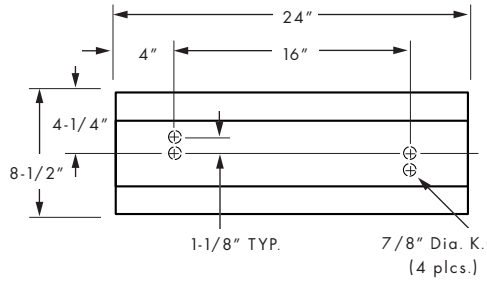
TYPICAL CLASSROOM INSTALLATION

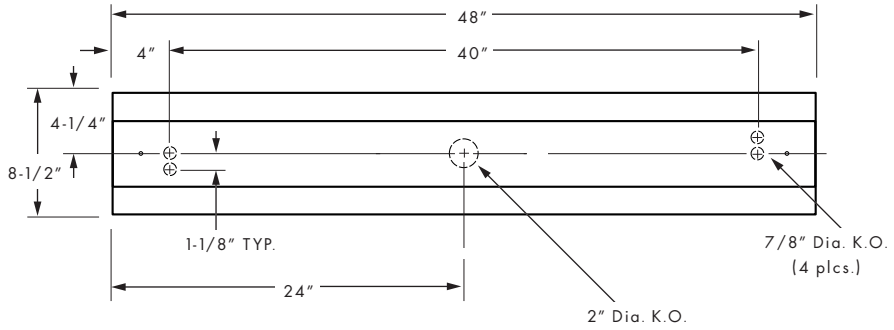
1-lamp cross section EW-4-132-A-EB1
30′ x 30′ room, 9′ ceilings, 80/50/20 reflectances
Three 24′ rows, 10′ on center, Electronic ballast,
1.18 ballast factor, Workplane height = 2.5′



Average = 52 FC
Maximum = 68 FC
Minimum = 28 FC
Max. to Min. = 2.4
Watts per sq. ft. = 0.78

MOUNTING





Back punching of 8′ fixture consists of duplicate 4′ punchings.

Williams
H.E. WILLIAMS, INC.
H.E. Williams, Inc. • Carthage, Missouri • www.**hewilliams**.com • 417-358-4065 • Fax: 417-358-6015

Information contained herein is subject to change without notice.

LED HIGH BAY
FBX



Enjoy
flexibility & savings
along with quality illumination

PHILIPS DAY-BRITE / PHILIPS CFI LED HIGH BAY FBX

The Philips Day-Brite / Philips CFI LED High Bay FBX provides versatility in form and function. With a range of lumen packages, optical distributions, and accessories available, this luminaire can be used in many different applications ranging from warehouses to retail outlets.

Project:
Location:
Catalog No:
Fixture Type:
Mfg: Qty:
Notes:

Ordering guide

example: FBX24LL40-UNV

Family	Lumens	Lamp Source	CCT	Voltage	Optics	Options
FBX		L	—	—	—	
FBX	**08L** 8,000 nominal delivered lumens **12L** 12,000 nominal delivered lumens **16L** 16,000 nominal delivered lumens **20L** 20,000 nominal delivered lumens **24L** 24,000 nominal delivered lumens **36L** 36,000 nominal delivered lumens **45L** 45,000 nominal delivered lumens	**L** LED	**40** 4000K (CRI 80) **50** 5000K (CRI 80)	**UNV** 120-277V **120** 120V **208** 208V **240** 240V **277** 277V **347** 347V **480** 480V	**Blank** General Distribution **N** Narrow **M** Medium **W** Wide **A** Aisle	**WP6** Wired 6' 16/3 Cord & NEMA Twist Lock Plug[56] **WC6** Wired 6' 16/3 Cord **WP6D** Wired 6' 16/3 Cord & NEMA Twist Lock Plug for Line Voltage and Wired 6' 16/3 Cord & Plug for Dimming Control[56] **WC6D** Wired 6' 16/3 Cord for Line Voltage and Wired 6' 16/3 Cord for Dimming Control **MD360** 360° Motion Detector (ON/OFF) **MD360D** 360° Motion Detector (ON/DIM) **EMLED** Emergency Battery (40°C max) **EMLEDC** Emergency Battery Cold Temp (40°C max) **55** High Ambient (55°C – optional for 24,000 lumen or less, required for 36,000 and 45,000 lumens) **LCA** Clear Acrylic Lens **LPA** Prismatic Acrylic Lens **LFA** Frosted Acrylic Lens

Footnotes:
[56] Must specify voltage.

Accessories (order separately)

FBX CHAIN KIT – 54" chains & V brackets
FBX-GRIP5 – 5' cables & V brackets
FBX-GRIP10 – 10' cables & V brackets
FBX-PENHGR – Pendant hanger (Not available for 36,000 or 45,000 lumen versions)
WG-FBX-2N – Wire guard for 8,000 and 12,000 lumen versions
WG-FBX-2W – Wire guard for 16,000, 20,000, and 24,000 lumen versions
WG-FBX-4 – Wire guard for 36,000 and 45,000 lumen versions

Wiring Notes

Standard cords have 3 wires. Consult factory for other cord options.

General Notes

All options factory installed.
All accessories are field installed.
Many luminaire components, such as reflectors, refractors, lenses, sockets, lampholders, and LEDs are made from various types of plastics which can be adversely affected by airborne contaminants. If sulfur based chemicals, petroleum based products, cleaning solutions, or other contaminants are expected in the intended area of use, consult factory for compatibility.

Predicted L_{70} Lifetime

40°C Ambient > 100,000 hours
40°C Ambient = 60,000 hours (for 8Klm and 16Klm)
(based upon LED manufacturer's supplied LM-80 data and in-situ laboratory testing)

PHILIPS Day-Brite
PHILIPS CFI

LED HIGH BAY
FBX

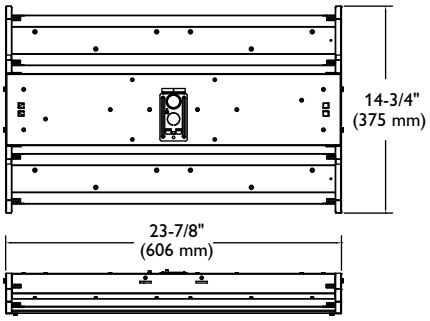
Application

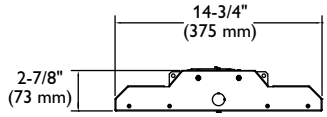
- This luminaire can be used to illuminate retail, cold storage, manufacturing, warehousing and many other large indoor spaces with control and precision.

Construction & Features

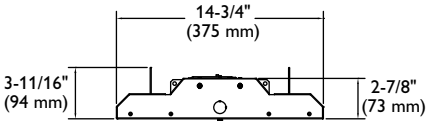
- Metal housing and reflectors provide excellent thermal transfer to extend component life.
- End holes to attach V bracket for chain or cable hanging.
- May be cable, chain, or pendant mounted.
- 7/8" K.O. at each end of luminaire for wiring or motion detector.
- Polyester powder finish for excellent impact and corrosion resistance.
- LED light engines and drivers are field replaceable.
- 5 Year Limited Warranty.
- Components are RoHS compliant.
- Listed by ETL to meet UL 1598 standards for damp location and -35°C to 40°C ambient. High ambient 55°C is optional.
- Dimming drivers are standard. Control is 0-10V DC.
- Optional motion detector.
- DLC Listing for most variations. Please check the DLC Qualified Products List to confirm (www.designlights.org/QPL).

Dimensions

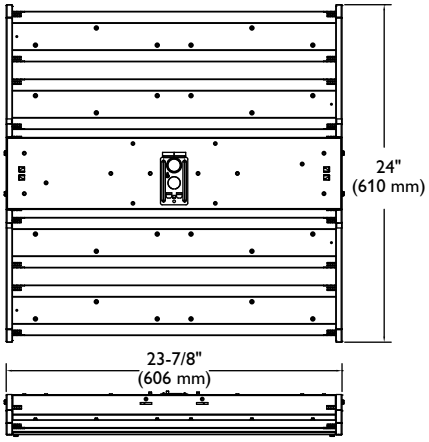


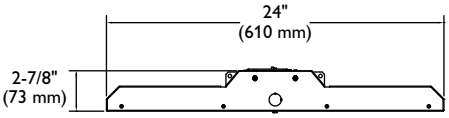


FBX08L
FBX12L

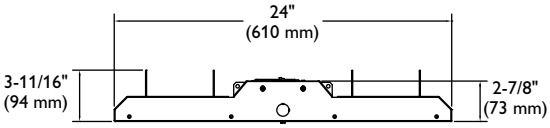


FBX08L high ambient
FBX12L high ambient

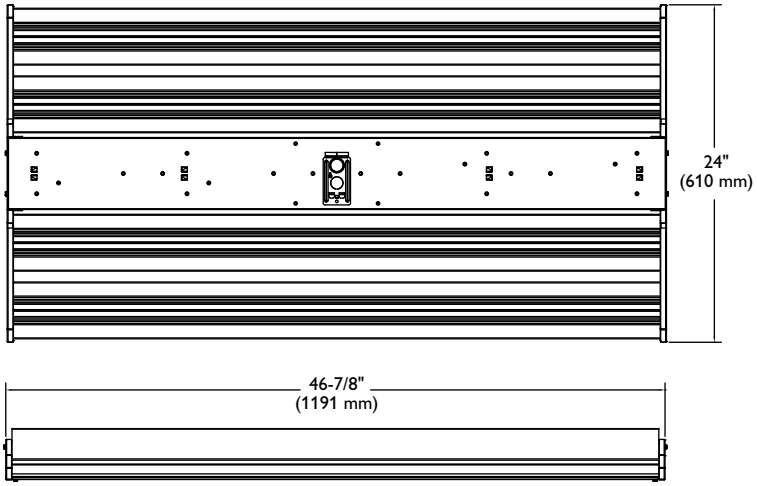


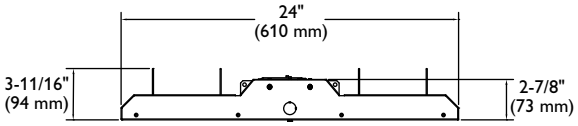


FBX16L
FBX20L
FBX24L



FBX16L high ambient
FBX20L high ambient
FBX24L high ambient





FBX36L
FBX45L

Photometry

LED High Bay FBX, General Distribution, 24,000 nominal delivered lumens

Catalog No.	FBX24LL40-UNV
Test No.	32714
S/MH	1.3
Lamp Type	LED
Lumens	22,277
Input Watts	197
Efficacy	113

Comparative yearly lighting energy cost per 1000 lumens – **$2.12** based on 3000 hrs. and $.08 pwr KWH.

The photometric results were obtained in the Philips Day-Brite laboratory which is NVLAP accredited by the National Institute of Standards and Technology.

Photometric values based on test performed in compliance with LM-79.

Candlepower

Angle	End	45	Cross
0	8056	8056	8056
5	8035	8023	8031
10	7941	7928	7932
15	7775	7777	7825
20	7574	7580	7599
25	7325	7319	7353
30	6989	6985	7031
35	6579	6595	6653
40	6128	6180	6227
45	5560	5668	5728
50	4974	5110	5169
55	4325	4469	4495
60	3637	3814	3076
65	2910	2982	1517
70	2164	1371	523
75	1441	358	338
80	758	258	284
85	219	165	162

Light Distribution

Degrees	Lumens	% Luminaire
0-30	6344	28.5
0-40	10479	47.0
0-60	18777	84.3
0-80	22086	99.1
0-90	22277	100.0

Average Luminance

Angle	End	45°	Cross
45	23804	24270	24523
55	22831	23589	23725
65	20846	21361	10869
75	16859	4188	3952
85	7611	5731	5631

Coefficients of Utilization

EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)

pcc	80			70			50	
pw	70	50	30	70	50	30	50	30
RCR								
0	119	119	119	116	116	116	111	111
1	110	105	101	107	103	100	99	96
2	100	92	86	98	91	85	87	82
3	92	82	74	89	80	73	77	71
4	84	72	64	82	71	63	69	62
5	77	65	56	75	64	55	61	54
6	71	58	49	69	57	49	55	48
7	66	53	44	64	52	44	50	43
8	61	48	40	60	47	39	46	39
9	57	44	36	56	43	36	42	35
10	54	41	33	52	40	33	39	32

LED High Bay FBX, Medium Distribution, 24,000 nominal delivered lumens

Catalog No.	FBX24LL40-UNV-M
Test No.	32706
S/MH	1.4
Lamp Type	LED
Lumens	22,520
Input Watts	197
Efficacy	115

Comparative yearly lighting energy cost per 1000 lumens – **$2.09** based on 3000 hrs. and $.08 pwr KWH.

The photometric results were obtained in the Philips Day-Brite laboratory which is NVLAP accredited by the National Institute of Standards and Technology.

Photometric values based on test performed in compliance with LM-79.

Candlepower

Angle	End	45	Cross
0	13073	13073	13073
5	13171	13134	13136
10	13297	13273	13320
15	13427	13525	13491
20	13432	13902	13734
25	12370	13953	13937
30	10686	12726	13403
35	9205	11072	11401
40	6972	8770	8174
45	3412	5815	4462
50	725	2582	1328
55	699	484	247
60	458	193	169
65	378	145	97
70	303	71	47
75	155	55	44
80	104	17	41
85	25	19	8

Light Distribution

Degrees	Lumens	% Luminaire
0-30	11268	22.6
0-40	17853	79.3
0-60	22231	98.7
0-80	22476	99.8
0-90	22520	100.0

Average Luminance

Angle	End	45°	Cross
45	14608	24899	19104
55	3690	2554	1301
65	2707	1036	698
75	1818	642	514
85	874	653	278

Coefficients of Utilization

EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)

pcc	80			70			50	
pw	70	50	30	70	50	30	50	30
RCR								
0	119	119	119	116	116	116	111	111
1	113	109	107	110	107	105	103	101
2	106	100	96	104	98	94	95	92
3	99	92	86	97	90	85	88	83
4	93	84	78	91	83	77	81	76
5	87	78	71	86	77	70	75	69
6	82	72	65	80	71	64	69	63
7	77	66	59	75	65	59	64	58
8	72	61	54	71	61	54	59	53
9	68	57	50	67	56	50	55	49
10	64	53	46	63	53	46	52	46

Photometric Test List

Catalog No.	Test No.	Delivered Lumens	Input Watts	Efficacy
FBX08LL40-UNV	32722	7918	82	96
FBX08LL40-UNV-LCA	32719	7695	83	93
FBX08LL40-UNV-LPA	32721	7445	82	91
FBX08LL40-UNV-LFA	32720	6728	82	82
FBX08LL40-UNV-N	32730	7906	83	96
FBX08LL40-UNV-N-LCA	32727	7682	82	94
FBX08LL40-UNV-N-LPA	32729	7458	82	91
FBX08LL40-UNV-N-LFA	32728	6765	82	83
FBX08LL40-UNV-M	32754	7937	82	97
FBX08LL40-UNV-M-LCA	32751	7720	82	94
FBX08LL40-UNV-M-LPA	32753	7457	82	91
FBX08LL40-UNV-M-LFA	32752	6719	82	82
FBX08LL40-UNV-W	32738	7920	82	96
FBX08LL40-UNV-W-LCA	32735	7665	82	94
FBX08LL40-UNV-W-LPA	32737	7372	82	89
FBX08LL40-UNV-W-LFA	32736	6634	82	81
FBX08LL40-UNV-A	32746	7997	83	97
FBX08LL40-UNV-A-LCA	32743	7771	82	94
FBX08LL40-UNV-A-LPA	32745	7431	82	91
FBX08LL40-UNV-A-LFA	32744	6594	82	80

Catalog No.	Test No.	Delivered Lumens	Input Watts	Efficacy
FBX12LL40-UNV	32790	11052	97	113
FBX12LL40-UNV-LCA	32793	10671	97	110
FBX12LL40-UNV-LPA	32791	10310	98	105
FBX12LL40-UNV-LFA	32792	9238	97	95
FBX12LL40-UNV-N	32797	11258	98	115
FBX12LL40-UNV-N-LCA	32794	10999	97	113
FBX12LL40-UNV-N-LPA	32796	10595	98	108
FBX12LL40-UNV-N-LFA	32795	9448	98	97
FBX12LL40-UNV-M	32805	11248	98	115
FBX12LL40-UNV-M-LCA	32802	10905	98	112
FBX12LL40-UNV-M-LPA	32804	10435	98	107
FBX12LL40-UNV-M-LFA	32803	9403	98	96
FBX12LL40-UNV-W	32798	11082	98	113
FBX12LL40-UNV-W-LCA	32801	10775	98	110
FBX12LL40-UNV-W-LPA	32799	10280	97	106
FBX12LL40-UNV-W-LFA	32800	9210	98	94
FBX12LL40-UNV-A-55	33825	12275	97	127
FBX12LL40-UNV-A-55-LCA	33826	11937	97	123
FBX12LL40-UNV-A-55-LPA	33827	11280	97	117
FBX12LL40-UNV-A-55-LFA	33828	9941	97	103

Photometric Test List (continued)

Catalog No.	Test No.	Delivered Lumens	Input Watts	Efficacy
FBX16LL40-UNV	32715	15819	166	95
FBX16LL40-UNV-LCA	32718	15320	166	92
FBX16LL40-UNV-LPA	32716	14758	165	89
FBX16LL40-UNV-LFA	32717	13298	165	81
FBX16LL40-UNV-N	32723	15708	166	95
FBX16LL40-UNV-N-LCA	32726	15314	166	92
FBX16LL40-UNV-N-LPA	32724	14861	166	90
FBX16LL40-UNV-N-LFA	32725	13400	165	81
FBX16LL40-UNV-M	32747	15974	166	96
FBX16LL40-UNV-M-LCA	32750	15484	165	94
FBX16LL40-UNV-M-LPA	32748	14927	165	91
FBX16LL40-UNV-M-LFA	32749	13398	165	81
FBX16LL40-UNV-W	32731	15789	166	95
FBX16LL40-UNV-W-LCA	32734	15358	165	93
FBX16LL40-UNV-W-LPA	32732	14704	165	89
FBX16LL40-UNV-W-LFA	32733	13211	165	80
FBX16LL40-UNV-A	32739	15923	166	96
FBX16LL40-UNV-A-LCA	32742	15587	166	94
FBX16LL40-UNV-A-LPA	32740	14801	166	89
FBX16LL40-UNV-A-LFA	32741	13223	165	80
FBX20LL40-UNV	32806	20191	173	116
FBX20LL40-UNV-LCA	32809	19572	173	113
FBX20LL40-UNV-LPA	32807	18784	173	109
FBX20LL40-UNV-LFA	32808	16908	172	98
FBX20LL40-UNV-N	32821	20179	173	117
FBX20LL40-UNV-N-LCA	32818	19640	172	114
FBX20LL40-UNV-N-LPA	32820	19083	173	111
FBX20LL40-UNV-N-LFA	32819	17203	172	100
FBX20LL40-UNV-M	32814	20304	173	117
FBX20LL40-UNV-M-LCA	32817	19824	173	115
FBX20LL40-UNV-M-LPA	32815	19071	172	111
FBX20LL40-UNV-M-LFA	32816	17102	173	99
FBX20LL40-UNV-W	32813	19984	172	116
FBX20LL40-UNV-W-LCA	32810	19515	172	113
FBX20LL40-UNV-W-LPA	32812	18688	172	109
FBX20LL40-UNV-W-LFA	32811	16793	173	97
FBX20LL40-UNV-A-55	33824	22359	171	131
FBX20LL40-UNV-A-55-LCA	33823	21534	171	126
FBX20LL40-UNV-A-55-LPA	33822	20155	171	118
FBX20LL40-UNV-A-55-LFA	33821	17662	171	104
FBX24LL40-UNV	32714	22277	197	113
FBX24LL40-UNV-LCA	32711	21673	196	111
FBX24LL40-UNV-LPA	32713	20782	197	106
FBX24LL40-UNV-LFA	32712	18697	196	95
FBX24LL40-UNV-N	32707	22412	197	114
FBX24LL40-UNV-N-LCA	32710	21744	196	111
FBX24LL40-UNV-N-LPA	32709	21133	196	108
FBX24LL40-UNV-N-LFA	32708	18976	196	97
FBX24LL40-UNV-M	32706	22520	197	115
FBX24LL40-UNV-M-LCA	32703	21868	197	111
FBX24LL40-UNV-M-LPA	32705	21084	197	107
FBX24LL40-UNV-M-LFA	32704	18952	196	97
FBX24LL40-UNV-W	32699	22309	197	113
FBX24LL40-UNV-W-LCA	32702	21633	197	110
FBX24LL40-UNV-W-LPA	32700	20663	196	105
FBX24LL40-UNV-W-LFA	32701	18621	197	95
FBX24LL40-UNV-A-55	33817	23975	194	124
FBX24LL40-UNV-A-55-LCA	33818	23313	193	121
FBX24LL40-UNV-A-55-LPA	33819	22142	193	115
FBX24LL40-UNV-A-55-LFA	33820	19561	193	101

Catalog No.	Test No.	Delivered Lumens	Input Watts	Efficacy
FBX36LL40-UNV-55	32880	36930	309	120
FBX36LL40-UNV-55-LCA	32879	36047	309	117
FBX36LL40-UNV-55-LPA	32878	34371	308	112
FBX36LL40-UNV-55-LFA	32877	30686	312	98
FBX36LL40-UNV-N-55	32881	37112	314	118
FBX36LL40-UNV-N-55-LCA	32882	36292	316	115
FBX36LL40-UNV-N-55-LPA	32883	35098	314	112
FBX36LL40-UNV-N-55-LFA	32884	31536	310	102
FBX36LL40-UNV-M-55	32888	37525	313	120
FBX36LL40-UNV-M-55-LCA	32887	36491	313	117
FBX36LL40-UNV-M-55-LPA	32886	35091	314	112
FBX36LL40-UNV-M-55-LFA	32885	31526	315	100
FBX36LL40-UNV-W-55	32889	37159	309	120
FBX36LL40-UNV-W-55-LCA	32890	36436	316	115
FBX36LL40-UNV-W-55-LPA	32891	34296	313	110
FBX36LL40-UNV-W-55-LFA	32892	30759	313	98
FBX36LL40-UNV-A-55	33928	39429	307	128
FBX36LL40-UNV-A-55-LCA	33927	38201	307	125
FBX36LL40-UNV-A-55-LPA	33926	36125	307	118
FBX36LL40-UNV-A-55-LFA	33925	32081	306	105
FBX45LL40-UNV-55	32834	45184	398	114
FBX45LL40-UNV-55-LCA	32835	44005	397	111
FBX45LL40-UNV-55-LPA	32836	41962	397	106
FBX45LL40-UNV-55-LFA	32837	37573	397	95
FBX45LL40-UNV-N-55	32833	45393	400	113
FBX45LL40-UNV-N-55-LCA	32832	44094	401	110
FBX45LL40-UNV-N-55-LPA	32831	42801	401	107
FBX45LL40-UNV-N-55-LFA	32830	38515	401	96
FBX45LL40-UNV-M-55	32826	45896	400	115
FBX45LL40-UNV-M-55-LCA	32827	44752	400	112
FBX45LL40-UNV-M-55-LPA	32828	42893	394	109
FBX45LL40-UNV-M-55-LFA	32829	38430	397	97
FBX45LL40-UNV-W-55	32825	45637	398	115
FBX45LL40-UNV-W-55-LCA	32824	44448	398	112
FBX45LL40-UNV-W-55-LPA	32823	41959	396	106
FBX45LL40-UNV-W-55-LFA	32822	37593	399	94
FBX45LL40-UNV-A-55	33921	47957	389	123
FBX45LL40-UNV-A-55-LCA	33922	47104	388	121
FBX45LL40-UNV-A-55-LPA	33923	44092	388	114
FBX45LL40-UNV-A-55-LFA	33924	39066	387	101

©2014 Koninklijke Philips N.V. All rights reserved.
Philips reserves the right to make changes in specifications and/or to discontinue any product at any time without notice or obligation and will not be liable for any consequences resulting from the use of this publication.

philips.com/luminaires

Philips Lighting
North America Corporation
200 Franklin Square Drive
Somerset, NJ 08873
Tel. 855-486-2216

Imported by: Philips Lighting
A division of Philips Electronics Ltd.
281 Hillmount Rd,
Markham, ON Canada L6C 2S3
Tel. 800-668-9008

NEPTUN LIGHT

LED
16" POLYCARBONATE LOW BAY FIXTURES

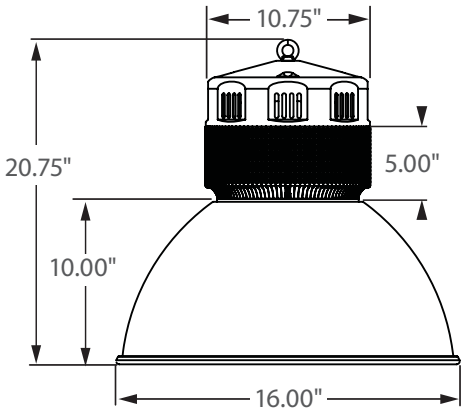


Please check latest update for complete information.
http://www.designlights.org/solidstate.about.QualifiedProductsList_Publicv2.php

** AVAILABLE **

Bi-Level 100% | Dimming 50%

0 - 10V FULL DIMMING



Incredible 75,000 hrs

GENERAL DESCRIPTION

Neptun's LED Polycarbonate Low-Bay fixtures combine classic form and versatility to make it an excellent choice for new construction or retrofit applications. The polycarbonate refractor offers excellent optics with horizontal and vertical footcandles. The 16" housing is offered in a variety of wattages to provide maximum flexibility in all types of applications. It can replace existing HID & HPS fixtures up to 250W.

APPLICATION

- Retail Lighting
- Showroom Lighting
- Grocery Store Lighting
- Area & Storage Lighting

STRUCTURE, MATERIALS, & FEATURES

- 16" High Efficiency, heat and impact resistant, UV protected, non yellowing, polycarbonate refractor.
- Corrosion resistant die-cast aluminum gear box with electrocoat finish.
- High Output COB LED's.
- High power factor, low THD driver with 10kV Surge Protection.
- High performance Thermal Management system.
- Instant-On flicker-free Cold Start and Hot Re-Start.
- Bright white light (5000˚K) for greater visibility and safety.
- Up to 15 year maintenance free operation.
- 5 Year Warranty on complete fixture. (LED's, Driver, & Housing)
- **Optional**: Bi-Level Dimming, 0-10V Dimming, Wi-Fi Control, Remote Monitoring and ON/ OFF Control

ORDERING INFORMATION

Sample Number: LED-17050-PC-UNV-BL-DIM-850-MD-C3
Custom options and accessories available. Please consult factory

Series	Wattage	Reflector	Voltage	Options	CCT	Accesories	Options
LED-17 = 16" High Bay	**050** = 50 W **080** = 80 W **100** = 100 W **160** = 160 W **240** = 240 W	**PC** = Polycarbonate	**UNV** = 120-277 VAC **347V** = 347 VAC **480V** = 480 VAC	**0-10VDIM** = 0-10V Dimming **BL-DIM** = Bi-Level Dimming * * Includes Motion Sensor ** Contact Factory for dimming options	**835** = 3500°K **841** = 4100°K **850** = 5000°K * * Standard	**MD** = Motion Sensor ON/OFF **DLH** = Day Light Harvesting* * Offered with 0-10V Dimming)	**C3*** = 3' Cord-No Plug (other lengths available C6 = 6' cord) **PC3** = 3' Cord with NEMA Plug **PL** = Polycarbonate Lens (verify plug type when ordering) * Standard

lightinnovations@work™

NEPTUN LIGHT

LED
16" POLYCARBONATE LOW BAY FIXTURES

PRODUCT INFORMATION

Model No.	Description	Rated Watts	Input Watts	Initial Lumens	Universal Line Voltage (VAC)	Max Line Current (Amp) @ 120 - 277	THD	Power Factor	Weight
LED-17050-PC-UNV	LED Low Bay Fixture	50	51	5,500	120-277	0.52 - 0.22	<20%	>0.90	15 lbs
LED-17080-PC-UNV	LED Low Bay Fixture	80	81	8,000	120-277	0.69 - 0.30	<20%	>0.90	15 lbs
LED-17100-PC-UNV	LED Low Bay Fixture	100	102	9,500	120-277	0.87 - 0.37	<20%	>0.90	15 lbs
LED-17160-PC-UNV	LED High Bay Fixture	160	162	13,600	120-277	1.39 - 0.60	<20%	>0.90	15 lbs
LED-17240-PC-UNV	LED High Bay Fixture	240	243	20,500	120-277	2.10 - 0.90	<20%	>0.90	15 lbs

SPECIFICATIONS

- Driver ..... Constant Current
- Start Method ..... InstantON
- Hot Re-start ..... InstantON
- Power Supply 350mA
- Driver UL Rating ..... Class 1
- Driver UL Outdoor Rated ..... Wet Location
- Sound Rating ..... Class A
- ANSI Surge Protection ..... IEEE C62.41 C High
- Driver Off-State Draw ..... 0 Watts
- Universal Input Line Voltage ..... 120-277 VAC
- Input Line Frequency ..... 50/60 Hz
- Projected (L70) @ 25°C ..... > 100,000 hrs.
- Color Temperature ..... 5,000°K
- Color Rendering Index (CRI) ..... > 80
- Minimum Starting Temperature ..... -40°C
- Maximum Starting Temperature ..... +50°C
- Lumens per Watt ..... > 90
- Shock / Vibration Resistant ..... Yes
- Power Factor ..... > 0.90
- Total Harmonic Distortion ..... < 20%
- Inrush Current Peak ..... < 10 Amp
- FCC Compliance ..... Part 15, Subp. C
- ETL Listed / UL Standard 1598 ..... Yes
- Housing IP Rating IP43
- Driver IP Rating IP67
- Warranty ..... 5 Year

MOUNTING OPTIONS

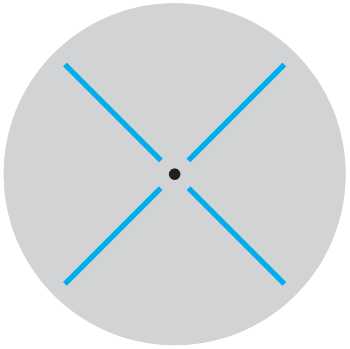
Hook Mount (Standard)



Pendant Mount
(Verify NPT size with factory)



PHOTOMETRICS (See Complete IES File)



Type V Distribution

Neptun Light, Inc.
13950 Business Center Drive
Lake Forest, IL 60045
Fax: 847.735.8004

Neptun Light, Inc. reserves the right to change materials or modify the design of its product without notification as part of the company's continuing product improvement program.
©2002-2013 Neptun Light, Inc. All rights reserved.

Spec. Rev. 1-2015

SEEX LED Exit Sign

Emergensee Light



LISTED

Features

- Compact, low-profile design in neutral finish
- Energy-efficient LED technology
- EZ snap-out chevron directional indicators
- UL listed for damp locations & meets UL924, NFPA 101 Life Safety Code, NEC, OSHA, Local and State Codes

Electrical

- Dual 120V/277V voltage
- Charge rate/power "ON" LED indicator light and push-to-test switch for mandated code compliance testing
- LVD (low voltage disconnect) prevents battery from deep discharge
- Long-life, maintenance-free, rechargeable NiCd battery (EM model)
- Internal solid-state transfer switch automatically connects the internal battery to LED board for minimum 90-minute emergency illumination
- Fully automatic solid-state, two-rate charger initiates battery charging to recharge a discharged battery in 24 hours.

Mounting

- Universal surface mount, wall or ceiling, with EZ-snap thermoplastic mounting canopy, which snaps into place making installation quick & easy.

Housing

- Injection-molded, engineering-grade, V-0 flame retardant, high-impact, thermoplastic in white or black finish

Options

- SDT: Self-Diagnostic (option SDT) continually diagnoses unit's performance and tests system (auto battery discharge once every 30 days and once every 12 months) to ensure reliable operation and to meet electrical and life safety codes
- DC: Dual Circuit option on the AC-only unit enables it to be connected to two different (primary and secondary, one acting as a back-up for the other) supplies at the same time (contact customer service).

Illumination

- Ultra-bright, energy efficient, long-life Red or Green LED



SALIDA faceplates also available.

Warranty

- Five Year Warranty on all electronics and housing. Batteries are pro-rated warranted for 5 years.

Dimensions





Special Wording Sign samples

ORDERING INFORMATION

Model	Face #	Letter Color	Housing Color	Battery	Options
SEEX	U2 - Universal	R - Red	W - White	Blank - AC Only	SDT - Self Diagnostics
	Single/Double	G - Green	B - Black	EM - NiCad Battery	2C - 2 Circuit Operation
					(ONLY 1 HOT CIRCUIT AT A TIME)
					SW - Special Wording
					USA - ASSEMBLED IN THE U.S.A.

Model	Face #	Letter Color	Housing Color	Battery	Options
_____ -	_____ -	_____ -	_____ -	_____ -	_____ - _____

CLED52N



LED ceiling light with precision optics deliver smooth and uniform distribution. Ideal for retail settings, workspace lighting and other applications requiring a high output commercial grade downlight.

Color: Bronze

Weight: 18.0 lbs

Project:	Type:
Prepared By:	Date:

Driver Info		LED Info	
Type:	Constant Current	Watts:	52W
120V:	0.53A	Color Temp:	4000K (Neutral)
208V:	0.35A	Color Accuracy:	82 CRI
240V:	0.30A	L70 Lifespan:	100,000
277V:	0.26A	Lumens:	4,553
Input Watts:	60W	Efficacy:	76 LPW
Efficiency:	87%		

Technical Specifications

Listings

UL Listing:

Suitable for Wet Locations. Covered Ceiling Mount Only.

Dark Sky Approved:

The International Dark Sky Association has approved this product as a full cutoff, fully shielded luminaire.

IESNA LM-79 & LM-80 Testing:

RAB LED luminaires have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80, and have received the Department of Energy "Lighting Facts" label.

LED Characteristics

Lifespan:

100,000-hour LED lifespan based on IES LM-80 results and TM-21 calculations.

LEDs:

4x13W high-output, long-life LEDs.

Color Consistency:

3-step MacAdam Ellipse binning to achieve consistent fixture-to-fixture color.

Color Stability:

LED color temperature is warrantied to shift no more than 200K in CCT over a 5 year period.

Color Uniformity:

RAB's range of CCT (Correlated Color Temperature) follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2011.

Electrical

Drivers:

2x26W Driver, Constant Current, Class 2, 100V-277V, 50/60 Hz, 6kv Surge Protection, 720mA, 100-277VAC 0.4 Amps., Power Factor 99%.

THD:

13.6% at 120V

Construction

Ambient Temperature:

Suitable for use in 40°C (104°F) ambient temperatures.

Cold Weather Starting:

Minimum starting temperature is -40°F/-40°C.

Thermal Management:

Optimized using computational fluid dynamics software to ensure long LED and driver lifespan.

Housing:

Precision die-cast aluminum housing and lens frame.

Lens:

Clear tempered glass lens.

Gaskets:

High-temperature silicone.

Finish:

Our environmentally friendly polyester powder coatings are formulated for high-durability and long-lasting color, and contains no VOC or toxic heavy metals.

Other

Green Technology:

Mercury and UV Free, and RoHS compliant.

California Title 24:

See CLED52/D10 for a 2013 California Title 24 compliant product. Any additional component requirements will be listed in the Title 24 section under technical specifications on the product page.

Patents:

The design of CLED52 is protected by patents pending in US, Canada, China, Taiwan and Mexico.

Country of Origin:

Designed by RAB in New Jersey and assembled in the USA by RAB's IBEW Local 3 workers.

Buy American Act Compliant:

This product is a COTS item manufactured in the United States, and is compliant with the Buy American Act.

Recovery Act (ARRA) Compliant:

This product complies with the 52.225-21 "Required Use of American Iron, Steel, and Manufactured Goods-- Buy American Act-- Construction Materials (October 2010).

Trade Agreements Act Compliant:

This product is a COTS item manufactured in the United States, and is compliant with the Trade Agreements Act.

GSA Schedule:

Suitable in accordance with FAR Subpart 25.4.

Optical

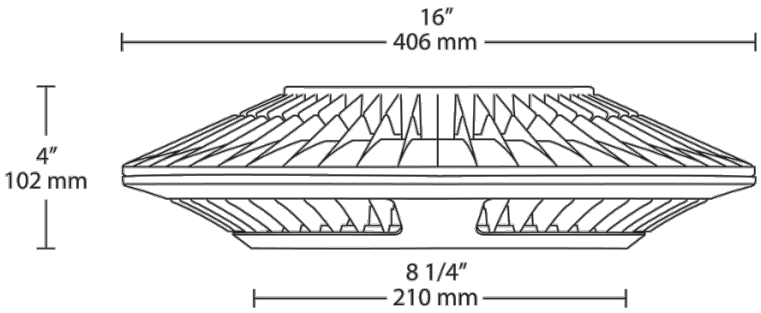
BUG Rating:

B2 U1 G1

Copyright © 2014 RAB Lighting Inc. All Rights Reserved Note: Specifications are subject to change at any time without notice

CLED52N

Dimensions



Features

- High output ceiling light
- Precision optics deliver uniform light distribution
- 100,000-hour LED lifespan
- 5-year warranty

Copyright © 2014 RAB Lighting Inc. All Rights Reserved Note: Specifications are subject to change at any time without notice



D-Series
LED Surface Canopy

d-series

Catalog Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

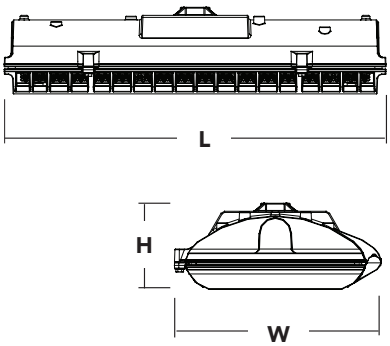
Specifications

Length: 17-3/4" *(45.1 cm)*

Width: 8-1/2" *(21.6 cm)*

Height: 3-7/16" *(8.7 cm)*

Weight (max): 16 lbs *(7.3 kg)*



Introduction

The D-Series LED Surface Canopy luminaire is ideal for covered walkways or drive-thrus, semi-covered outdoor aisles, and walk-in coolers and freezers. Its five optical choices provide the design flexibility to potentially reduce luminaire counts while still meeting IES criteria, lowering overall energy consumption.

Its expected service life of over 100,000 hours (20 years of nighttime operation) combined with the available motion/ambient sensor offers an extremely low maintenance solution that yields quick payback.

Ordering Information

EXAMPLE: DSXSC LED 20C 700 40K T5M MVOLT SRM DWHXD

DSXSC LED

Series	LEDs	Drive current	Color temperature	Distribution	Voltage	Mounting
DSXSC LED	10C 10 LEDs (one engine) [1,2] 20C 20 LEDs (two engines) 30C 30 LEDs (three engines)	350 350 mA 530 530 mA 700 700 mA 1000 1000 mA (1 A)	30K 3000 K 40K 4000 K 50K 5000 K AMBPC Amber phosphor converted[3]	T5E Type V, entryway [4] T5M Type V, medium T5W Type V, wide T5R Type V, rectangular ASY Asymmetric	MVOLT [5] 120 [5] 208 [5] 240 [5] 277 [5] 347 [6] 480 [6]	**Shipped included** SRM Surface mount (12-inch length supply leads)

Options

Shipped installed

HS	House-side shield (housing visor) [7]
SF	Single fuse (120, 277, 347V) [8,9]
DF	Double fuse (208, 240, 480V) [8,9]
SPD	Separate surge protection [10]
CFMH	Cover finish matches housing [11]
PIR	Motion/ambient sensor for 8-15' mounting heights [12]
PIRH	Motion/ambient sensor for 15-30' mounting heights [12]
PIR3FC3V	Motion/ambient sensor for 8-15' mounting heights and for typical applications requiring daylight harvesting and Title 24 compliance [12]
PIRH3FC3V	Motion/ambient sensor for 15-30' mounting heights and typical applications requiring daylight harvesting and Title 24 compliance [12]
XAD	XPoint™ Wireless enabled [13]
XADN	XPoint™ Wireless enabled for emergency circuit [13]
XAD PIR	XPoint™ Wireless enabled motion/ambient sensor for 8-15' mounting heights [13,14]
XAD PIRH	XPoint™ Wireless enabled motion/ambient sensor for 15-30' mounting heights [13,14]
XADN PIR	XPoint™ Wireless enabled motion/ambient sensor for emergency circuits for 8-15' mounting heights [13,14]
XADN PIRH	XPoint™ Wireless enabled motion/ambient sensor for emergency circuits for 15-30' mounting heights [13,14]

Shipped separately

BDS	Bird shroud [7]

Finish *(required)*

DWHXD	White
DNAXD	Natural aluminum
DDBXD	Dark bronze

Accessories

Ordered and shipped separately.

DSXSCHS U	House-side shield (1 per light engine)
DSXSCBDSSJ DWHXD U	Bird shroud for SRM on surface J-box only, white (specify finish)

NOTES

1 Available with 700mA or 1000mA option only.
2 Not available with 347 or 480V.
3 AMBPC only available with 530mA or 700mA.
4 DesignLights Consortium qualified.
5 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Specify 120, 208, 240 or 277 options only when ordering with fusing (SF, DF options).
6 N/A with one light engine (10C). Only available with 700mA or 1000mA.
7 Also available as a separate accessory; see Accessories information at left.
8 Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
9 Not available with XAD.
10 See the electrical section on page 3 for more details.
11 Available with DNAXD or DDBXD only.
12 PIR & PIR3FC3V specifies the Acuity Controls SBOR 10 ODP motion/ambient sensor, the PIRH & PIRH3FC3V specifies the Acuity Controls SBOR 6 ODP motion/ambient sensor.
13 Dimming driver standard. Not available with 347V or 480V. Not available with fusing.
14 XAD PIR specifies the Acuity Controls XPA SBOR10 wireless controller, the XADN PIR specifies the Acuity Controls XPA SBON10 wireless controller, the XAD PIRH specifies the Acuity Controls XPA SBOR6 wireless controller, and the XADN PIRH specifies the XPA SBON6 wireless controller.

LITHONIA LIGHTING

One Lithonia Way • Conyers, Georgia 30012 • Phone: 800.279.8041 • Fax: 770.918.1209 • www.lithonia.com
© 2012-2015 Acuity Brands Lighting, Inc. All rights reserved.

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts.

Light Engines	Drive Current (mA)	Performance Package	System Watts	Dist. Type	30K (3000 K, 80 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 65 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
10C (10 LEDs)	700 mA	10C 700--K	26W	ASY	1,792	0	0	1	69	2,253	1	0	1	87	2,428	1	0	1	93
				T5E	1,882	1	0	0	72	2,366	1	0	0	91	2,550	1	0	0	98
				T5M	1,889	1	0	0	73	2,375	2	0	0	91	2,560	2	0	0	98
				T5R	1,860	2	0	2	72	2,339	2	0	2	90	2,521	2	0	2	97
				T5W	1,771	2	0	1	68	2,226	2	0	1	86	2,399	2	0	1	92
	1000 mA	10C1000 --K	37W	ASY	2,444	1	0	1	66	3,074	1	0	1	83	3,314	1	0	1	90
				T5E	2,566	1	0	0	69	3,227	2	0	0	87	3,479	2	0	0	94
				T5M	2,576	2	0	0	70	3,241	2	0	1	88	3,493	2	0	1	94
				T5R	2,537	2	0	2	69	3,191	2	0	2	86	3,440	3	0	3	93
				T5W	2,414	2	0	1	65	3,037	2	0	1	82	3,274	3	0	1	88
20C (20 LEDs)	350 mA	20C 350 --K	25W	ASY	1,995	1	0	1	80	2,511	1	0	1	100	2,705	1	0	1	108
				T5E	2,095	1	0	0	84	2,637	1	0	0	105	2,840	2	0	0	114
				T5M	2,103	2	0	0	84	2,647	2	0	0	106	2,851	2	0	1	114
				T5R	2,071	2	0	2	83	2,607	2	0	2	104	2,808	2	0	2	112
				T5W	1,971	2	0	1	79	2,481	2	0	1	99	2,672	2	0	1	107
	530 mA	20C 530 --K	37W	ASY	2,803	1	0	1	76	3,526	1	0	1	95	3,799	1	0	1	103
				T5E	2,943	2	0	0	80	3,702	2	0	0	100	3,989	2	0	0	108
				T5M	2,955	2	0	1	80	3,717	2	0	1	100	4,005	2	0	1	108
				T5R	2,910	2	0	2	79	3,660	3	0	3	99	3,944	3	0	3	107
				T5W	2,770	2	0	1	75	3,483	3	0	1	94	3,754	3	0	1	101
	700 mA	20C 700 --K	46W	ASY	3,449	1	0	1	75	4,337	1	0	1	94	4,675	1	0	1	102
				T5E	3,621	2	0	0	79	4,554	2	0	0	99	4,909	2	0	0	107
				T5M	3,636	2	0	1	79	4,572	3	0	1	99	4,928	3	0	1	107
				T5R	3,580	3	0	3	78	4,502	3	0	3	98	4,853	3	0	3	106
				T5W	3,407	3	0	1	74	4,285	3	0	1	93	4,619	3	0	1	100
	1000 mA	20C 1000 --K	74W	ASY	4,632	1	0	1	63	5,828	1	0	1	79	6,283	1	0	2	85
				T5E	4,864	2	0	0	66	6,119	2	0	0	83	6,597	2	0	1	89
				T5M	4,883	3	0	1	66	6,143	3	1	1	83	6,623	3	0	1	90
				T5R	4,808	3	0	3	65	6,050	3	0	3	82	6,522	3	0	3	88
				T5W	4,577	3	0	1	62	5,758	3	0	2	78	6,207	3	0	2	84
30C (30 LEDs)	350 mA	30C 350 --K	35W	ASY	3,022	1	0	1	86	3,799	1	0	1	109	4,097	1	0	1	117
				T5E	3,172	2	0	0	91	3,989	2	0	0	114	4,302	2	0	0	123
				T5M	3,185	2	0	1	91	4,005	2	0	1	114	4,319	3	0	1	123
				T5R	3,137	2	0	2	90	3,944	3	0	3	113	4,253	3	0	3	122
				T5W	2,985	2	0	1	85	3,754	3	0	1	107	4,048	3	0	1	116
	530 mA	30C 530 --K	53W	ASY	4,239	1	0	1	80	5,333	1	0	1	101	5,748	1	0	1	108
				T5E	4,451	2	0	0	84	5,599	2	0	0	106	6,035	2	0	0	114
				T5M	4,468	3	0	1	84	5,622	3	0	1	106	6,059	3	0	1	114
				T5R	4,400	3	0	3	83	5,536	3	0	3	104	5,967	3	0	3	113
				T5W	4,188	3	0	1	79	5,269	3	0	1	99	5,679	3	0	1	107
	700 mA	30C 700 --K	67W	ASY	5,170	1	0	1	77	6,504	1	0	2	97	7,011	1	0	2	105
				T5E	5,428	2	0	0	81	6,829	3	0	1	102	7,362	3	0	1	110
				T5M	5,450	3	0	1	81	6,856	3	0	1	102	7,391	3	0	2	110
				T5R	5,367	3	0	3	80	6,752	3	0	3	101	7,278	3	0	3	109
				T5W	5,108	3	0	1	76	6,426	3	0	2	96	6,927	3	0	2	103
	1000 mA	30C 1000 --K	107W	ASY	6,775	1	0	2	63	8,520	2	0	2	80	9,187	2	0	2	86
				T5E	7,113	3	0	1	66	8,946	3	0	1	84	9,646	3	0	1	90
				T5M	7,141	3	0	1	67	8,982	3	0	2	84	9,685	3	0	2	91
				T5R	7,032	3	0	3	66	8,845	4	0	4	83	9,537	4	0	4	89
				T5W	6,693	3	0	2	63	8,418	4	0	2	79	9,077	4	0	2	85

Note: Available with phosphor-converted amber LEDs (nomenclature AMBPC). These LEDs produce light with 97+% >530 nm. Output can be calculated by applying a 0.7 factor to 4000 K lumen values and photometric files (for 530mA and 700mA drive currents only).

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.02
10°C	50°F	1.01
20°C	68°F	1.00
25°C	**77°F**	**1.00**
30°C	86°F	1.00
40°C	104°F	0.98

Electrical Load

LEDs	Drive Current (mA)	System Watts	Current (A)					
			120V	208V	240V	277V	347V	480V
10C	700	26W	0.25	0.15	0.13	0.11	–	–
	1000	37W	0.37	0.21	0.18	0.16	–	–
20C	350	25W	0.23	0.13	0.12	0.10	–	–
	530	37W	0.33	0.19	0.17	0.14	–	–
	700	46W	0.43	0.25	0.22	0.19	0.15	0.11
	1000	74W	0.68	0.39	0.34	0.29	–	–
30C	350	35W	0.33	0.19	0.16	0.14	–	–
	530	53W	0.50	0.29	0.25	0.22	–	–
	700	67W	0.66	0.38	0.33	0.29	0.23	0.17
	1000	107W	1.01	0.58	0.50	0.44	–	–

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a 25°C ambient, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

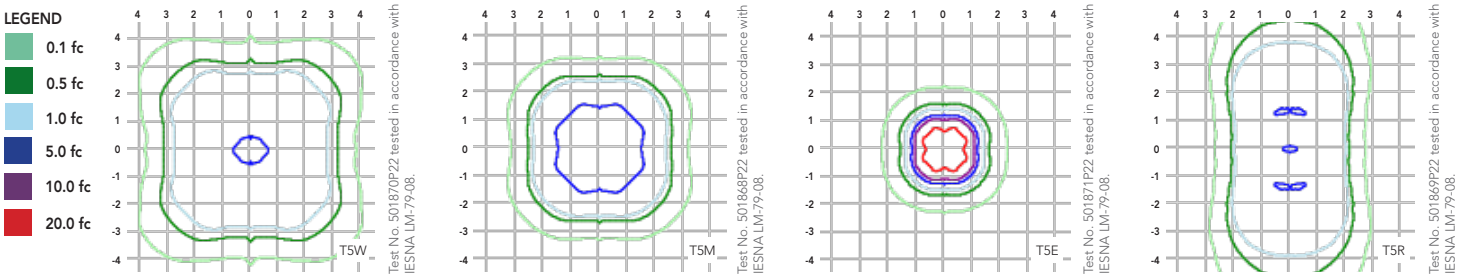
Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	DSXSC LED 10C 1000			
	1.0	0.97	0.94	0.90
	DSXSC LED 30C 1000			
	1.0	0.93	0.89	0.80
	DSXSC LED 30C 700			
	1.0	0.98	0.97	0.95

© 2012-2015 Acuity Brands Lighting, Inc. All rights reserved.

Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Parking Garage homepage.

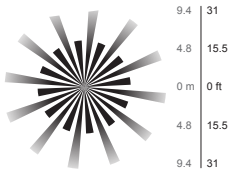
Isofootcandle plots for the DSXSC LED 30C 700 40K. Distances are in units of mounting height (8').



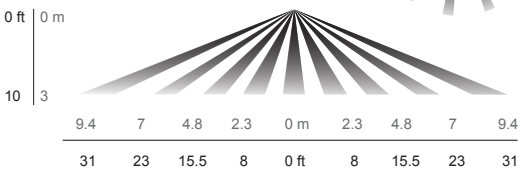
Motion Sensing

The motion/ambient sensor options (PIR360SS or PIRH360SS) have 360° of passive infrared sensing and adjustable bi-level dimming to save energy when there are no occupants.

TOP VIEW

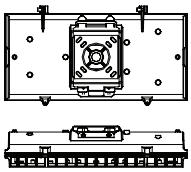


SIDE VIEW



Mounting Options

Surface Mounting



FEATURES & SPECIFICATIONS

INTENDED USE

The energy savings, long life, and easy-to-install design of the D-Series LED Surface Canopy luminaire make it the smart choice for canopy lighting in commercial, industrial and institutional applications with mounting heights of 8-15'.

CONSTRUCTION

Two-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance and future light engine upgrades. The LED drivers are mounted in direct contact with the casting to promote low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP66) and is suitable for hose-down.

FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling.

OPTICS

Precision-molded proprietary acrylic lenses provide five different photometric distributions suited to a variety of canopy and walkway applications. Light engines are available in 3000 K (80 min. CRI), 4000 K (70 min. CRI) or 5000 K (65 min. CRI) configurations.

ELECTRICAL

Light engines consist of 10 high-efficacy LEDs mounted to a metal-core circuit board to maximize heat dissipation and promote long life. The electronic driver has a power factor of >90%, THD <20%, and a minimum 2.5 KV surge rating. When ordering the SPD option, a separate surge protection device is installed within the luminaire which meets a minimum Category C low operation (per ANSI/IEEE C62.41.2).

INSTALLATION

Mounts to a 4x4" recessed or surface mount outlet box using a quick-mount kit (included); kit contains galvanized steel luminaire and outlet box plates and a full pad gasket. Kit has an integral mounting support that allows the luminaire to hinge down for easy electrical connections. Luminaire and plates are secured with captive screws. Supply leads are 12" in length as standard. For longer supply leads, please consult factory.

LISTINGS

CSA certified to U.S. and Canadian standards. Light engines and luminaire are IP66 rated. Rated for -40°C minimum ambient.

DesignLights Consortium® (DLC) qualified product — Fuel Pump Canopy Luminaires category. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org to confirm which versions are qualified.

WARRANTY

5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx.

Note: Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

© 2012-2015 Acuity Brands Lighting, Inc. All rights reserved.



D-Series
LED Surface Canopy

d-series

Catalog Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

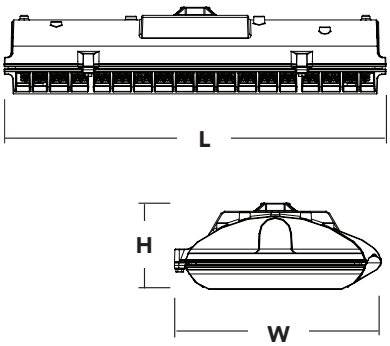
Specifications

Length: 17-3/4" *(45.1 cm)*

Width: 8-1/2" *(21.6 cm)*

Height: 3-7/16" *(8.7 cm)*

Weight (max): 16 lbs *(7.3 kg)*



Introduction

The D-Series LED Surface Canopy luminaire is ideal for covered walkways or drive-thrus, semi-covered outdoor aisles, and walk-in coolers and freezers. Its five optical choices provide the design flexibility to potentially reduce luminaire counts while still meeting IES criteria, lowering overall energy consumption.

Its expected service life of over 100,000 hours (20 years of nighttime operation) combined with the available motion/ambient sensor offers an extremely low maintenance solution that yields quick payback.

Ordering Information

EXAMPLE: DSXSC LED 20C 700 40K T5M MVOLT SRM DWHXD

DSXSC LED

Series	LEDs	Drive current	Color temperature	Distribution	Voltage	Mounting
DSXSC LED	10C 10 LEDs (one engine) [1,2] 20C 20 LEDs (two engines) 30C 30 LEDs (three engines)	350 350 mA 530 530 mA 700 700 mA 1000 1000 mA (1 A)	30K 3000 K 40K 4000 K 50K 5000 K AMBPC Amber phosphor converted[3]	T5E Type V, entryway [4] T5M Type V, medium T5W Type V, wide T5R Type V, rectangular ASY Asymmetric	MVOLT [5] 120 [5] 208 [5] 240 [5] 277 [5] 347 [6] 480 [6]	**Shipped included** SRM Surface mount (12-inch length supply leads)

Options

Shipped installed

HS	House-side shield (housing visor) [7]
SF	Single fuse (120, 277, 347V) [8,9]
DF	Double fuse (208, 240, 480V) [8,9]
SPD	Separate surge protection [10]
CFMH	Cover finish matches housing [11]
PIR	Motion/ambient sensor for 8-15' mounting heights [12]
PIRH	Motion/ambient sensor for 15-30' mounting heights [12]
PIR3FC3V	Motion/ambient sensor for 8-15' mounting heights and for typical applications requiring daylight harvesting and Title 24 compliance [12]
PIRH3FC3V	Motion/ambient sensor for 15-30' mounting heights and typical applications requiring daylight harvesting and Title 24 compliance [12]
XAD	XPoint™ Wireless enabled [13]
XADN	XPoint™ Wireless enabled for emergency circuit [13]
XAD PIR	XPoint™ Wireless enabled motion/ambient sensor for 8-15' mounting heights [13,14]
XAD PIRH	XPoint™ Wireless enabled motion/ambient sensor for 15-30' mounting heights [13,14]
XADN PIR	XPoint™ Wireless enabled motion/ambient sensor for emergency circuits for 8-15' mounting heights [13,14]
XADN PIRH	XPoint™ Wireless enabled motion/ambient sensor for emergency circuits for 15-30' mounting heights [13,14]

Shipped separately

BDS	Bird shroud [7]

Finish *(required)*

DWHXD	White
DNAXD	Natural aluminum
DDBXD	Dark bronze

Accessories

Ordered and shipped separately.

DSXSCHS U	House-side shield (1 per light engine)
DSXSCBDSSJ DWHXD U	Bird shroud for SRM on surface J-box only, white (specify finish)

NOTES

1 Available with 700mA or 1000mA option only.
2 Not available with 347 or 480V.
3 AMBPC only available with 530mA or 700mA.
4 DesignLights Consortium qualified.
5 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Specify 120, 208, 240 or 277 options only when ordering with fusing (SF, DF options).
6 N/A with one light engine (10C). Only available with 700mA or 1000mA.
7 Also available as a separate accessory; see Accessories information at left.
8 Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
9 Not available with XAD.
10 See the electrical section on page 3 for more details.
11 Available with DNAXD or DDBXD only.
12 PIR & PIR3FC3V specifies the Acuity Controls SBOR 10 ODP motion/ambient sensor, the PIRH & PIRH3FC3V specifies the Acuity Controls SBOR 6 ODP motion/ambient sensor.
13 Dimming driver standard. Not available with 347V or 480V. Not available with fusing.
14 XAD PIR specifies the Acuity Controls XPA SBOR10 wireless controller, the XADN PIR specifies the Acuity Controls XPA SBON10 wireless controller, the XAD PIRH specifies the Acuity Controls XPA SBOR6 wireless controller, and the XADN PIRH specifies the XPA SBON6 wireless controller.

LITHONIA LIGHTING

One Lithonia Way • Conyers, Georgia 30012 • Phone: 800.279.8041 • Fax: 770.918.1209 • www.lithonia.com
© 2012-2015 Acuity Brands Lighting, Inc. All rights reserved.

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts.

Light Engines	Drive Current (mA)	Performance Package	System Watts	Dist. Type	30K (3000 K, 80 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 65 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
10C (10 LEDs)	700 mA	10C 700--K	26W	ASY	1,792	0	0	1	69	2,253	1	0	1	87	2,428	1	0	1	93
				T5E	1,882	1	0	0	72	2,366	1	0	0	91	2,550	1	0	0	98
				T5M	1,889	1	0	0	73	2,375	2	0	0	91	2,560	2	0	0	98
				T5R	1,860	2	0	2	72	2,339	2	0	2	90	2,521	2	0	2	97
				T5W	1,771	2	0	1	68	2,226	2	0	1	86	2,399	2	0	1	92
	1000 mA	10C1000 --K	37W	ASY	2,444	1	0	1	66	3,074	1	0	1	83	3,314	1	0	1	90
				T5E	2,566	1	0	0	69	3,227	2	0	0	87	3,479	2	0	0	94
				T5M	2,576	2	0	0	70	3,241	2	0	1	88	3,493	2	0	1	94
				T5R	2,537	2	0	2	69	3,191	2	0	2	86	3,440	3	0	3	93
				T5W	2,414	2	0	1	65	3,037	2	0	1	82	3,274	3	0	1	88
20C (20 LEDs)	350 mA	20C 350 --K	25W	ASY	1,995	1	0	1	80	2,511	1	0	1	100	2,705	1	0	1	108
				T5E	2,095	1	0	0	84	2,637	1	0	0	105	2,840	2	0	0	114
				T5M	2,103	2	0	0	84	2,647	2	0	0	106	2,851	2	0	1	114
				T5R	2,071	2	0	2	83	2,607	2	0	2	104	2,808	2	0	2	112
				T5W	1,971	2	0	1	79	2,481	2	0	1	99	2,672	2	0	1	107
	530 mA	20C 530 --K	37W	ASY	2,803	1	0	1	76	3,526	1	0	1	95	3,799	1	0	1	103
				T5E	2,943	2	0	0	80	3,702	2	0	0	100	3,989	2	0	0	108
				T5M	2,955	2	0	1	80	3,717	2	0	1	100	4,005	2	0	1	108
				T5R	2,910	2	0	2	79	3,660	3	0	3	99	3,944	3	0	3	107
				T5W	2,770	2	0	1	75	3,483	3	0	1	94	3,754	3	0	1	101
	700 mA	20C 700 --K	46W	ASY	3,449	1	0	1	75	4,337	1	0	1	94	4,675	1	0	1	102
				T5E	3,621	2	0	0	79	4,554	2	0	0	99	4,909	2	0	0	107
				T5M	3,636	2	0	1	79	4,572	3	0	1	99	4,928	3	0	1	107
				T5R	3,580	3	0	3	78	4,502	3	0	3	98	4,853	3	0	3	106
				T5W	3,407	3	0	1	74	4,285	3	0	1	93	4,619	3	0	1	100
	1000 mA	20C 1000 --K	74W	ASY	4,632	1	0	1	63	5,828	1	0	1	79	6,283	1	0	2	85
				T5E	4,864	2	0	0	66	6,119	2	0	0	83	6,597	2	0	1	89
				T5M	4,883	3	0	1	66	6,143	3	1	1	83	6,623	3	0	1	90
				T5R	4,808	3	0	3	65	6,050	3	0	3	82	6,522	3	0	3	88
				T5W	4,577	3	0	1	62	5,758	3	0	2	78	6,207	3	0	2	84
30C (30 LEDs)	350 mA	30C 350 --K	35W	ASY	3,022	1	0	1	86	3,799	1	0	1	109	4,097	1	0	1	117
				T5E	3,172	2	0	0	91	3,989	2	0	0	114	4,302	2	0	0	123
				T5M	3,185	2	0	1	91	4,005	2	0	1	114	4,319	3	0	1	123
				T5R	3,137	2	0	2	90	3,944	3	0	3	113	4,253	3	0	3	122
				T5W	2,985	2	0	1	85	3,754	3	0	1	107	4,048	3	0	1	116
	530 mA	30C 530 --K	53W	ASY	4,239	1	0	1	80	5,333	1	0	1	101	5,748	1	0	1	108
				T5E	4,451	2	0	0	84	5,599	2	0	0	106	6,035	2	0	0	114
				T5M	4,468	3	0	1	84	5,622	3	0	1	106	6,059	3	0	1	114
				T5R	4,400	3	0	3	83	5,536	3	0	3	104	5,967	3	0	3	113
				T5W	4,188	3	0	1	79	5,269	3	0	1	99	5,679	3	0	1	107
	700 mA	30C 700 --K	67W	ASY	5,170	1	0	1	77	6,504	1	0	2	97	7,011	1	0	2	105
				T5E	5,428	2	0	0	81	6,829	3	0	1	102	7,362	3	0	1	110
				T5M	5,450	3	0	1	81	6,856	3	0	1	102	7,391	3	0	2	110
				T5R	5,367	3	0	3	80	6,752	3	0	3	101	7,278	3	0	3	109
				T5W	5,108	3	0	1	76	6,426	3	0	2	96	6,927	3	0	2	103
	1000 mA	30C 1000 --K	107W	ASY	6,775	1	0	2	63	8,520	2	0	2	80	9,187	2	0	2	86
				T5E	7,113	3	0	1	66	8,946	3	0	1	84	9,646	3	0	1	90
				T5M	7,141	3	0	1	67	8,982	3	0	2	84	9,685	3	0	2	91
				T5R	7,032	3	0	3	66	8,845	4	0	4	83	9,537	4	0	4	89
				T5W	6,693	3	0	2	63	8,418	4	0	2	79	9,077	4	0	2	85

Note: Available with phosphor-converted amber LEDs (nomenclature AMBPC). These LEDs produce light with 97+% >530 nm. Output can be calculated by applying a 0.7 factor to 4000 K lumen values and photometric files (for 530mA and 700mA drive currents only).

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.02
10°C	50°F	1.01
20°C	68°F	1.00
25°C	**77°F**	**1.00**
30°C	86°F	1.00
40°C	104°F	0.98

Electrical Load

LEDs	Drive Current (mA)	System Watts	Current (A)					
			120V	208V	240V	277V	347V	480V
10C	700	26W	0.25	0.15	0.13	0.11	–	–
	1000	37W	0.37	0.21	0.18	0.16	–	–
20C	350	25W	0.23	0.13	0.12	0.10	–	–
	530	37W	0.33	0.19	0.17	0.14	–	–
	700	46W	0.43	0.25	0.22	0.19	0.15	0.11
	1000	74W	0.68	0.39	0.34	0.29	–	–
30C	350	35W	0.33	0.19	0.16	0.14	–	–
	530	53W	0.50	0.29	0.25	0.22	–	–
	700	67W	0.66	0.38	0.33	0.29	0.23	0.17
	1000	107W	1.01	0.58	0.50	0.44	–	–

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a 25°C ambient, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

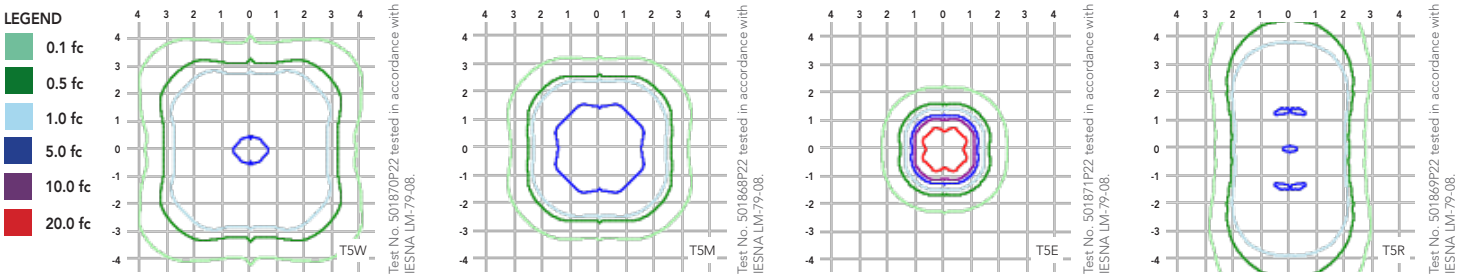
Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	DSXSC LED 10C 1000			
	1.0	0.97	0.94	0.90
	DSXSC LED 30C 1000			
	1.0	0.93	0.89	0.80
	DSXSC LED 30C 700			
	1.0	0.98	0.97	0.95

© 2012-2015 Acuity Brands Lighting, Inc. All rights reserved.

Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Parking Garage homepage.

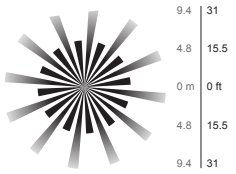
Isofootcandle plots for the DSXSC LED 30C 700 40K. Distances are in units of mounting height (8').



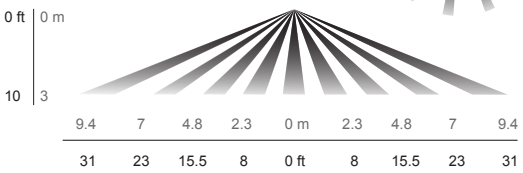
Motion Sensing

The motion/ambient sensor options (PIR360SS or PIRH360SS) have 360° of passive infrared sensing and adjustable bi-level dimming to save energy when there are no occupants.

TOP VIEW

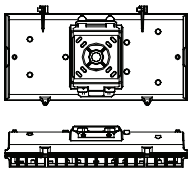


SIDE VIEW



Mounting Options

Surface Mounting



FEATURES & SPECIFICATIONS

INTENDED USE

The energy savings, long life, and easy-to-install design of the D-Series LED Surface Canopy luminaire make it the smart choice for canopy lighting in commercial, industrial and institutional applications with mounting heights of 8-15'.

CONSTRUCTION

Two-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance and future light engine upgrades. The LED drivers are mounted in direct contact with the casting to promote low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP66) and is suitable for hose-down.

FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling.

OPTICS

Precision-molded proprietary acrylic lenses provide five different photometric distributions suited to a variety of canopy and walkway applications. Light engines are available in 3000 K (80 min. CRI), 4000 K (70 min. CRI) or 5000 K (65 min. CRI) configurations.

ELECTRICAL

Light engines consist of 10 high-efficacy LEDs mounted to a metal-core circuit board to maximize heat dissipation and promote long life. The electronic driver has a power factor of >90%, THD <20%, and a minimum 2.5 KV surge rating. When ordering the SPD option, a separate surge protection device is installed within the luminaire which meets a minimum Category C low operation (per ANSI/IEEE C62.41.2).

INSTALLATION

Mounts to a 4x4" recessed or surface mount outlet box using a quick-mount kit (included); kit contains galvanized steel luminaire and outlet box plates and a full pad gasket. Kit has an integral mounting support that allows the luminaire to hinge down for easy electrical connections. Luminaire and plates are secured with captive screws. Supply leads are 12" in length as standard. For longer supply leads, please consult factory.

LISTINGS

CSA certified to U.S. and Canadian standards. Light engines and luminaire are IP66 rated. Rated for -40°C minimum ambient.

DesignLights Consortium® (DLC) qualified product — Fuel Pump Canopy Luminaires category. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org to confirm which versions are qualified.

WARRANTY

5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx.

Note: Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

© 2012-2015 Acuity Brands Lighting, Inc. All rights reserved.



D-Series
LED Surface Canopy

d-series

Catalog Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

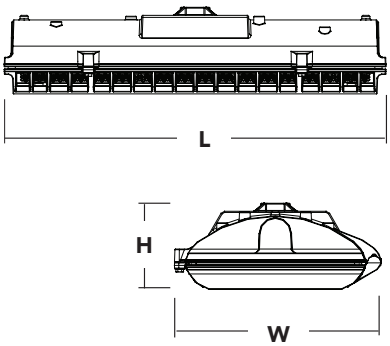
Specifications

Length: 17-3/4" *(45.1 cm)*

Width: 8-1/2" *(21.6 cm)*

Height: 3-7/16" *(8.7 cm)*

Weight (max): 16 lbs *(7.3 kg)*



Introduction

The D-Series LED Surface Canopy luminaire is ideal for covered walkways or drive-thrus, semi-covered outdoor aisles, and walk-in coolers and freezers. Its five optical choices provide the design flexibility to potentially reduce luminaire counts while still meeting IES criteria, lowering overall energy consumption.

Its expected service life of over 100,000 hours (20 years of nighttime operation) combined with the available motion/ambient sensor offers an extremely low maintenance solution that yields quick payback.

Ordering Information

EXAMPLE: DSXSC LED 20C 700 40K T5M MVOLT SRM DWHXD

DSXSC LED

Series	LEDs	Drive current	Color temperature	Distribution	Voltage	Mounting
DSXSC LED	10C 10 LEDs (one engine) [1,2] 20C 20 LEDs (two engines) 30C 30 LEDs (three engines)	350 350 mA 530 530 mA 700 700 mA 1000 1000 mA (1 A)	30K 3000 K 40K 4000 K 50K 5000 K AMBPC Amber phosphor converted[3]	T5E Type V, entryway [4] T5M Type V, medium T5W Type V, wide T5R Type V, rectangular ASY Asymmetric	MVOLT [5] 120 [5] 208 [5] 240 [5] 277 [5] 347 [6] 480 [6]	**Shipped included** SRM Surface mount (12-inch length supply leads)

Options

Shipped installed

HS	House-side shield (housing visor) [7]
SF	Single fuse (120, 277, 347V) [8,9]
DF	Double fuse (208, 240, 480V) [8,9]
SPD	Separate surge protection [10]
CFMH	Cover finish matches housing [11]
PIR	Motion/ambient sensor for 8-15' mounting heights [12]
PIRH	Motion/ambient sensor for 15-30' mounting heights [12]
PIR3FC3V	Motion/ambient sensor for 8-15' mounting heights and for typical applications requiring daylight harvesting and Title 24 compliance [12]
PIRH3FC3V	Motion/ambient sensor for 15-30' mounting heights and typical applications requiring daylight harvesting and Title 24 compliance [12]
XAD	XPoint™ Wireless enabled [13]
XADN	XPoint™ Wireless enabled for emergency circuit [13]
XAD PIR	XPoint™ Wireless enabled motion/ambient sensor for 8-15' mounting heights [13,14]
XAD PIRH	XPoint™ Wireless enabled motion/ambient sensor for 15-30' mounting heights [13,14]
XADN PIR	XPoint™ Wireless enabled motion/ambient sensor for emergency circuits for 8-15' mounting heights [13,14]
XADN PIRH	XPoint™ Wireless enabled motion/ambient sensor for emergency circuits for 15-30' mounting heights [13,14]

Shipped separately

BDS	Bird shroud [7]

Finish *(required)*

DWHXD	White
DNAXD	Natural aluminum
DDBXD	Dark bronze

Accessories

Ordered and shipped separately.

DSXSCHS U	House-side shield (1 per light engine)
DSXSCBDSSJ DWHXD U	Bird shroud for SRM on surface J-box only, white (specify finish)

NOTES

1 Available with 700mA or 1000mA option only.
2 Not available with 347 or 480V.
3 AMBPC only available with 530mA or 700mA.
4 DesignLights Consortium qualified.
5 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Specify 120, 208, 240 or 277 options only when ordering with fusing (SF, DF options).
6 N/A with one light engine (10C). Only available with 700mA or 1000mA.
7 Also available as a separate accessory; see Accessories information at left.
8 Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
9 Not available with XAD.
10 See the electrical section on page 3 for more details.
11 Available with DNAXD or DDBXD only.
12 PIR & PIR3FC3V specifies the Acuity Controls SBOR 10 ODP motion/ambient sensor, the PIRH & PIRH3FC3V specifies the Acuity Controls SBOR 6 ODP motion/ambient sensor.
13 Dimming driver standard. Not available with 347V or 480V. Not available with fusing.
14 XAD PIR specifies the Acuity Controls XPA SBOR10 wireless controller, the XADN PIR specifies the Acuity Controls XPA SBON10 wireless controller, the XAD PIRH specifies the Acuity Controls XPA SBOR6 wireless controller, and the XADN PIRH specifies the XPA SBON6 wireless controller.

LITHONIA LIGHTING

One Lithonia Way • Conyers, Georgia 30012 • Phone: 800.279.8041 • Fax: 770.918.1209 • www.lithonia.com
© 2012-2015 Acuity Brands Lighting, Inc. All rights reserved.

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts.

Light Engines	Drive Current (mA)	Performance Package	System Watts	Dist. Type	30K (3000 K, 80 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 65 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
10C (10 LEDs)	700 mA	10C 700--K	26W	ASY	1,792	0	0	1	69	2,253	1	0	1	87	2,428	1	0	1	93
				T5E	1,882	1	0	0	72	2,366	1	0	0	91	2,550	1	0	0	98
				T5M	1,889	1	0	0	73	2,375	2	0	0	91	2,560	2	0	0	98
				T5R	1,860	2	0	2	72	2,339	2	0	2	90	2,521	2	0	2	97
				T5W	1,771	2	0	1	68	2,226	2	0	1	86	2,399	2	0	1	92
	1000 mA	10C1000 --K	37W	ASY	2,444	1	0	1	66	3,074	1	0	1	83	3,314	1	0	1	90
				T5E	2,566	1	0	0	69	3,227	2	0	0	87	3,479	2	0	0	94
				T5M	2,576	2	0	0	70	3,241	2	0	1	88	3,493	2	0	1	94
				T5R	2,537	2	0	2	69	3,191	2	0	2	86	3,440	3	0	3	93
				T5W	2,414	2	0	1	65	3,037	2	0	1	82	3,274	3	0	1	88
20C (20 LEDs)	350 mA	20C 350 --K	25W	ASY	1,995	1	0	1	80	2,511	1	0	1	100	2,705	1	0	1	108
				T5E	2,095	1	0	0	84	2,637	1	0	0	105	2,840	2	0	0	114
				T5M	2,103	2	0	0	84	2,647	2	0	0	106	2,851	2	0	1	114
				T5R	2,071	2	0	2	83	2,607	2	0	2	104	2,808	2	0	2	112
				T5W	1,971	2	0	1	79	2,481	2	0	1	99	2,672	2	0	1	107
	530 mA	20C 530 --K	37W	ASY	2,803	1	0	1	76	3,526	1	0	1	95	3,799	1	0	1	103
				T5E	2,943	2	0	0	80	3,702	2	0	0	100	3,989	2	0	0	108
				T5M	2,955	2	0	1	80	3,717	2	0	1	100	4,005	2	0	1	108
				T5R	2,910	2	0	2	79	3,660	3	0	3	99	3,944	3	0	3	107
				T5W	2,770	2	0	1	75	3,483	3	0	1	94	3,754	3	0	1	101
	700 mA	20C 700 --K	46W	ASY	3,449	1	0	1	75	4,337	1	0	1	94	4,675	1	0	1	102
				T5E	3,621	2	0	0	79	4,554	2	0	0	99	4,909	2	0	0	107
				T5M	3,636	2	0	1	79	4,572	3	0	1	99	4,928	3	0	1	107
				T5R	3,580	3	0	3	78	4,502	3	0	3	98	4,853	3	0	3	106
				T5W	3,407	3	0	1	74	4,285	3	0	1	93	4,619	3	0	1	100
	1000 mA	20C 1000 --K	74W	ASY	4,632	1	0	1	63	5,828	1	0	1	79	6,283	1	0	2	85
				T5E	4,864	2	0	0	66	6,119	2	0	0	83	6,597	2	0	1	89
				T5M	4,883	3	0	1	66	6,143	3	1	1	83	6,623	3	0	1	90
				T5R	4,808	3	0	3	65	6,050	3	0	3	82	6,522	3	0	3	88
				T5W	4,577	3	0	1	62	5,758	3	0	2	78	6,207	3	0	2	84
30C (30 LEDs)	350 mA	30C 350 --K	35W	ASY	3,022	1	0	1	86	3,799	1	0	1	109	4,097	1	0	1	117
				T5E	3,172	2	0	0	91	3,989	2	0	0	114	4,302	2	0	0	123
				T5M	3,185	2	0	1	91	4,005	2	0	1	114	4,319	3	0	1	123
				T5R	3,137	2	0	2	90	3,944	3	0	3	113	4,253	3	0	3	122
				T5W	2,985	2	0	1	85	3,754	3	0	1	107	4,048	3	0	1	116
	530 mA	30C 530 --K	53W	ASY	4,239	1	0	1	80	5,333	1	0	1	101	5,748	1	0	1	108
				T5E	4,451	2	0	0	84	5,599	2	0	0	106	6,035	2	0	0	114
				T5M	4,468	3	0	1	84	5,622	3	0	1	106	6,059	3	0	1	114
				T5R	4,400	3	0	3	83	5,536	3	0	3	104	5,967	3	0	3	113
				T5W	4,188	3	0	1	79	5,269	3	0	1	99	5,679	3	0	1	107
	700 mA	30C 700 --K	67W	ASY	5,170	1	0	1	77	6,504	1	0	2	97	7,011	1	0	2	105
				T5E	5,428	2	0	0	81	6,829	3	0	1	102	7,362	3	0	1	110
				T5M	5,450	3	0	1	81	6,856	3	0	1	102	7,391	3	0	2	110
				T5R	5,367	3	0	3	80	6,752	3	0	3	101	7,278	3	0	3	109
				T5W	5,108	3	0	1	76	6,426	3	0	2	96	6,927	3	0	2	103
	1000 mA	30C 1000 --K	107W	ASY	6,775	1	0	2	63	8,520	2	0	2	80	9,187	2	0	2	86
				T5E	7,113	3	0	1	66	8,946	3	0	1	84	9,646	3	0	1	90
				T5M	7,141	3	0	1	67	8,982	3	0	2	84	9,685	3	0	2	91
				T5R	7,032	3	0	3	66	8,845	4	0	4	83	9,537	4	0	4	89
				T5W	6,693	3	0	2	63	8,418	4	0	2	79	9,077	4	0	2	85

Note: Available with phosphor-converted amber LEDs (nomenclature AMBPC). These LEDs produce light with 97+% >530 nm. Output can be calculated by applying a 0.7 factor to 4000 K lumen values and photometric files (for 530mA and 700mA drive currents only).

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.02
10°C	50°F	1.01
20°C	68°F	1.00
25°C	**77°F**	**1.00**
30°C	86°F	1.00
40°C	104°F	0.98

Electrical Load

LEDs	Drive Current (mA)	System Watts	Current (A)					
			120V	208V	240V	277V	347V	480V
10C	700	26W	0.25	0.15	0.13	0.11	–	–
	1000	37W	0.37	0.21	0.18	0.16	–	–
20C	350	25W	0.23	0.13	0.12	0.10	–	–
	530	37W	0.33	0.19	0.17	0.14	–	–
	700	46W	0.43	0.25	0.22	0.19	0.15	0.11
	1000	74W	0.68	0.39	0.34	0.29	–	–
30C	350	35W	0.33	0.19	0.16	0.14	–	–
	530	53W	0.50	0.29	0.25	0.22	–	–
	700	67W	0.66	0.38	0.33	0.29	0.23	0.17
	1000	107W	1.01	0.58	0.50	0.44	–	–

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a 25°C ambient, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

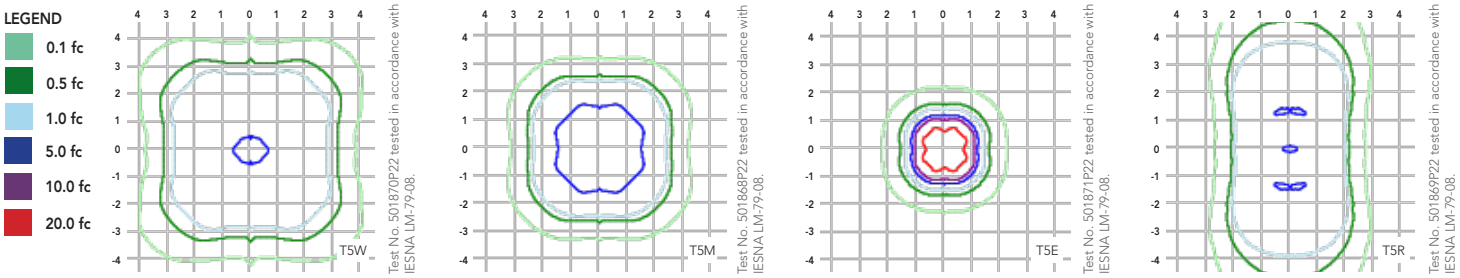
Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	DSXSC LED 10C 1000			
	1.0	0.97	0.94	0.90
	DSXSC LED 30C 1000			
	1.0	0.93	0.89	0.80
	DSXSC LED 30C 700			
	1.0	0.98	0.97	0.95

© 2012-2015 Acuity Brands Lighting, Inc. All rights reserved.

Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Parking Garage homepage.

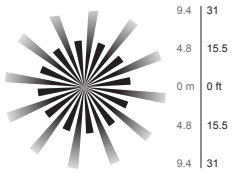
Isofootcandle plots for the DSXSC LED 30C 700 40K. Distances are in units of mounting height (8').



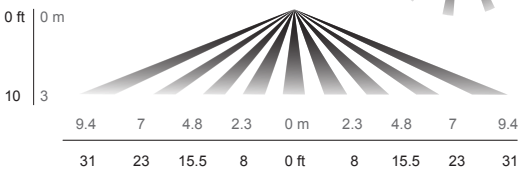
Motion Sensing

The motion/ambient sensor options (PIR360SS or PIRH360SS) have 360° of passive infrared sensing and adjustable bi-level dimming to save energy when there are no occupants.

TOP VIEW

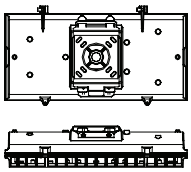


SIDE VIEW



Mounting Options

Surface Mounting



FEATURES & SPECIFICATIONS

INTENDED USE

The energy savings, long life, and easy-to-install design of the D-Series LED Surface Canopy luminaire make it the smart choice for canopy lighting in commercial, industrial and institutional applications with mounting heights of 8-15'.

CONSTRUCTION

Two-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance and future light engine upgrades. The LED drivers are mounted in direct contact with the casting to promote low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP66) and is suitable for hose-down.

FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling.

OPTICS

Precision-molded proprietary acrylic lenses provide five different photometric distributions suited to a variety of canopy and walkway applications. Light engines are available in 3000 K (80 min. CRI), 4000 K (70 min. CRI) or 5000 K (65 min. CRI) configurations.

ELECTRICAL

Light engines consist of 10 high-efficacy LEDs mounted to a metal-core circuit board to maximize heat dissipation and promote long life. The electronic driver has a power factor of >90%, THD <20%, and a minimum 2.5 KV surge rating. When ordering the SPD option, a separate surge protection device is installed within the luminaire which meets a minimum Category C low operation (per ANSI/IEEE C62.41.2).

INSTALLATION

Mounts to a 4x4" recessed or surface mount outlet box using a quick-mount kit (included); kit contains galvanized steel luminaire and outlet box plates and a full pad gasket. Kit has an integral mounting support that allows the luminaire to hinge down for easy electrical connections. Luminaire and plates are secured with captive screws. Supply leads are 12" in length as standard. For longer supply leads, please consult factory.

LISTINGS

CSA certified to U.S. and Canadian standards. Light engines and luminaire are IP66 rated. Rated for -40°C minimum ambient.

DesignLights Consortium® (DLC) qualified product — Fuel Pump Canopy Luminaires category. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org to confirm which versions are qualified.

WARRANTY

5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx.

Note: Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

© 2012-2015 Acuity Brands Lighting, Inc. All rights reserved.

LUMARK® energy solutions

DESCRIPTION

The patented Lumark Crosstour™ LED Wall Pack Series of luminaries provides an architectural style with super bright, energy efficient LEDs. The low-profile, rugged die-cast aluminum construction, universal back box, stainless steel hardware along with a sealed and gasketed optical compartment make the Crosstour impervious to contaminants. The Crosstour wall luminaire is ideal for wall/surface, inverted mount for façade/canopy illumination, post/bollard, site lighting, floodlight and low level pathway illumination including stairs. Typical applications include building entrances, multi-use facilities, apartment buildings, institutions, schools, stairways and loading docks test.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction

Slim, low-profile LED design with rugged one-piece, die-cast aluminum hinged removable door and back box. Matching housing styles incorporate both a small and large design. The small housing is available in 7W and 18W. The large housing is available in the 26W model. Patent pending secure lock hinge feature allows for safe and easy tool-less electrical connections with the supplied push-in connectors. Back box includes three (3) half-inch, NPT threaded conduit entry points. The universal back box supports both the small and large forms and mounts to standard 3-1/2" to 4" round and octagonal, 4" square, single gang and masonry junction boxes. Key hole gasket allows for adaptation to junction box or wall. External fin design extracts heat from the fixture surface. One-piece silicone gasket seals door and back box. Minimum 5" wide pole for site lighting application. Not recommended for car wash applications.

Optical

Silicone sealed optical LED chamber incorporates a custom engineered mirrored anodized reflector providing high-efficiency illumination. Optical assembly includes impact-resistant tempered glass and meets IESNA requirements for full cutoff compliance. Solid state LED Crosstour luminaries are thermally optimized with five (5) lumen packages in cool 5000K or neutral warm 3500K LED color temperature (CCT).

Electrical

LED driver is mounted to the die-cast housing for optimal heat sinking. LED thermal management system incorporates both conduction and natural convection to transfer heat rapidly away from the LED source. 7W models operate in -40°C to 40°C [-40°F to 104°F]. 18W and 26W models operate in -40°C to 40°C [-40°F to 104°F]. High ambient 50°C models available. Crosstour luminaires maintain greater than 90% of initial light output after 72,000 hours of operation. Three (3) half-inch NPT threaded conduit entry points allow for thru-branch wiring. Back box is an authorized electrical wiring compartment. Integral LED electronic driver incorporates surge protection. 120-277V 50/60Hz or 347V 60Hz models.

Finish

Crosstour is protected with a Super durable TGIC carbon bronze or summit white polyester powder coat paint. Super durable TGIC powder coat paint finishes withstand extreme climate conditions while providing optimal color and gloss retention of the installed life.

Warranty

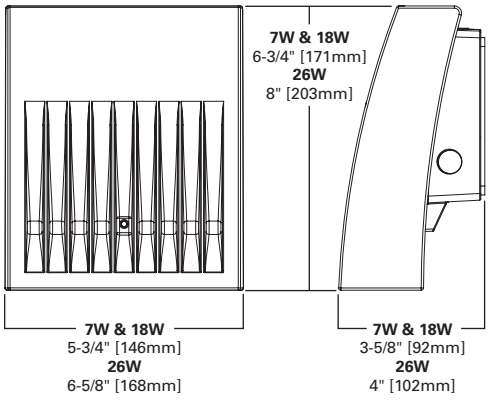
Five-year warranty.



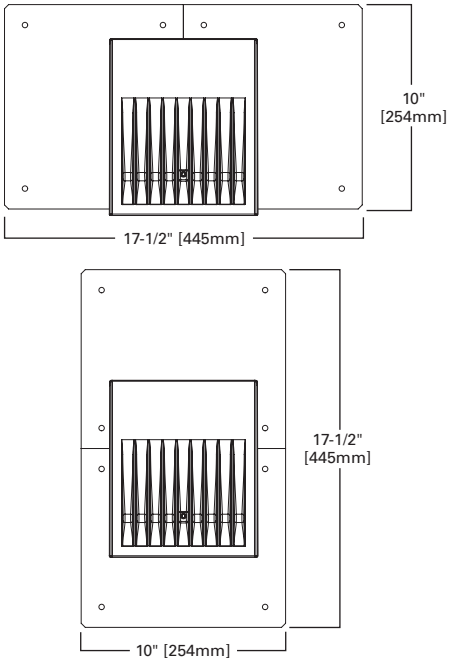
XTOR
CROSSTOUR LED

APPLICATIONS:
WALL / SURFACE
POST / BOLLARD
LOW LEVEL
FLOODLIGHT
INVERTED
SITE LIGHTING

DIMENSIONS



ESCUTCHEON PLATES



CERTIFICATION DATA

UL/cUL Wet Location Listed
LM79 / LM80 Compliant
ROHS Compliant
ADA Compliant
NOM Compliant Models
IP66 Ingressed Protection Rated
Title 24 Compliant

TECHNICAL DATA

40°C Maximum Ambient Temperature
External Supply Wiring 90°C Minimum

EPA

Effective Projected Area:
(Sq. Ft.)
XTOR1A/XT0R2A=0.34
XTOR3A = 0.45

SHIPPING DATA:

Approximate Net Weight:
3.7 – 5.25 lbs. [1.7 – 2.4 kgs.]

Cooper Lighting by EATON

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (72,000 Hours)	Theoretical L70 (Hours)
XTOR1A Model		
25°C	> 92%	> 290,000
40°C	> 92%	> 290,000
50°C	> 91%	> 270,000
XTOR2A Model		
25°C	> 91%	> 270,000
40°C	> 90%	> 260,000
50°C	> 88%	> 225,000
XTOR3A Model		
25°C	> 91%	> 280,000
40°C	> 91%	> 270,000
50°C	> 89%	> 240,000

LUMENS - CRI/CCT TABLE

LED Information	XTOR1A	XTOR2A	XTOR2A-N	XTOR3A	XTOR3A-N
Delivered Lumens (Wall Mount)	722	1,633	1,523	2,804	2,284
Delivered Lumens (With Flood Accessory Kit) [1]	468	1,060	978	2,168	1,738
B.U.G. Rating [2]	B0-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0
CCT (Kelvin)	5,000	5,000	3,500	5,000	3,500
CRI (Color Rendering Index)	65	65	70	65	70
Power Consumption (Watts)	7W	18W	18W	26W	26W

NOTES: 1 Includes shield and visor. **2** B.U.G. Rating does not apply to floodlighting.

CURRENT DRAW

Voltage	Model Series		
	XTOR1A	XTOR2A	XTOR3A
120V	0.05A	0.15A	0.22A
208V	0.03A	0.08A	0.13A
240V	0.03A	0.07A	0.11A
277V	0.03A	0.06A	0.10A
347V	0.025A	0.058A	0.082A

ORDERING INFORMATION

Sample Number: XTOR2A-N-WT-PC1

Series	**LED Kelvin Color**	**Housing Color**	**Options** (Add as Suffix)	**Accessories** (Order Separately)
XTOR1A=Small Door, 7W **XTOR2A**=Small Door, 18W **XTOR3A**=Small Door, 26W	**[Blank]**=Bright White (Standard) 5000K **N**=Neutral Warm White, 3500K [1]	**[Blank]**=Carbon Bronze (Standard) **WT**=Summit White	**PC1**=Photocontrol 120V [2] **PC2**=Photocontrol 208-277V [2, 3] **347V**=347V [4] **HA**=50°C High Ambient [4]	**WG/XTOR**=Wire Guard [5] **XTORFLD-KNC**=Knuckle Floodlight Kit [6] **XTORFLD-TRN**=Trunnion Floodlight Kit [6] **XTORFLD-KNC-WT**=Knuckle Floodlight Kit, Summit White [6] **XTORFLD-TRN-WT**=Trunnion Floodlight Kit, Summit White [6] **EWP/XTOR**=Escutcheon Wall Plate, Carbon Bronze **EWP/XTOR-WT**=Escutcheon Wall Plate, Summit White

NOTES: 1 XTOR1A not available in 3500K. **2** Photocontrols are factory installed. **3** Order PC2 for 347V models. **4** Thru-branch wiring not available with HA option or with 347V. **5** Wire guard for wall/surface mount. Not for use with floodlight kit accessory. **6** Floodlight kit accessory supplied with knuckle (KNC) or trunnion (TRN) base, small and large top visors and small and large impact shields.

STOCK ORDERING INFORMATION

7W Series	18W Series	26W Series
XTOR1A=7W, 5000K, Carbon Bronze	XTOR2A=18W, 5000K, Carbon Bronze	XTOR3A=26W, 5000K, Carbon Bronze
XTOR1A-WT=7W, 5000K, Summit White	XTOR2A-N=18W, 3500K, Carbon Bronze	XTOR3A-N=26W, 3500K, Carbon Bronze
XTOR1A-PC1=7W, 5000K, 120V PC, Carbon Bronze	XTOR2A-WT=18W, Summit White	XTOR3A-WT=26W, Summit White
	XTOR2A-PC1=18W, 120V PC, Carbon Bronze	XTOR3A-PC1=26W, 120V PC, Carbon Bronze

5-DAY QUICK SHIP ORDERING INFORMATION

7W Series	18W Series	26W Series
XTOR1A-WT-PC1=7W, 5000K, Summit White, 120V PC	XTOR2A-PC2=18W, 5000K, 208-277V PC, Carbon Bronze	XTOR3A-PC2=26W, 5000K, 208-277V PC, Carbon Bronze
	XTOR2A-WT-PC1=18W, 5000K, Summit White, 120V PC	XTOR3A-WT-PC1=26W, 5000K, Summit White, 120V PC
	XTOR2A-WT-PC2=18W, 5000K, Summit White, 208-277V PC	XTOR3A-WT-PC2=26W, 5000K, Summit White, 208-277V PC
	XTOR2A-N-WT=18W, 3500K, Summit White	XTOR3A-N-WT=26W, 3500K, Summit White
	XTOR2A-N-PC1=18W, 3500K, 120V PC, Carbon Bronze	XTOR3A-N-PC1=26W, 3500K, 120V PC, Carbon Bronze
	XTOR2A-N-PC2=18W, 3500K, 208-277V PC, Carbon Bronze	XTOR3A-N-PC2=26W, 3500K, 208-277V PC, Carbon Bronze
	XTOR2A-N-WHT-PC1=18W, 3500K, Summit White, 120V PC	XTOR3A-N-WHT-PC1=26W, 3500K, Summit White, 120V PC
	XTOR2A-N-WT-PC2=18W, 3500K, Summit White, 208-277V PC	XTOR3A-N-WT-PC2=26W, 3500K, Summit White, 208-277V PC

Cooper Lighting by EATON

Eaton
1000 Eaton Boulevard
Cleveland, OH 44122
United States
Eaton.com

Eaton's Cooper Lighting Business
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.cooperlighting.com

Specifications and dimensions subject to change without notice.

LUMARK® energy solutions

DESCRIPTION

The patented Lumark Crosstour™ MAXX LED Wall Pack Series of luminaries provides low-profile architectural style with super bright, energy-efficient LEDs. The rugged die-cast aluminum construction, back box with secure lock hinges, stainless steel hardware along with a sealed and gasketed optical compartment make Crosstour impervious to contaminants. The Crosstour MAXX wall luminaire is ideal for wall/surface, inverted mount for facade/canopy illumination, perimeter and site lighting. Typical applications include pedestrian walkways, building entrances, multi-use facilities, industrial facilities, perimeter parking areas, storage facilities, institutions, schools and loading docks.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction
Low-profile LED design with rugged one-piece, die-cast aluminum back box and hinged removable door. Matching housing styles incorporate both a full cutoff and refractive lens design. Full cutoff and refractive lens models are available in 41W and 79W. Patent pending secure lock hinge feature allows for safe and easy tool-less electrical connections with the supplied push-in connectors. Back box includes four 1/2" NPT threaded conduit entry points. The back box is secured by four lag bolts (supplied by others). External fin design extracts heat from the fixture surface. One-piece silicone gasket seals door and back box. Not recommended for car wash applications.

Optical
Silicone sealed optical LED chamber incorporates a custom engineered reflector providing high-efficiency illumination. Full cutoff models integrate an impact-resistant molded refractive prism optical lens assembly meeting requirements for Dark Sky compliance. Refractive lens models incorporate a molded lens assembly designed for maximum forward throw. Solid state LED Crosstour luminaries are thermally optimized with two lumen packages in cool 5000K or neutral warm 3500K LED color temperature (CCT).

Electrical
LED driver is mounted to the die-cast aluminum housing for optimal heat sinking. LED thermal management system incorporates both conduction and natural convection to transfer heat rapidly away from the LED source. 41W and 79W models operate in -40°C to 40°C [-40°F to 104°F]. High ambient 50°C [122°F] models available. Crosstour MAXX luminaires maintain greater than 90% of initial light output after 72,000 hours of operation. Four half-inch NPT threaded conduit entry points allow for thru-branch wiring. Back box is an authorized electrical wiring compartment. Integral LED electronic driver incorporates surge protection. 120-277V 50/60Hz, 480V 60Hz, or 347V 60Hz electrical operation.

Emergency Egress
Optional integral cold weather battery emergency egress includes emergency operation test switch, an AC-ON indicator light and a premium extended rated sealed maintenance-free nickel-metal hydride battery pack. The separate emergency lighting LEDs are wired to provide redundant emergency lighting. Listed to UL Standard 924, Emergency Lighting.

Area and Site Pole Mounting
Optional extruded aluminum 6-1/2" arm features internal bolt guides for supplied twin support rods, allowing for easy positioning of the fixture during installation to pole. Supplied with round plate adapter plate. Optional tenon adapter fits 2-3/8" or 3-1/2" O.D. Tenon.

Finish
Crosstour MAXX is protected with a super TGIC carbon bronze or summit white polyester powder coat paint. Super TGIC powder coat paint finishes withstand extreme climate conditions while providing optimal color and gloss retention of the installed life.

Warranty
Five-year warranty.



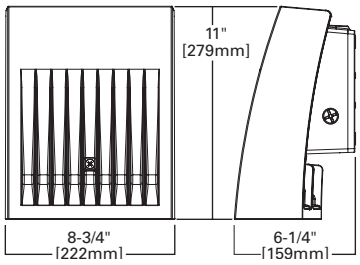


XTOR
CROSSTOUR MAXX LED

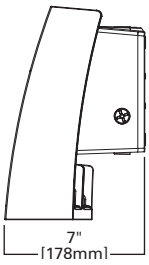
APPLICATIONS:
WALL / SURFACE
INVERTED
SITE LIGHTING

DIMENSIONS

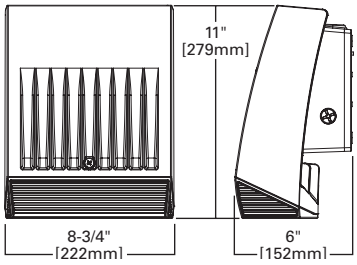
FULL CUTOFF



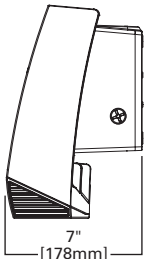
DEEP BACK BOX



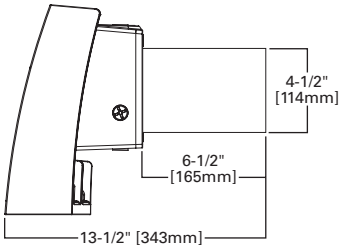
REFRACTIVE LENS



DEEP BACK BOX

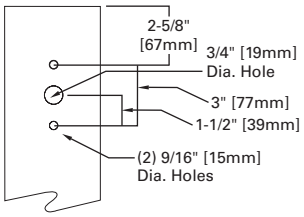


OPTIONAL POLE MOUNT ARM

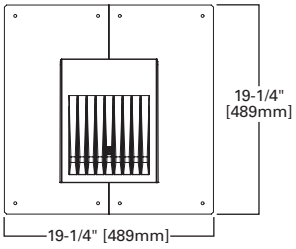


ARM DRILLING

TYPE "C"



ESCUTCHEON PLATES



CERTIFICATION DATA
UL/cUL Wet Location Listed
LM79 / LM80 Compliant
ROHS Compliant
NOM Compliant Models
3G Vibration Tested
UL924 Listed (CBP Models)
IP66 Rated

TECHNICAL DATA
40°C Ambient Temperature
External Supply Wiring 90°C Minimum

EPA
Effective Projected Area (Sq. Ft.):
XTOR5A/XTOR9A = 0.54
With Pole Mount Arm = 0.98

SHIPPING DATA:
Approximate Net Weight:
12-15 lbs. [5.4-6.8 kgs.]

Cooper Lighting
by EATON

POWER AND LUMENS BY FIXTURE MODEL

LED Information	XTOR5A	XTOR5ARL	XTOR5A-N	XTOR5ARL-N
Delivered Lumens	4,409	4,831	4,136	3,744
B.U.G. Rating	B1-U0-G1	B1-U0-G2	B1-U0-G1	B1-U0-G2
CCT (Kelvin)	5000K	5000K	3500K	3500K
CRI (Color Rendering Index)	65	65	70	70
Power Consumption (Watts)	41W	41W	43W	42W

LED Information	XTOR9A	XTOR9ARL	XTOR9A-N	XTOR9ARL-N
Delivered Lumens	7,079	7,367	6,468	6,036
B.U.G. Rating	B1-U0-G1	B1-U0-G2	B1-U0-G1	B1-U0-G2
CCT (Kelvin)	5000K	5000K	3500K	3500K
CRI (Color Rendering Index)	65	65	70	70
Power Consumption (Watts)	79W	82W	79W	81W

EGRESS Information	XTOR5A and XTOR9A Full Cutoff CBP Egress LED	XTOR5A and XTOR9A Refractive Lens CBP Egress LED
Delivered Lumens	509	468
B.U.G. Rating	N.A.	N.A.
CCT (Kelvin)	4000K	4000K
CRI (Color Rendering Index)	65	65
Power Consumption (Watts)	1.8W	1.8W

CURRENT DRAW

Voltage	Model Series			
	XTOR5A	XTOR9A	XTOR5A-CBP (Fixture/Battery)	XTOR9A-CBP (Fixture/Battery)
120V	0.35	0.67	0.60/0.25	0.92/0.25
208V	0.20	0.39	- -	- -
240V	0.18	0.34	- -	- -
277V	0.15	0.29	0.36/0.21	0.50/0.21
347V	0.14	0.26	- -	- -
480V	0.10	0.19	- -	- -

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (72,000 Hours)	Theoretical L70 (Hours)
XTOR5A Model		
25°C	> 92%	> 290,000
40°C	> 91%	> 290,000
50°C	> 89%	> 250,000
XTOR9A Model		
25°C	> 91%	> 260,000
40°C	> 90%	> 230,000
50°C	> 82%	> 130,000

ORDERING INFORMATION

Sample Number: XTOR5A-N-WT-PC1

Series	**LED Kelvin Color**	**Housing Color**	**Options** (Add as Suffix)
Full Cutoff **XTOR5A**=41W **XTOR9A**=79W **Refractive Lens** **XTOR5ARL**=41W **XTOR9ARL**=79W	**[Blank]**=Bright White (Standard) 5000K **N**=Neutral Warm White, 3500K	**[Blank]**=Carbon Bronze (Standard) **WT**=Summit White	**347V**=347V [1, 2, 3, 4] **480V**=480V [1, 2, 3, 4, 5] **PC1**=Photocontrol 120V [6] **PC2**=Photocontrol 208-277V [6, 7] **DIM**=0-10V Dimming Driver [1] **PMA**=Pole Mount Arm (C Drilling) with Round Adapter [2] **HA**=50°C High Ambient [4] **MS-L20**=Motion Sensor for ON/OFF Operation [1, 2, 8, 11] **MS/DIM-L20**=Motion Sensor for Dimming Operation [1, 2, 8, 9, 10, 11] **CBP**=Cold Weather Battery Pack [1, 2, 9, 12]
Accessories (Order Separately)			
WG-XTORMX=Crosstour MAXX Wire Guard **PB120V**=Field Installed 120V Photocontrol **PB277V BUTTON PC**=Field Installed 208-277V Photocontrol [7] **VA1040-XX**=Single Tenon Adapter for 3-1/2" O.D. Tenon [13] **VA1041-XX**=2@180° Tenon Adapter for 3-1/2" O.D. Tenon [13] **VA1042-XX**=3@120° Tenon Adapter for 3-1/2" O.D. Tenon [13] **VA1043-XX**=4@90° Tenon Adapter for 3-1/2" O.D. Tenon [13] **VA1044-XX**=2@90° Tenon Adapter for 3-1/2" O.D. Tenon [13] **VA1045-XX**=3@90° Tenon Adapter for 3-1/2" O.D. Tenon [13]			**VA1046-XX**=2@120° Tenon Adapter for 3-1/2" O.D. Tenon [13] **VA1033-XX**=Single Tenon Adapter for 2-3/8" O.D. Tenon [13] **VA1034-XX**=2@180° Tenon Adapter for 2-3/8" O.D. Tenon [13] **VA1035-XX**=3@120° Tenon Adapter for 2-3/8" O.D. Tenon [13] **VA1036-XX**=4@90° Tenon Adapter for 2-3/8" O.D. Tenon [13] **VA1037-XX**=2@90° Tenon Adapter for 2-3/8" O.D. Tenon [13] **VA1038-XX**=3@90° Tenon Adapter for 2-3/8" O.D. Tenon [13] **VA1039-XX**=2@120° Tenon Adapter for 2-3/8" O.D. Tenon [13] **EWP/XTORMX**=Escutcheon Wall Plate, Carbon Bronze **EWP/XTORMX-WT**=Escutcheon Wall Plate, Summit White

NOTES: 1 Not available with HA option. **2** Deep back box is standard for 347V, 480V, CBP, PMA, MS-L20 and MS/DIM-L20. **3** Not available with CBP option. **4** Thru-branch wiring not available with HA option or with 347V. **5** Not to be used with un-grounded systems. **6** Not available with MS-L20 and MS/DIM-L20 options. **7** Use PC2 with 347V or 480V option for photocontrol. Factory wired to 208-277V lead. **8** For use in downlight orientation only. Optimal coverage at mounting heights of 9'-20'. **9** 120V or 277V only. **10** Factory set to 50% power reduction after 15-minutes of inactivity. Dimming driver included. **11** Includes integral photo sensor. **12** Operating temperatures -20°C to 25°C. **13** Replace XX with CB for carbon bronze or WT for summit white.

STOCK ORDERING INFORMATION

41W Series	**79W Series**
Full Cutoff	
XTOR5A=41W, 5000K, Carbon Bronze	XTOR9A=79W, 5000K, Carbon Bronze
XTOR5A-PC1=41W, 5000K, 120V PC, Carbon Bronze	XTOR9A-PC1=79W, 5000K, 120V PC, Carbon Bronze
XTOR5A-WT= 41W, 5000K, Summit White	XTOR9A-WT=79W, 5000K, Summit White
XTOR5A-N=41W, 3500K, Carbon Bronze	XTOR9A-PC2=79W, 5000K, 208-277V PC, Carbon Bronze
	XTOR9A-480V=79W, 5000K, 480V, Carbon Bronze
	XTOR9A-PMA=79W, 5000K, Pole Mount Arm, Carbon Bronze
Refractive Lens	
XTOR5ARL=41W, 5000K, Refractive Lens, Carbon Bronze	XTOR9ARL=79W, 5000K, Refractive Lens, Carbon Bronze
XTOR5ARL-PC1=41W, 5000K, Refractive Lens, 120V PC, Carbon Bronze	XTOR9ARL-PC1=79W, 5000K, Refractive Lens, 120V PC, Carbon Bronze
XTOR5ARL-WT=41W, 5000K, Refractive Lens, Summit White	XTOR9ARL-WT=79W, 5000K, Refractive Lens, Summit White
XTOR5ARL-N=41W, 3500K, Refractive Lens, Carbon Bronze	XTOR9ARL-PC2=79W, 5000K, Refractive Lens, 208-277V PC, Carbon Bronze
	XTOR9ARL-480V=79W, 5000K, Refractive Lens, 480V, Carbon Bronze
	XTOR9ARL-PMA=79W, 5000K, Refractive Lens, Pole Mount Arm, Carbon Bronze

5-DAY QUICK SHIP ORDERING INFORMATION

41W Series	**79W Series**
Full Cutoff	
XTOR5A-CBP=41W, 5000K, Carbon Bronze, Cold Weather Battery Pack	XTOR9A-CBP=79W, 5000K, Carbon Bronze, Cold Weather Battery Pack
XTOR5A-480V=41W, 5000K, Carbon Bronze, 480V	XTOR9A-N=79W, 3500K, Carbon Bronze
XTOR5A-PC2=41W, 5000K, Carbon Bronze, 208-277V PC	
Refractive Lens	
XTOR5ARL-PC2=41W, Refractive Lens, 5000K, Carbon Bronze, 208-277V PC	XTOR9ARL-CBP=79W, Refractive Lens, 5000K, Carbon Bronze, Cold Weather Battery Pack
XTOR5ARL-CBP=41W, Refractive Lens, 5000K, Carbon Bronze, Cold Weather Battery Pack	XTOR9ARL-N=79W, Refractive Lens, 3500K, Carbon Bronze
XTOR5ARL-480V=41W, Refractive Lens, 5000K, Carbon Bronze, 480V	

LUMARK® energy solutions

DESCRIPTION

The patented Lumark Crosstour™ MAXX LED Wall Pack Series of luminaries provides low-profile architectural style with super bright, energy-efficient LEDs. The rugged die-cast aluminum construction, back box with secure lock hinges, stainless steel hardware along with a sealed and gasketed optical compartment make Crosstour impervious to contaminants. The Crosstour MAXX wall luminaire is ideal for wall/surface, inverted mount for facade/canopy illumination, perimeter and site lighting. Typical applications include pedestrian walkways, building entrances, multi-use facilities, industrial facilities, perimeter parking areas, storage facilities, institutions, schools and loading docks.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction
Low-profile LED design with rugged one-piece, die-cast aluminum back box and hinged removable door. Matching housing styles incorporate both a full cutoff and refractive lens design. Full cutoff and refractive lens models are available in 41W and 79W. Patent pending secure lock hinge feature allows for safe and easy tool-less electrical connections with the supplied push-in connectors. Back box includes four 1/2" NPT threaded conduit entry points. The back box is secured by four lag bolts (supplied by others). External fin design extracts heat from the fixture surface. One-piece silicone gasket seals door and back box. Not recommended for car wash applications.

Optical
Silicone sealed optical LED chamber incorporates a custom engineered reflector providing high-efficiency illumination. Full cutoff models integrate an impact-resistant molded refractive prism optical lens assembly meeting requirements for Dark Sky compliance. Refractive lens models incorporate a molded lens assembly designed for maximum forward throw. Solid state LED Crosstour luminaries are thermally optimized with two lumen packages in cool 5000K or neutral warm 3500K LED color temperature (CCT).

Electrical
LED driver is mounted to the die-cast aluminum housing for optimal heat sinking. LED thermal management system incorporates both conduction and natural convection to transfer heat rapidly away from the LED source. 41W and 79W models operate in -40°C to 40°C [-40°F to 104°F]. High ambient 50°C [122°F] models available. Crosstour MAXX luminaires maintain greater than 90% of initial light output after 72,000 hours of operation. Four half-inch NPT threaded conduit entry points allow for thru-branch wiring. Back box is an authorized electrical wiring compartment. Integral LED electronic driver incorporates surge protection. 120-277V 50/60Hz, 480V 60Hz, or 347V 60Hz electrical operation.

Emergency Egress
Optional integral cold weather battery emergency egress includes emergency operation test switch, an AC-ON indicator light and a premium extended rated sealed maintenance-free nickel-metal hydride battery pack. The separate emergency lighting LEDs are wired to provide redundant emergency lighting. Listed to UL Standard 924, Emergency Lighting.

Area and Site Pole Mounting
Optional extruded aluminum 6-1/2" arm features internal bolt guides for supplied twin support rods, allowing for easy positioning of the fixture during installation to pole. Supplied with round plate adapter plate. Optional tenon adapter fits 2-3/8" or 3-1/2" O.D. Tenon.

Finish
Crosstour MAXX is protected with a super TGIC carbon bronze or summit white polyester powder coat paint. Super TGIC powder coat paint finishes withstand extreme climate conditions while providing optimal color and gloss retention of the installed life.

Warranty
Five-year warranty.



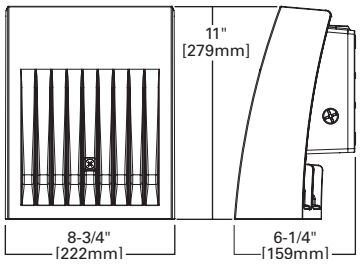


XTOR
CROSSTOUR MAXX LED

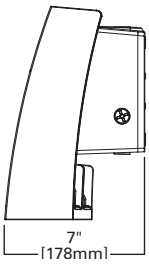
APPLICATIONS:
WALL / SURFACE
INVERTED
SITE LIGHTING

DIMENSIONS

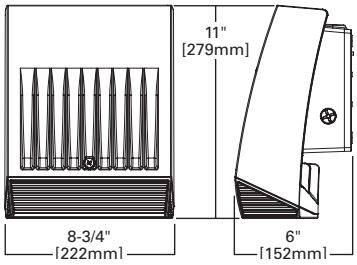
FULL CUTOFF



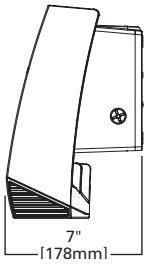
DEEP BACK BOX



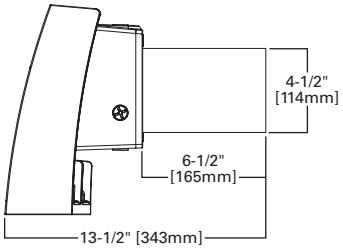
REFRACTIVE LENS



DEEP BACK BOX

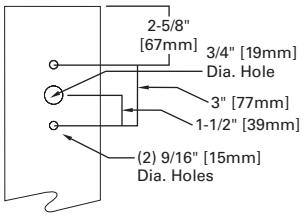


OPTIONAL POLE MOUNT ARM

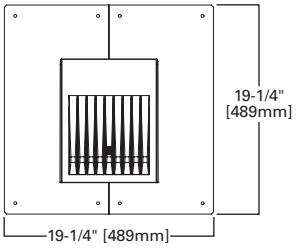


ARM DRILLING

TYPE "C"



ESCUTCHEON PLATES



CERTIFICATION DATA
UL/cUL Wet Location Listed
LM79 / LM80 Compliant
ROHS Compliant
NOM Compliant Models
3G Vibration Tested
UL924 Listed (CBP Models)
IP66 Rated

TECHNICAL DATA
40°C Ambient Temperature
External Supply Wiring 90°C Minimum

EPA
Effective Projected Area (Sq. Ft.):
XTOR5A/XTOR9A = 0.54
With Pole Mount Arm = 0.98

SHIPPING DATA:
Approximate Net Weight:
12-15 lbs. [5.4-6.8 kgs.]

Cooper Lighting
by EATON

POWER AND LUMENS BY FIXTURE MODEL

LED Information	XTOR5A	XTOR5ARL	XTOR5A-N	XTOR5ARL-N
Delivered Lumens	4,409	4,831	4,136	3,744
B.U.G. Rating	B1-U0-G1	B1-U0-G2	B1-U0-G1	B1-U0-G2
CCT (Kelvin)	5000K	5000K	3500K	3500K
CRI (Color Rendering Index)	65	65	70	70
Power Consumption (Watts)	41W	41W	43W	42W

LED Information	XTOR9A	XTOR9ARL	XTOR9A-N	XTOR9ARL-N
Delivered Lumens	7,079	7,367	6,468	6,036
B.U.G. Rating	B1-U0-G1	B1-U0-G2	B1-U0-G1	B1-U0-G2
CCT (Kelvin)	5000K	5000K	3500K	3500K
CRI (Color Rendering Index)	65	65	70	70
Power Consumption (Watts)	79W	82W	79W	81W

EGRESS Information	XTOR5A and XTOR9A Full Cutoff CBP Egress LED	XTOR5A and XTOR9A Refractive Lens CBP Egress LED
Delivered Lumens	509	468
B.U.G. Rating	N.A.	N.A.
CCT (Kelvin)	4000K	4000K
CRI (Color Rendering Index)	65	65
Power Consumption (Watts)	1.8W	1.8W

CURRENT DRAW

Voltage	Model Series			
	XTOR5A	XTOR9A	XTOR5A-CBP (Fixture/Battery)	XTOR9A-CBP (Fixture/Battery)
120V	0.35	0.67	0.60/0.25	0.92/0.25
208V	0.20	0.39	- -	- -
240V	0.18	0.34	- -	- -
277V	0.15	0.29	0.36/0.21	0.50/0.21
347V	0.14	0.26	- -	- -
480V	0.10	0.19	- -	- -

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (72,000 Hours)	Theoretical L70 (Hours)
XTOR5A Model		
25°C	> 92%	> 290,000
40°C	> 91%	> 290,000
50°C	> 89%	> 250,000
XTOR9A Model		
25°C	> 91%	> 260,000
40°C	> 90%	> 230,000
50°C	> 82%	> 130,000

ORDERING INFORMATION

Sample Number: XTOR5A-N-WT-PC1

Series	**LED Kelvin Color**	**Housing Color**	**Options** (Add as Suffix)
Full Cutoff **XTOR5A**=41W **XTOR9A**=79W **Refractive Lens** **XTOR5ARL**=41W **XTOR9ARL**=79W	**[Blank]**=Bright White (Standard) 5000K **N**=Neutral Warm White, 3500K	**[Blank]**=Carbon Bronze (Standard) **WT**=Summit White	**347V**=347V [1, 2, 3, 4] **480V**=480V [1, 2, 3, 4, 5] **PC1**=Photocontrol 120V [6] **PC2**=Photocontrol 208-277V [6, 7] **DIM**=0-10V Dimming Driver [1] **PMA**=Pole Mount Arm (C Drilling) with Round Adapter [2] **HA**=50°C High Ambient [4] **MS-L20**=Motion Sensor for ON/OFF Operation [1, 2, 8, 11] **MS/DIM-L20**=Motion Sensor for Dimming Operation [1, 2, 8, 9, 10, 11] **CBP**=Cold Weather Battery Pack [1, 2, 9, 12]
Accessories (Order Separately)			
WG-XTORMX=Crosstour MAXX Wire Guard **PB120V**=Field Installed 120V Photocontrol **PB277V BUTTON PC**=Field Installed 208-277V Photocontrol [7] **VA1040-XX**=Single Tenon Adapter for 3-1/2" O.D. Tenon [13] **VA1041-XX**=2@180° Tenon Adapter for 3-1/2" O.D. Tenon [13] **VA1042-XX**=3@120° Tenon Adapter for 3-1/2" O.D. Tenon [13] **VA1043-XX**=4@90° Tenon Adapter for 3-1/2" O.D. Tenon [13] **VA1044-XX**=2@90° Tenon Adapter for 3-1/2" O.D. Tenon [13] **VA1045-XX**=3@90° Tenon Adapter for 3-1/2" O.D. Tenon [13]			**VA1046-XX**=2@120° Tenon Adapter for 3-1/2" O.D. Tenon [13] **VA1033-XX**=Single Tenon Adapter for 2-3/8" O.D. Tenon [13] **VA1034-XX**=2@180° Tenon Adapter for 2-3/8" O.D. Tenon [13] **VA1035-XX**=3@120° Tenon Adapter for 2-3/8" O.D. Tenon [13] **VA1036-XX**=4@90° Tenon Adapter for 2-3/8" O.D. Tenon [13] **VA1037-XX**=2@90° Tenon Adapter for 2-3/8" O.D. Tenon [13] **VA1038-XX**=3@90° Tenon Adapter for 2-3/8" O.D. Tenon [13] **VA1039-XX**=2@120° Tenon Adapter for 2-3/8" O.D. Tenon [13] **EWP/XTORMX**=Escutcheon Wall Plate, Carbon Bronze **EWP/XTORMX-WT**=Escutcheon Wall Plate, Summit White

NOTES: 1 Not available with HA option. **2** Deep back box is standard for 347V, 480V, CBP, PMA, MS-L20 and MS/DIM-L20. **3** Not available with CBP option. **4** Thru-branch wiring not available with HA option or with 347V. **5** Not to be used with un-grounded systems. **6** Not available with MS-L20 and MS/DIM-L20 options. **7** Use PC2 with 347V or 480V option for photocontrol. Factory wired to 208-277V lead. **8** For use in downlight orientation only. Optimal coverage at mounting heights of 9'-20'. **9** 120V or 277V only. **10** Factory set to 50% power reduction after 15-minutes of inactivity. Dimming driver included. **11** Includes integral photo sensor. **12** Operating temperatures -20°C to 25°C. **13** Replace XX with CB for carbon bronze or WT for summit white.

STOCK ORDERING INFORMATION

41W Series	**79W Series**
Full Cutoff	
XTOR5A=41W, 5000K, Carbon Bronze	XTOR9A=79W, 5000K, Carbon Bronze
XTOR5A-PC1=41W, 5000K, 120V PC, Carbon Bronze	XTOR9A-PC1=79W, 5000K, 120V PC, Carbon Bronze
XTOR5A-WT= 41W, 5000K, Summit White	XTOR9A-WT=79W, 5000K, Summit White
XTOR5A-N=41W, 3500K, Carbon Bronze	XTOR9A-PC2=79W, 5000K, 208-277V PC, Carbon Bronze
	XTOR9A-480V=79W, 5000K, 480V, Carbon Bronze
	XTOR9A-PMA=79W, 5000K, Pole Mount Arm, Carbon Bronze
Refractive Lens	
XTOR5ARL=41W, 5000K, Refractive Lens, Carbon Bronze	XTOR9ARL=79W, 5000K, Refractive Lens, Carbon Bronze
XTOR5ARL-PC1=41W, 5000K, Refractive Lens, 120V PC, Carbon Bronze	XTOR9ARL-PC1=79W, 5000K, Refractive Lens, 120V PC, Carbon Bronze
XTOR5ARL-WT=41W, 5000K, Refractive Lens, Summit White	XTOR9ARL-WT=79W, 5000K, Refractive Lens, Summit White
XTOR5ARL-N=41W, 3500K, Refractive Lens, Carbon Bronze	XTOR9ARL-PC2=79W, 5000K, Refractive Lens, 208-277V PC, Carbon Bronze
	XTOR9ARL-480V=79W, 5000K, Refractive Lens, 480V, Carbon Bronze
	XTOR9ARL-PMA=79W, 5000K, Refractive Lens, Pole Mount Arm, Carbon Bronze

5-DAY QUICK SHIP ORDERING INFORMATION

41W Series	**79W Series**
Full Cutoff	
XTOR5A-CBP=41W, 5000K, Carbon Bronze, Cold Weather Battery Pack	XTOR9A-CBP=79W, 5000K, Carbon Bronze, Cold Weather Battery Pack
XTOR5A-480V=41W, 5000K, Carbon Bronze, 480V	XTOR9A-N=79W, 3500K, Carbon Bronze
XTOR5A-PC2=41W, 5000K, Carbon Bronze, 208-277V PC	
Refractive Lens	
XTOR5ARL-PC2=41W, Refractive Lens, 5000K, Carbon Bronze, 208-277V PC	XTOR9ARL-CBP=79W, Refractive Lens, 5000K, Carbon Bronze, Cold Weather Battery Pack
XTOR5ARL-CBP=41W, Refractive Lens, 5000K, Carbon Bronze, Cold Weather Battery Pack	XTOR9ARL-N=79W, Refractive Lens, 3500K, Carbon Bronze
XTOR5ARL-480V=41W, Refractive Lens, 5000K, Carbon Bronze, 480V	



d-series

D-Series Size 1
LED Flood Luminaire

Catalog Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

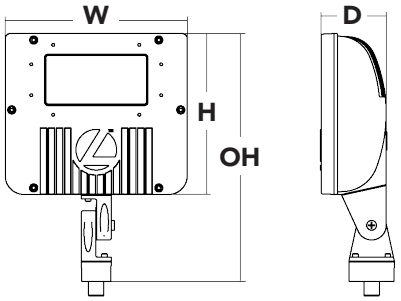
Introduction

The D-Series Size 1 Flood features precision optics to beautifully illuminate a variety of applications while its sleek, compact styling blends seamlessly with the environment.

The D-Series Flood reflector systems and cutting-edge chip-on-board LED technology produce low field-to-beam ratios for minimal spill light and incredible photometric performance. It's the ideal long-life replacement for 50 - 150W metal halide floods, with typical energy savings of 72% and expected service life of over 100,000 hours.

Specifications

EPA:	0.6 ft² *(0.05 m²)*
Depth:	3-1/8" *(8.0 cm)*
Width:	8-7/8" *(22.4 cm)*
Height:	7-3/4" *(19.8 cm)*
Overall Height	12" *(30.5 cm)*
Weight:	7.2 lbs *(3.3 kg)*



Ordering Information

EXAMPLE: DSXF1 LED 2 A530/40K MSP MVOLT THK DDBXD

DSXF1 LED							
Series	**Light Engines**	**Performance Package**	**Distribution**	**Voltage**	**Mounting**	**Options**	**Finish** *(required)*
DSXF1 LED	1 One COB engine 2 Two COB engines	**530 mA options:** A530/30K 3000K A530/40K 4000K A530/50K 5000K	NSP Narrow spot MSP Medium spot MFL Medium flood FL Flood WFL Wide flood WFR Wide flood, rectangular HMF Horizontal flood	MVOLT [1] 120 [1] 208 [1] 240 [1] 277 [1]	**Shipped included** THK Knuckle with 1/2" NPS threaded pipe IS Integral slipfitter (fits 2-3/8" O.D. tenon) **Shipped separately** [2] DSXF1/2TS Tenon slipfitter (2-3/8" O.D. THK required)	**Shipped installed** PE Photocontrol, button style [3] SF Single fuse (120, 277V) [4] **Shipped separately** [2] UBV Upper/bottom visor (universal) FV Full visor VG Vandal guard	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White

Stock configurations are offered for shorter lead times:

Standard Part Number	Stock Part Number
DSXF1 LED 1 A530/40K WFL MVOLT THK DDBXD	DSXF1 LED 1 40K
DSXF1 LED 1 A530/50K WFL MVOLT THK DDBXD	DSXF1 LED 1 50K
DSXF1 LED 2 A530/40K WFL MVOLT THK DDBXD	DSXF1 LED 2 40K
DSXF1 LED 2 A530/50K WFL MVOLT THK DDBXD	DSXF1 LED 2 50K

Accessories

Ordered and shipped separately.

DSXF1/2TS DDBXD U	Slipfitter for 1-1/4" to 2-3/8" OD tenons; mates with 1/2" threaded knuckle (specify finish)
FRWB DDBXD U	Radius wall bracket, 2-3/8" OD tenon (specify finish)
FSPB DDBXD U	Steel square pole bracket, 2-3/8" OD tenon (specify finish)
DSXF1UBV DDBXD U	Upper/bottom visor accessory (specify finish)
DSXF1FV DDBXD U	Full visor accessory (specify finish)
DSXF1VG U	Vandal guard accessory

For more mounting options, visit our Floodlighting Accessories pages.

NOTES

1. MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Specify 120, 208, 240 or 277 options only when ordering with fusing (SF option) or photocontrol (PE).
2. Also available as separate accessories; see Accessories information at left.
3. Photocontrol (PE) requires 120, 208, 240 or 277 voltage option.
4. Single fuse (SF) requires 120 or 277 voltage option.

LITHONIA LIGHTING

One Lithonia Way • Conyers, Georgia 30012 • Phone: 800.279.8041 • Fax: 770.918.1209 • www.lithonia.com
© 2012-2014 Acuity Brands Lighting, Inc. All rights reserved.

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Actual performance may differ as a result of end-user environment and application. Actual wattage may differ by +/- 8% when operating between 120-480V +/- 10%. Contact factory for performance data on any configurations not shown here.

Light Engines	Drive Current (mA)	Performance Package	System Watts	Dist. Type	Field Angle		Beam Angle		30K (3000K, 70 CRI)			40K (4000K, 70 CRI)			50K (5000K, 70 CRI)		
					°H	°V	°H	°V	Max Cd	Lumens	LPW	Max Cd	Lumens	LPW	Max Cd	Lumens	LPW
1	530	A530/--K	19W	NSP	48	49	19	19	7062	1408	74	7300	1692	89	7277	1700	89
				MSP	50	48	24	23	6782	1541	81	6740	1923	101	6719	1916	101
				MFL	60	60	47	46	2249	1316	69	2806	1581	83	2797	1588	84
				FL	85	84	63	62	1845	1752	92	1855	2105	111	1849	2115	111
				WFL	106	106	71	72	1301	1739	92	1391	1995	105	1387	2099	110
				WFR	107	88	85	64	1279	1764	93	1386	2119	112	1381	2129	112
				HMF	100	62	80	13	1445	771	41	1259	927	49	1255	931	49
2	530	A530/--K	37W	NSP	48	49	19	19	13,379	2668	72	13,803	3206	87	13,760	3221	87
				MSP	50	48	24	23	12,850	2920	79	12,744	3643	98	12,704	3631	98
				MFL	60	60	47	46	4260	2493	67	5305	2995	81	5288	3009	81
				FL	85	84	63	62	3496	3320	90	3507	3989	108	3496	4008	108
				WFL	106	106	71	72	2465	3294	89	2630	3958	107	2622	3977	107
				WFR	107	88	85	64	2422	3342	90	2620	4015	109	2612	4034	109
				HMF	100	62	80	13	2738	1462	40	2381	1756	47	2374	1764	48

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.07
10°C	50°F	1.04
20°C	68°F	1.02
25°C	**77°F**	**1.00**
30°C	86°F	0.98
40°C	104°F	0.95

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the **DSXF1 LED 2 A530** platform based on 8400 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	0.94	0.90	0.80

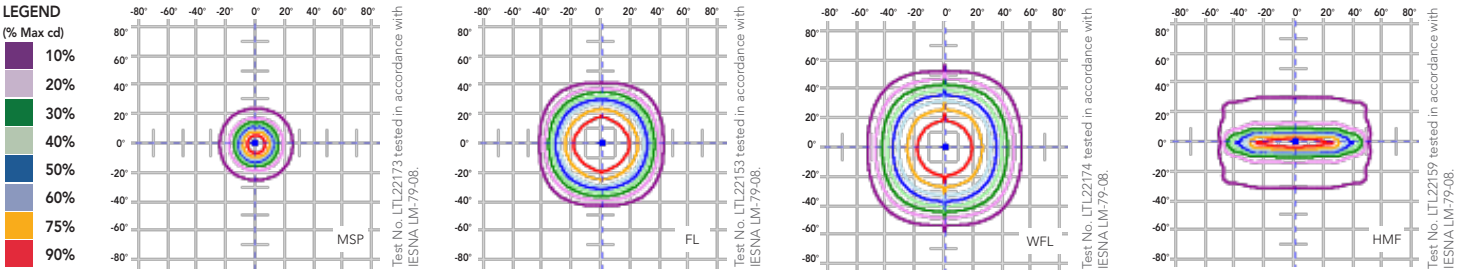
Electrical Load

Light Engines	Drive Current (mA)	System Watts	Current (A)					
			120	208	240	277	347	480
1	530	19W	0.16	0.1	0.09	0.08	-	-
2	530	37W	0.32	0.19	0.17	0.15	-	-

Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Flood Size 1 homepage.

Isocandela plots for the DSXF1 LED 2 A530/40K.



Mounting, Options and Accessories



THK - Knuckle with 1/2" NPS threaded pipe



IS – Integral slipfitter
H= 2-1/2" (6.3 cm)
ID= 2-3/8" (6.0 cm)
OD= 3-1/2" (8.8 cm)



UBV – Upper/bottom visor
W= 5-1/4" (13.3 cm)
H= 2-1/2" (6.3 cm)
D= 3" (7.6 cm)



FV – Full visor
W= 5-1/4" (13.3 cm)
H= 2-1/2" (6.3 cm)
D= 3" (7.6 cm)



VG – Vandal guard
W= 6-1/2" (16.5 cm)
H= 4" (10.1 cm)

© 2012-2014 Acuity Brands Lighting, Inc. All rights reserved.

FEATURES & SPECIFICATIONS

INTENDED USE
The sleek design of the D-Series Size 1 Flood reflects the embedded high performance LED technology. It is ideal for landscape, signage and accent lighting in many commercial and residential applications.

CONSTRUCTION
Die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. The LED driver is mounted in direct contact with the casting to promote low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP65). Low EPA (0.6 ft^2) for optimized wind loading.

FINISH
Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling.

OPTICS
A variety of precision-molded vacuum-metallized specular reflectors are engineered for superior field-to-beam ratios, uniformity and spacing. Light engines are available in 3000K (70 CRI min.), 4000K (70 CRI min.) or 5000K (70 CRI min.) configurations. Optional visors offer additional versatility.

ELECTRICAL
Light engine(s) consist of chip-on-board (COB) LEDs directly coupled to the housing to maximize heat dissipation and promote long life (100,000 hrs, L80). Single-engine unit uses a Class 2 electronic driver; dual-engine unit uses a Class 1 electronic driver. Both drivers have a power factor >90%, THD <20%, and an expected life of 100,000 hours. Surge protection meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

INSTALLATION
Integral adjustable knuckle with 1/2-14NPS threaded pipe, tenon slipfitter, or integral slipfitter, facilitates quick and easy installation to a variety of mounting accessories. This secure connection enables the D-Series Size 1 to withstand up to a 1.5 G vibration load rating per ANSI C136.31.

LISTINGS
CSA certified to U.S. and Canadian standards. Luminaire is IP65 rated. Rated for -40°C minimum ambient.

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org to confirm which versions are qualified.

WARRANTY
Five year limited warranty. Full warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx.

Note: Specifications subject to change without notice.

© 2012-2014 Acuity Brands Lighting, Inc. All rights reserved.



d-series

D-Series Size 2
LED Flood Luminaire

Catalog Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

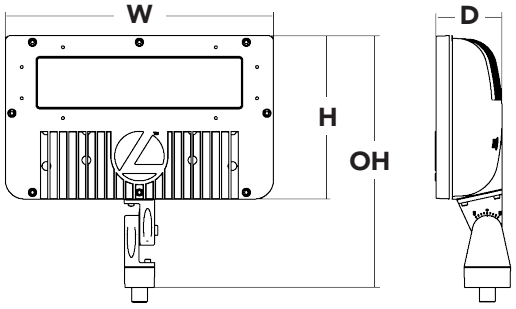
Introduction

The D-Series Size 2 Flood features precision optics to beautifully illuminate a variety of applications as its sleek, compact styling blends seamlessly with its environment.

The D-Series Flood reflector systems and cutting-edge chip-on-board LED technology produce low field-to-beam ratios for minimal spill light and incredible photometric performance. It's the ideal long-life replacement for 150 - 250W metal halide floods, with typical energy savings of 70% and expected service life of over 100,000 hours.

Specifications

EPA:	0.8 ft² *(0.05 m²)*
Depth:	3-1/8" *(8.0 cm)*
Width:	12-7/8" *(32.6 cm)*
Height:	7-3/4" *(19.8 cm)*
Overall Height	12" *(30.5 cm)*
Weight:	10.5 lbs *(4.8 kg)*



Ordering Information

EXAMPLE: DSXF2 LED 4 A530/40K MSP MVOLT THK DDBXD

DSXF2 LED

Series	Light Engines	Performance Package	Distribution	Voltage	Mounting	Options	Finish *(required)*
DSXF2 LED	3 Three COB engines [1] 4 Four COB engines	**530 mA options:** A530/30K 3000K A530/40K 4000K A530/50K 5000K	NSP Narrow spot MSP Medium spot MFL Medium flood FL Flood WFL Wide flood WFR Wide flood, rectangular HMF Horizontal flood	MVOLT [2] 120 [2] 208 [2] 240 [2] 277 [2] 347 480	**Shipped included** THK Knuckle with 1/2" NPS threaded pipe YKC62 Yoke with 16-3 SO cord IS Integral slipfitter (fits 2-3/8" O.D. tenon) **Shipped separately** [3] DSXF1/2TS Tenon slipfitter (2-3/8" O.D. THK required) FTS CG6 Tenon slipfitter (2-7/8" O.D. YKC62 required)	**Shipped installed** PE Photocontrol, button style [4] DMG 0-10V dimming driver (no controls) [1,5] SF Single fuse (120, 277, 347V) [6] DF Double fuse (208, 240, 480V) [6] **Shipped separately** [3] UBV Upper/bottom visor (universal) FV Full visor VG Vandal guard	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White

Stock configurations are offered for shorter lead times:

Standard Part Number	Stock Part Number
DSXF2 LED 3 A530/40K WFL MVOLT THK DDBXD	DSXF2 LED 3 40K
DSXF2 LED 3 A530/50K WFL MVOLT THK DDBXD	DSXF2 LED 3 50K
DSXF2 LED 4 A530/40K WFL MVOLT THK DDBXD	DSXF2 LED 4 40K
DSXF2 LED 4 A530/50K WFL MVOLT THK DDBXD	DSXF2 LED 4 50K

Accessories

Ordered and shipped separately.

DSXF1/2TS DDBXD U	Slipfitter for 1-1/4" to 2-3/8" OD tenons; mates with 1/2" threaded knuckle (specify finish)
FTS CG6 DDBXD U	Slipfitter for 2-3/8" to 2-7/8" OD tenons; mates with yoke mount (specify finish)
FRWB DDBXD U	Radius wall bracket, 2-3/8" OD tenon (specify finish)
FSPB DDBXD U	Steel square pole bracket, 2-3/8" OD tenon (specify finish)
DSXF2UBV DDBXD U	Upper/bottom visor accessory (specify finish)
DSXF2FV DDBXD U	Full visor accessory (specify finish)
DSXF2VG U	Vandal guard accessory

For more mounting options, visit our Floodlighting Accessories pages.

NOTES

1. Not available with 347 or 480V.
2. MVOLT driver operates on any line voltage from 120-277V. Specify 120, 208, 240 or 277 options only when ordering with fusing (SF, DF options) or photocontrol (PE).
3. Also available as separate accessories; see Accessories information at left.
4. Photocontrol (PE) requires 120, 208, 240, 277 or 347 voltage option.
5. Not available with three-engine product (DSXF2 LED 3).
6. Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.

LITHONIA LIGHTING

One Lithonia Way • Conyers, Georgia 30012 • Phone: 800.279.8041 • Fax: 770.918.1209 • www.lithonia.com
© 2012-2014 Acuity Brands Lighting, Inc. All rights reserved.

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Actual performance may differ as a result of end-user environment and application. Actual wattage may differ by +/- 8% when operating between 120-480V +/- 10%. Contact factory for performance data on any configurations not shown here.

Light Engines	Drive Current (mA)	Performance Package	System Watts	Dist. Type	Field Angle		Beam Angle		30K (3000K, 70 CRI)			40K (4000K, 70 CRI)			50K (5000K, 70 CRI)		
					°H	°V	°H	°V	Max Cd	Lumens	LPW	Max Cd	Lumens	LPW	Max Cd	Lumens	LPW
3	530	A530/--K	54W	NSP	48	49	19	19	19,398	3868	72	20,166	4648	86	20,103	4670	86
				MSP	50	48	24	23	18,631	4234	78	18,619	5087	94	18,561	5111	95
				MFL	60	60	47	46	6177	3614	67	7751	4342	80	7726	4363	81
				FL	85	84	63	62	5069	4813	89	5124	5783	107	5108	5810	108
				WFL	106	106	71	72	3573	4776	88	3842	6108	113	3830	5766	107
				WFR	107	88	85	64	3513	4845	90	3828	5821	108	3816	5849	108
				HMF	100	62	80	13	3969	2119	39	3479	2546	47	3468	2558	47
4	530	A530/--K	74W	NSP	48	49	19	19	25,870	5159	70	26,893	6198	84	26,809	6228	84
				MSP	50	48	24	23	25,415	5775	78	24,830	6933	94	24,752	6966	94
				MFL	60	60	47	46	8237	4820	65	10,336	5791	78	10,304	5818	79
				FL	85	84	63	62	6760	6419	87	6833	7712	104	6811	7749	105
				WFL	106	106	71	72	4758	6359	86	5124	7633	103	5108	7670	104
				WFR	107	88	85	64	4684	6462	87	5105	7764	105	5089	7801	105
				HMF	100	62	80	13	5293	2826	38	4639	3396	46	4625	3412	46

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.07
10°C	50°F	1.04
20°C	68°F	1.02
25°C	**77°F**	**1.00**
30°C	86°F	0.98
40°C	104°F	0.95

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the DSXF LED 4 A530 platform based on 8400 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	0.94	0.90	0.80

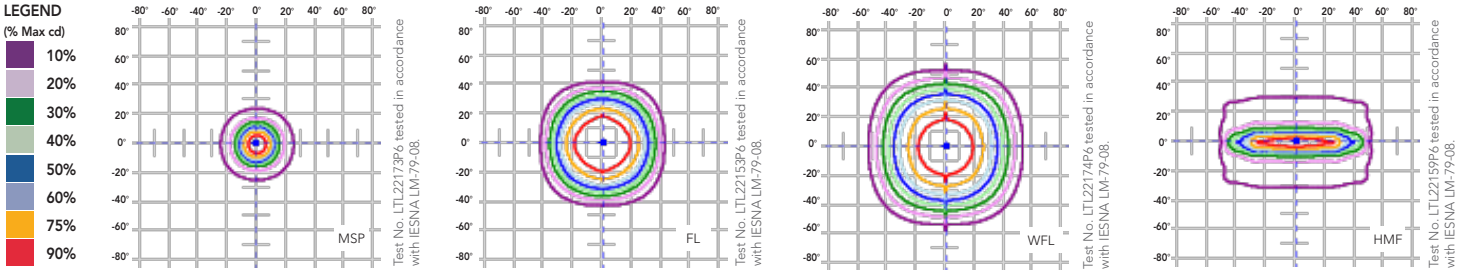
Electrical Load

Light Engines	Drive Current (mA)	System Watts	Current (A)					
			120	208	240	277	347	480
3	530	54W	0.47	0.28	0.22	0.2	0.17	0.12
4	530	74W	0.63	0.37	0.33	0.3	0.22	0.16

Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Flood Size 2 homepage.

Isocandela plots for the DSXF2 LED 4 A530/40K.



Mounting, Options and Accessories



THK - Knuckle with 1/2" NPS threaded pipe

YKC62 - Yoke with SO cord
W= 4-3/4" (12.0 cm)
H= 4-1/4" (10.7 cm)
D= 2-1/4" (5.7 cm)

IS – Integral slipfitter
H= 2-1/2" (6.3 cm)
ID= 2-3/8" (6.0 cm)
OD= 3-1/2" (8.8 cm)

UBV – Upper/bottom visor
W= 10" (25.4 cm)
H= 2-1/2" (6.3 cm)
D= 3" (7.6 cm)

FV – Full visor
W= 10" (25.4 cm)
H= 2-1/2" (6.3 cm)
D= 3" (7.6 cm)

VG – Vandal guard
W= 10-1/2" (26.6cm)
H= 4" (10.1cm

© 2012-2014 Acuity Brands Lighting, Inc. All rights reserved.

FEATURES & SPECIFICATIONS

INTENDED USE
The sleek design of the D-Series Size 2 Flood reflects the embedded high performance LED technology. It is ideal for larger signage, facade and flagpole lighting in many commercial and residential applications.

CONSTRUCTION
Die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. The LED driver is mounted in direct contact with the casting to promote low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP65). Low EPA (0.8 ft^2) for optimized wind loading.

FINISH
Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling.

OPTICS
A variety of precision-molded vacuum-metallized specular reflectors are engineered for superior field-to-beam ratios, uniformity and spacing. Light engines are available in 3000K (70 CRI min.), 4000K (70 CRI min.) or 5000K (70 CRI min.) configurations. Optional visors offer additional versatility.

ELECTRICAL
Light engine(s) consist of chip-on-board (COB) LEDs directly coupled to the housing to maximize heat dissipation and promote long life (100,000 hrs, L80). Class 1 electronic driver has a power factor >90%, THD <20%, and has an expected life of 100,000 hours with <1% failure rate. Surge protection meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

INSTALLATION
Integral adjustable knuckle with 1/2-14 NPS threaded pipe, tenon slipfitter, or yoke mounting, facilitates quick and easy installation to a variety of mounting accessories. This secure connection enables the D-Series Size 2 to withstand up to a 1.5 G vibration load rating per ANSI C136.31.

LISTINGS
CSA certified to U.S. and Canadian standards. Luminaire is IP65 rated. Rated for -40°C minimum ambient.

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org to confirm which versions are qualified.

WARRANTY
Five year limited warranty. Full warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx.

Note: Specifications subject to change without notice.

© 2012-2014 Acuity Brands Lighting, Inc. All rights reserved.

ARE-EDG-5S-AA

Cree Edge™ Area Luminaire – Type V Short – Adjustable Arm Mount

Product Description

Slim, low profile design minimizes wind load requirements. Luminaire sides are rugged cast aluminum with integral, weathertight LED driver compartments and high performance aluminum heat sinks. Adjustable arm mount is rugged die cast aluminum and mounts to 2" (51mm) IP, 2.375" (60mm) O.D. tenon. Includes leaf / debris guard.

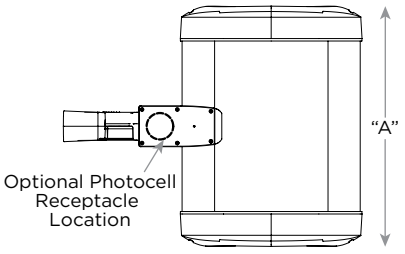
Performance Summary

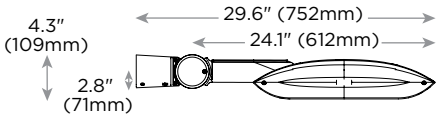
- Utilizes BetaLED® Technology
- Patented NanoOptic® Product Technology
- Made in the U.S.A. of U.S. and imported parts
- **CRI:** Minimum 70 CRI
- **CCT:** 5700K (+ / - 500K) Standard, 4000K (+ / - 300K)
- **Limited Warranty†:** 10 years on luminaire / 10 years on Colorfast DeltaGuard® finish
- **EPA and Weight:** Reference EPA and Weight spec sheet

Accessories

Field Installed Accessories
XA-BRDSPK Bird Spikes







LED Count (x10)	Dim. "A"
04	12.1" (306mm)
06	14.1" (357mm)
08	16.1" (408mm)
10	18.1" (459mm)
12	20.1" (510mm)
14	22.1" (560mm)
16	24.1" (611mm)
20	28.1" (713mm)
24	32.1" (814mm)

Ordering Information

Example: ARE-EDG-5S-AA-04-E-UL-SV-350-OPTIONS

ARE-EDG	5S	AA		E				
Product	**Optic**	**Mounting**	**LED Count (x10)**	**Series**	**Voltage**	**Color Options**	**Drive Current**	**Options**
ARE-EDG	**5S** Type V Short	**AA** Adjustable Arm	**04** **06** **08** **10** **12** **14** **16** **20** **24**	**E**	**UL** Universal 120–277V **UH** Universal 347–480V **34** 347V	**SV** Silver (Standard) **BK** Black **BZ** Bronze **PB** Platinum Bronze **WH** White	**350*** 350mA **525**** 525mA **700***** 700mA	**40K 4000K Color Temperature** - Color temperature per luminaire **DIM 0–10V Dimming** - Control by others - Refer to dimming spec sheet for details - Can't exceed specified drive current **F Fuse** - When code dictates fusing, use time delay fuse - Not available with all ML options. Refer to ML spec sheet for availability with ML options **HL Hi / Low (175 / 350 / 525 Dual Circuit Input)** - Refer to ML spec sheet for details - Sensor not included **P Photocell** - Not available with all ML options. Refer to ML spec sheet for availability with ML options - Must specify voltage other than UH **R NEMA Photocell Receptacle** - Not available with all ML options. Refer to ML spec sheet for availability with ML options - Intended for downlight applications at 0˚ tilt - Photocell by others **ML Multi-Level** - Refer to ML spec sheet for details

† See www.cree.com/lighting/products/warranty for warranty terms
* Available on luminaires with 60–240 LEDs.
** Available on luminaires with 40–160 LEDs.
*** Available on luminaires with 40–60 LEDs.

BetaLED TECHNOLOGY

c UL us

Rev. Date: 09/27/13

CREE®

Product Specifications

CONSTRUCTION & MATERIALS

- Slim, low profile, minimizing wind load requirements
- Luminaire sides are rugged die cast aluminum with integral, weathertight LED driver compartments and high performance heat sinks
- Adjustable mounting arm is rugged die cast aluminum and mounts to 2" (51mm) IP, 2.375" (60mm) O.D. tenon
- Includes leaf / debris guard
- Exclusive Colorfast DeltaGuard® finish features an E-Coat epoxy primer with an ultra-durable powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion. Standard is silver. Bronze, black, white, and platinum bronze are also available

ELECTRICAL SYSTEM

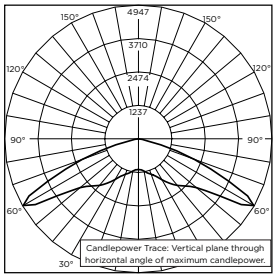
- **Input Voltage:** 120–277V or 347–480V, 50 / 60Hz, Class 1 drivers
- **Power Factor:** > 0.9 at full load
- **Total Harmonic Distortion:** < 20% at full load
- Integral weathertight electrical box with terminal strips (12Ga–20Ga) for easy power hookup
- Integral 10kV surge suppression protection standard
- To address inrush current, slow blow fuse or type C / D breaker should be used

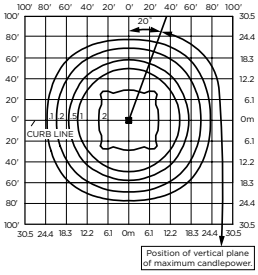
REGULATORY & VOLUNTARY QUALIFICATIONS

- cULus Listed
- Suitable for wet locations
- Enclosure rated IP66 per IEC 60529 when ordered without P or R options
- Consult factory for CE Certified products
- Certified to ANSI C136.31-2001, 3G bridge and overpass vibration standards
- 10kV surge suppression protection tested in accordance with IEEE / ANSI C62.41.2
- Luminaire and finish endurance tested to withstand 5,000 hours of elevated ambient salt fog conditions as defined in ASTM Standard B 117
- Product qualified on the DesignLights Consortium™ ("DLC") Qualified Products List ("QPL") when ordered without full backlight control shield
- Meets Buy American requirements within ARRA

Photometry

All published luminaire photometric testing performed to IESNA LM-79-08 standards by a NVLAP certified laboratory.





CSA Test Report #: 6362
ARE-EDG-5S-**-06-E-UL-700-40K
Initial Delivered Lumens: 12,798

ARE-EDG-5S-**-12-E-UL-525-40K
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 20,700
Initial FC at grade

IES Files
To obtain an IES file specific to your project consult:
http://www.cree.com/lighting/tools-and-support/exterior-ies-configuration-tool

Lumen Output, Electrical, and Lumen Maintenance Data

Type V Short Distribution												
LED Count (x10)	5700K		4000K		System Watts 120–480V	TOTAL CURRENT						50K Hours Projected Lumen Maintenance Factor @ 15˚C (59˚F)***
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11		120V	208V	240V	277V	347V	480V	
350mA @ 25˚C (77˚F)												
06	7,696	B3 U0 G1	7,411	B3 U0 G1	66	0.52	0.31	0.28	0.26	0.20	0.15	93%
08	10,261	B3 U0 G2	9,881	B3 U0 G2	90	0.75	0.44	0.38	0.34	0.26	0.20	
10	12,796	B3 U0 G2	12,322	B3 U0 G2	110	0.92	0.53	0.47	0.41	0.32	0.24	
12	15,355	B4 U0 G2	14,786	B4 U0 G2	130	1.10	0.63	0.55	0.48	0.38	0.28	
14	17,800	B4 U0 G2	17,141	B4 U0 G2	158	1.32	0.77	0.68	0.62	0.47	0.35	
16	20,343	B4 U0 G2	19,590	B4 U0 G2	179	1.49	0.87	0.77	0.68	0.53	0.39	
20	25,429	B4 U0 G2	24,487	B4 U0 G2	220	1.84	1.06	0.93	0.83	0.64	0.47	
24	30,515	B5 U0 G3	29,385	B5 U0 G3	261	2.19	1.26	1.10	0.97	0.76	0.56	
525mA @ 25˚C (77˚F)												
04	7,266	B3 U0 G1	6,997	B3 U0 G1	70	0.58	0.34	0.31	0.28	0.21	0.16	92%
06	10,774	B3 U0 G2	10,375	B3 U0 G2	101	0.84	0.49	0.43	0.38	0.30	0.22	
08	14,365	B4 U0 G2	13,833	B4 U0 G2	133	1.13	0.66	0.58	0.51	0.39	0.28	
10	17,914	B4 U0 G2	17,250	B4 U0 G2	171	1.43	0.83	0.74	0.66	0.50	0.38	
12	21,496	B4 U0 G2	20,700	B4 U0 G2	202	1.69	0.98	0.86	0.77	0.59	0.44	
14	24,920	B4 U0 G2	23,997	B4 U0 G2	232	1.94	1.12	0.98	0.87	0.68	0.50	
16	28,480	B5 U0 G3	27,426	B5 U0 G3	263	2.21	1.27	1.11	0.97	0.77	0.56	
700mA @ 25˚C (77˚F)												
04	8,874	B3 U0 G1	8,546	B3 U0 G1	92	0.78	0.46	0.40	0.36	0.27	0.20	90%
06	13,160	B3 U0 G2	12,672	B3 U0 G2	134	1.14	0.65	0.57	0.50	0.39	0.29	

* Actual production yield may vary between -4 and +10% of initial delivered lumens.
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit www.iesna.org/PDF/Erratas/TM-15-11BugRatingsAddendum.pdf. Vaild with no tilt.
*** For recommended lumen maintenance factor data see TD-13. Calculated L_{70} based on 6,000 hours LM-80-08 testing: > 150,000 hours.

© 2013 Cree, Inc. All rights reserved. For informational purposes only. Content is subject to change. See www.cree.com/patents for patents that cover these products. Cree®, the Cree logo, BetaLED®, NanoOptic®, the BetaLED Technology logo, and Colorfast DeltaGuard® are registered trademarks, and Cree Edge™ is a trademark of Cree, Inc. The UL logo is a registered trademark of UL LLC. DesignLights Consortium™ and the DLC QPL logo are trademarks of Northeast Energy Efficiency Partnerships, Inc.

ARE-EDG-5M-DA

Cree Edge™ Area Luminaire – Type V Medium – Direct Arm Mount

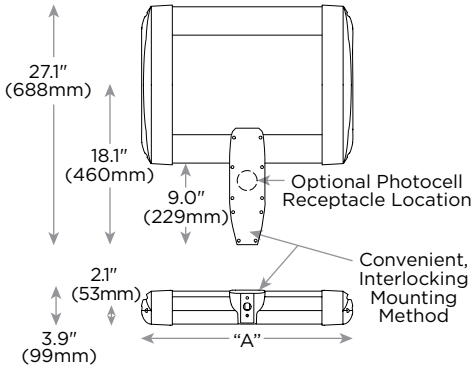
Product Description

Slim, low profile design minimizes wind load requirements. Luminaire sides are rugged cast aluminum with integral, weathertight LED driver compartments and high performance aluminum heat sinks. Convenient, interlocking mounting method. Mounting housing is rugged die cast aluminum and mounts to 3–6" (76–152mm) square or round pole. Luminaire is secured by two 5/16-18 UNC bolts spaced on 2" (51mm) centers.



Performance Summary

- Utilizes BetaLED® Technology
- Patented NanoOptic® Product Technology
- Made in the U.S.A. of U.S. and imported parts
- **CRI:** Minimum 70 CRI
- **CCT:** 5700K (+ / - 500K) Standard, 4000K (+ / - 300K)
- **Limited Warranty†:** 10 years on luminaire / 10 years on Colorfast DeltaGuard® finish
- **EPA and Weight:** Reference EPA and Weight spec sheet



LED Count (x10)	Dim. "A"
04	12.1" (306mm)
06	14.1" (357mm)
08	16.1" (408mm)
10	18.1" (459mm)
12	20.1" (510mm)
14	22.1" (560mm)
16	24.1" (611mm)
20	28.1" (713mm)
24	32.1" (814mm)

Accessories

Field Installed Accessories
XA-BRDSPK Bird Spikes

Ordering Information

Example: ARE-EDG-5M-DA-04-E-UL-SV-350-OPTIONS

ARE-EDG	5M	DA		E				
Product	**Optic**	**Mounting**	**LED Count (x10)**	**Series**	**Voltage**	**Color Options**	**Drive Current**	**Options**
ARE-EDG	**5M** Type V Medium	**DA** Direct Arm	**04** **06** **08** **10** **12** **14** **16** **20** **24**	**E**	**UL** Universal 120–277V **UH** Universal 347–480V **34** 347V	**SV** Silver (Standard) **BK** Black **BZ** Bronze **PB** Platinum Bronze **WH** White	**350*** 350mA **525**** 525mA **700***** 700mA	**40K 4000K Color Temperature** - Color temperature per luminaire **DIM 0–10V Dimming** - Control by others - Refer to dimming spec sheet for details - Can't exceed specified drive current **F Fuse** - When code dictates fusing, use time delay fuse - Not available with all ML options. Refer to ML spec sheet for availability with ML options **HL Hi / Low (175 / 350 / 525 Dual Circuit Input)** - Refer to ML spec sheet for details - Sensor not included **P Photocell** - Not available with all ML options. Refer to ML spec sheet for availability with ML options - Must specify voltage other than UH **R NEMA Photocell Receptacle** - Not available with all ML options. Refer to ML spec sheet for availability with ML options - Photocell by others **ML Multi-Level** - Refer to ML spec sheet for details

† See www.cree.com/lighting/products/warranty for warranty terms
* Available on luminaires with 60–240 LEDs.
** Available on luminaires with 40–160 LEDs.
*** Available on luminaires with 40–60 LEDs.

Rev. Date: 09/27/13

Product Specifications

CONSTRUCTION & MATERIALS

- Slim, low profile, minimizing wind load requirements
- Luminaire sides are rugged die cast aluminum with integral, weathertight LED driver compartments and high performance heat sinks
- Convenient interlocking mounting method. Mounting housing is rugged die cast aluminum mounting to 3–6" (76–152mm) square or round pole, secured by two 5 / 16-18 UNC bolts spaced on 2" (51mm) centers
- Includes leaf / debris guard
- Exclusive Colorfast DeltaGuard® finish features an E-Coat epoxy primer with an ultra-durable powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion. Standard is silver. Bronze, black, white, and platinum bronze are also available

ELECTRICAL SYSTEM

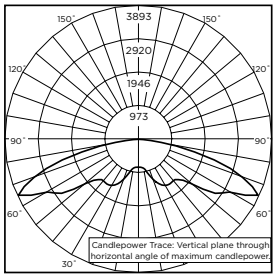
- **Input Voltage:** 120–277V or 347–480V, 50 / 60Hz, Class 1 drivers
- **Power Factor:** > 0.9 at full load
- **Total Harmonic Distortion:** < 20% at full load
- Integral weathertight electrical box with terminal strips (12Ga–20Ga) for easy power hookup
- Integral 10kV surge suppression protection standard
- To address inrush current, slow blow fuse or type C / D breaker should be used

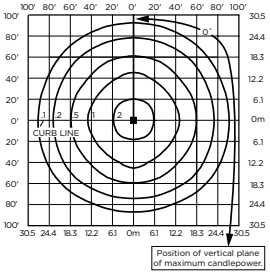
REGULATORY & VOLUNTARY QUALIFICATIONS

- cULus Listed
- Suitable for wet locations
- Enclosure rated IP66 per IEC 60529 when ordered without P or R options
- Consult factory for CE Certified products
- Certified to ANSI C136.31-2001, 3G bridge and overpass vibration standards
- 10kV surge suppression protection tested in accordance with IEEE / ANSI C62.41.2
- Luminaire and finish endurance tested to withstand 5,000 hours of elevated ambient salt fog conditions as defined in ASTM Standard B 117
- Product qualified on the DesignLights Consortium™ ("DLC") Qualified Products List ("QPL") when ordered without full backlight control shield
- Meets Buy American requirements within ARRA

Photometry

All published luminaire photometric testing performed to IESNA LM-79-08 standards by a NVLAP certified laboratory.





CSA Test Report #: 6416
ARE-EDG-5M-**-06-E-UL-700-40K
Initial Delivered Lumens: 12,022

ARE-EDG-5M-**-12-E-UL-525-40K
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 18,630
Initial FC at grade

IES Files
To obtain an IES file specific to your project consult:
http://www.cree.com/lighting/tools-and-support/exterior-ies-configuration-tool

Lumen Output, Electrical, and Lumen Maintenance Data

Type V Medium Distribution												
LED Count (x10)	5700K		4000K		System Watts 120–480V	TOTAL CURRENT						50K Hours Projected Lumen Maintenance Factor @ 15˚C (59˚F)***
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11		120V	208V	240V	277V	347V	480V	
350mA @ 25˚C (77˚F)												
06	6,926	B3 U0 G2	6,670	B3 U0 G2	66	0.52	0.31	0.28	0.26	0.20	0.15	93%
08	9,235	B3 U0 G2	8,893	B3 U0 G2	90	0.75	0.44	0.38	0.34	0.26	0.20	
10	11,516	B4 U0 G2	11,089	B4 U0 G2	110	0.92	0.53	0.47	0.41	0.32	0.24	
12	13,819	B4 U0 G3	13,307	B4 U0 G3	130	1.10	0.63	0.55	0.48	0.38	0.28	
14	16,020	B4 U0 G3	15,427	B4 U0 G3	158	1.32	0.77	0.68	0.62	0.47	0.35	
16	18,309	B4 U0 G3	17,631	B4 U0 G3	179	1.49	0.87	0.77	0.68	0.53	0.39	
20	22,886	B5 U0 G3	22,038	B5 U0 G3	220	1.84	1.06	0.93	0.83	0.64	0.47	
24	27,463	B5 U0 G4	26,446	B5 U0 G4	261	2.19	1.26	1.10	0.97	0.76	0.56	
525mA @ 25˚C (77˚F)												
04	6,539	B3 U0 G2	6,297	B3 U0 G2	70	0.58	0.34	0.31	0.28	0.21	0.16	92%
06	9,697	B3 U0 G2	9,338	B3 U0 G2	101	0.84	0.49	0.43	0.38	0.30	0.22	
08	12,929	B4 U0 G3	12,450	B4 U0 G3	133	1.13	0.66	0.58	0.51	0.39	0.28	
10	16,122	B4 U0 G3	15,525	B4 U0 G3	171	1.43	0.83	0.74	0.66	0.50	0.38	
12	19,347	B4 U0 G3	18,630	B4 U0 G3	202	1.69	0.98	0.86	0.77	0.59	0.44	
14	22,428	B5 U0 G3	21,598	B5 U0 G3	232	1.94	1.12	0.98	0.87	0.68	0.50	
16	25,632	B5 U0 G3	24,683	B5 U0 G3	263	2.21	1.27	1.11	0.97	0.77	0.56	
700mA @ 25˚C (77˚F)												90%
04	7,987	B3 U0 G2	7,691	B3 U0 G2	92	0.78	0.46	0.40	0.36	0.27	0.20	
06	11,844	B4 U0 G3	11,405	B4 U0 G2	134	1.14	0.65	0.57	0.50	0.39	0.29	

* Actual production yield may vary between -4 and +10% of initial delivered lumens.
** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit www.iesna.org/PDF/Erratas/TM-15-11BugRatingsAddendum.pdf.
*** For recommended lumen maintenance factor data see TD-13. Calculated L_{70} based on 6,000 hours LM-80-08 testing: > 150,000 hours.

© 2013 Cree, Inc. All rights reserved. For informational purposes only. Content is subject to change. See www.cree.com/patents for patents that cover these products. Cree®, the Cree logo, BetaLED®, NanoOptic®, the BetaLED Technology logo, and Colorfast DeltaGuard® are registered trademarks, and Cree Edge™ is a trademark of Cree, Inc. The UL logo is a registered trademark of UL LLC. DesignLights Consortium™ and the DLC QPL logo are trademarks of Northeast Energy Efficiency Partnerships, Inc.

LITHONIA LIGHTING®

Catalog Number	
Notes	
Type	

Decorative Indoor

LED Low Profile Round

Flush Mount

HIGH-PERFORMANCE LED



FEATURES & SPECIFICATIONS

INTENDED USE

Provides general illumination in commercial and residential applications. Ideal for use in closets, foyers, hallways, corridors, bedrooms, offices, utility work areas, stairways and more.

CONSTRUCTION

Features a white acrylic diffuser and is available in 11″ and 14″ sizes. Hidden cam-latches provide easy diffuser removal for installation and maintenance.

OPTICS

11″ units produce 1100 lumens and 14″ units produce 1600 lumens, both at 50,000 hours life.

ELECTRICAL

Fixture operates at 120 volts, 60 Hz. 11″ Standard input = 16 watts, 69 lumens per watt.

14″ Standard input = 24 watts, 67 lumens per watt.

Works with most standard incandescent dimmers (see list of approved dimmers).

INSTALLATION

All mounting hardware included.

LISTINGS

cUL Certified to US and Canadian standards and listed suitable for damp locations.

WARRANTY

5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Specifications subject to change without notice.

Specifications

Height: FMLRL 11 – 2-7/8 (7.3)
FMLRL 14 – 3-1/8 (7.9)

Width: FMLRL 11 – 11 (27.9)
FMLRL 14 – 13-11/16 (34.7)

All dimensions are inches (centimeters) unless otherwise indicated.

ORDERING INFORMATION For shortest lead times, configure product using **bolded options.**

Example: FMLRL 11 14840

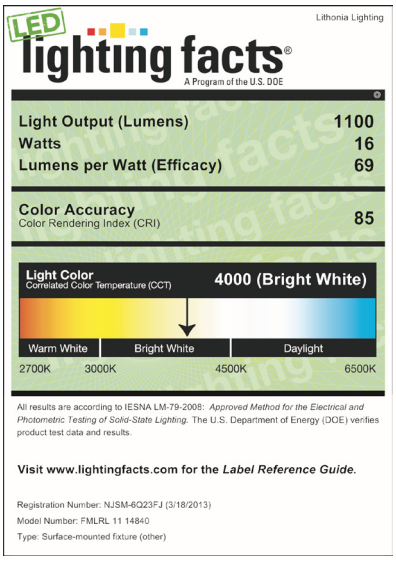
Series		Module/CRI		Color temperature	
FMLRL 11	11″ LED low profile round flush mount	**148**	>80	**40**	4000 K
FMLRL 14	14″ LED low profile round flush mount	**208**	>80	35	3500 K[1]
				30	3000 K
				27	2700 K[1]

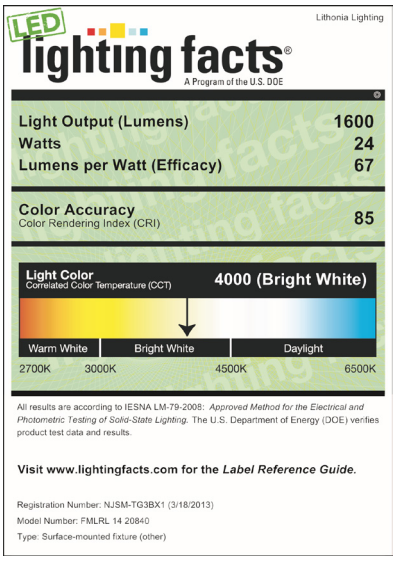
Accessories: *Order as separate catalog number.*	
DFMLRL11	11″ LED low profile round diffuser
DFMLRL14	14″ LED low profile round diffuser

Notes
1 Minimum 90-day lead time for non-standard color temperatures; minimum 50 order quantity.

LED Low Profile Round Flush Mount

LIGHTING FACTS





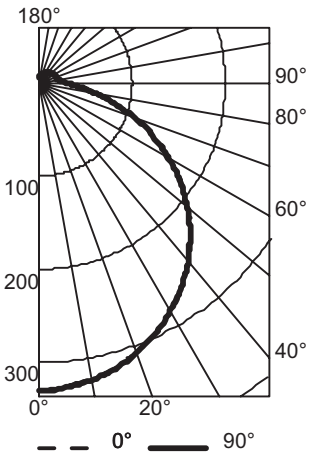
SUGGESTED DIMMERS

The FMLRL is designed to operate with most standard Triac Based (Forward Phase-Control or Leading Edge) dimmers and is not compatible with 0-10v dimming systems. The following is a list of dimmers tested and does not imply any guarantee or warranty of compatibility with a particular application. Unlisted dimmers do not imply non-compatibility.

Manufacturer	Part number(s)
Leviton	6633P
	IPL06
	6674P
	IPE04
	Trimatron 600W
Lutron	DVELV 300P
	Skylark 300P
	NTELV 300
	NLV 600
Synergy	ISD 600 I 120

PHOTOMETRICS

FMLRL 11 14840, test no. LTL23006, tested in accordance to IESNA LM-79.



CP Summary

	0°	90
0°	330	330
5°	327	328
15°	317	318
25°	296	296
35°	266	267
45°	230	230
55°	187	186
65°	137	135
75°	86	84
85°	44	42
90	31	30

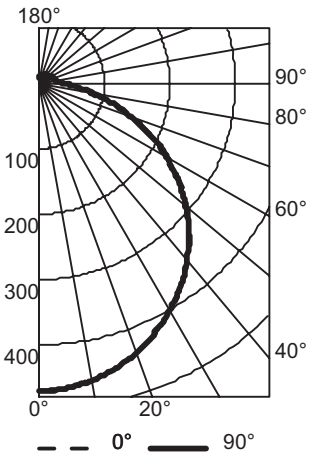
Coefficients of Utilization

pf		80%			20%			50%		
pc		70%	50%	30%	70%	50%	30%	70%	50%	30%
pw		10%	10%	10%	10%	10%	10%	10%	10%	10%
RCR	0	117	117	117	113	113	113	106	106	106
	1	105	100	95	97	92	88	90	87	84
	2	95	86	79	83	77	71	78	73	68
	3	86	75	67	73	65	59	68	62	56
	4	79	66	57	64	56	49	61	53	48
	5	72	59	50	57	49	42	54	47	41
	6	67	53	44	52	43	37	49	41	36
	7	62	48	39	47	38	32	44	37	31
	8	57	44	35	43	34	29	40	33	28
	9	54	40	32	39	31	26	37	30	25
	10	50	37	29	36	28	23	34	27	23

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0° - 30°	258	22.1	22.1
0° - 40°	425	36.5	36.5
0° - 60°	771	66.1	66.1
0° - 90°	1051	90.1	90.1
90° - 120°	72	6.2	6.2
90° - 130°	87	7.5	7.5
90° - 150°	107	9.2	9.2
90° - 180°	115	9.9	9.9
0° - 180°	1166	100.0	100.0

FMLRL 14 20840, test no. LTL23005, tested in accordance to IESNA LM-79.



CP Summary

	0°	90
0°	470	470
5°	467	468
15°	451	452
25°	421	420
35°	380	378
45°	327	324
55°	265	260
65°	195	188
75°	120	114
85°	58	56
90	39	38

Coefficients of Utilization

pf		80%			20%			50%		
pc		70%	50%	30%	70%	50%	30%	70%	50%	30%
pw		10%	10%	10%	10%	10%	10%	10%	10%	10%
RCR	0	117	117	117	113	113	113	106	106	106
	1	106	100	96	97	93	89	91	88	85
	2	96	87	79	84	77	72	79	74	69
	3	87	76	67	74	66	59	69	63	57
	4	79	67	58	65	57	50	61	54	48
	5	73	60	50	58	49	43	55	47	42
	6	67	53	44	52	43	37	49	42	36
	7	62	48	39	47	39	33	45	37	32
	8	58	44	35	43	35	29	41	34	28
	9	54	40	32	39	32	26	38	31	26
	10	50	37	29	36	29	24	35	28	23

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0° - 30°	366	22.8	22.8
0° - 40°	604	37.6	37.6
0° - 60°	1090	67.8	67.8
0° - 90°	1472	91.6	91.6
90° - 120°	86	5.3	5.3
90° - 130°	103	6.4	6.4
90° - 150°	125	7.8	7.8
90° - 180°	135	8.4	8.4
0° - 180°	1607	100.0	100.0

DECORATIVE INDOOR: One Lithonia Way, Conyers, GA 30012 Phone: 800-748-5070 Fax: 770-860-3903 www.lithonia.com

© 2014-2015 Acuity Brands Lighting, Inc. All rights reserved. Rev. 02/09/15



A-Shape LED

11A19/END/2700 DIM 6/1

Philips A-shape Dimmable LED lamps are the smart LED alternative to standard incandescents. The unique lamp design provides omi-directional light with excellent dimming performance.

Product data

• General Characteristics

Cap-Base	E26
Bulb	A19
Rated Avg. Life (Hours)	25000 hr
Rated Avg. Life (Hours)	25000 hr

• Light Technical Characteristics

Color Code	WW
Color Designation	Warm White
Beam Description	- [-]
Correlated Color Temperature	2700 K
Approximate Lumens	800 Lm
Approx. MBCP	800 cd
CRI	81
Luminous Efficacy Lamp	72.73 Lm/W
Color Temp. (Kelvin)	2700 K [CCT 2700K]
Rated Luminous Flux	800 Lm

• Electrical Characteristics

Wattage	11 W
Wattage Technical	11 W
Voltage	120 V
Line Frequency	60 Hz
Power Factor	0.7 -
Lamp Current mA	110 mA
Dimmable	Yes
Wattage Equivalent	60 W
Starting Time	0.5 s

• Environmental characteristics

Energy consumption kWh/1000h	11 kWh

• Measuring Conditions

Switching cycle	50000X

• Product Dimensions

Overall Length C	106.8 mm
Diameter D	31.8 mm

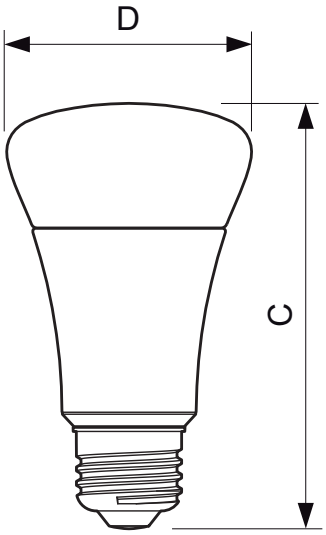
• Product Data

Product number	423491
Full product name	11A19/END/2700 DIM 6/1
Short product name	11A19/END/2700 DIM 6/1
Pieces per Sku	1
eop_pck_cfg	6
Skus/Case	6
Bar code on pack	46677423490
Bar code on case	50046677423495
Logistics code(s)	929000226804
eop_net_weight_pp	0.134 kg

PHILIPS

A-Shape LED

Dimensional drawing





E26

11A19/END/2700 DIM 6/1

Product	C (Norm)	D (Norm)
LED 11W E26 2700K 120V A19	106.8	31.8

© 2014 Koninklijke Philips N.V. (Royal Philips)
All rights reserved.

Specifications are subject to change without notice. Trademarks are the property of Koninklijke Philips N.V. (Royal Philips) or their respective owners.

www.philips.com/lighting

2014, November 18
data subject to change



A-Shape LED

19A21/2700-WHT DIM 6/1

Philips A-shape Dimmable LED lamps are the smart LED alternative to standard incandescents. The unique lamp design provides omi-directional light with excellent dimming performance.

Product data

• General Characteristics

Cap-Base	E26
Bulb	A21
Rated Avg. Life (Hours)	25000 hr
Nominal Lifetime hours	25000 hr

• Light Technical Characteristics

Color Code	827
Color Designation	Warm White
Correlated Color Temperature	2700 K
Approximate Lumens	1680 Lm
CRI	80
Luminous Efficacy Lamp	88.42 Lm/W
Color Temp. (Kelvin)	2700 K [CCT 2700K]
Rated Luminous Flux	1680 Lm
LLMF - end nominal lifetime	70 %
Colour consistency	6 steps

• Electrical Characteristics

Wattage	19 W
Wattage Technical	19 W
Voltage	120 V
Line Frequency	50-60 Hz
Power Factor	0.9 -
Lamp Current mA	195 mA
Dimmable	Yes
Wattage Equivalent	100 W
Rated Wattage	19 W
Starting Time	0.5 s
Suitable for accent lighting	No

• Temperature Characteristics

• Environmental characteristics

Energy Efficiency Label (EEL)	A
Energy consumption kWh/1000h	19 kWh

• Measuring Conditions

Switching cycle	50000X

• Product Dimensions

Overall Length C	125 mm
Diameter D	60 mm

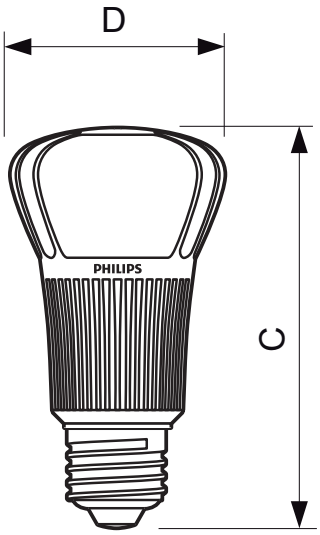
• Product Data

Product number	432211
Full product name	19A21/2700-WHT DIM 6/1
Short product name	19A21/2700-WHT DIM 6/1
Pieces per Sku	1
eop_pck_cfg	6
Skus/Case	6
Bar code on pack	46677432218
Bar code on case	50046677432213
Logistics code(s)	929000259604
eop_net_weight_pp	0.224 kg

PHILIPS

A-Shape LED

Dimensional drawing



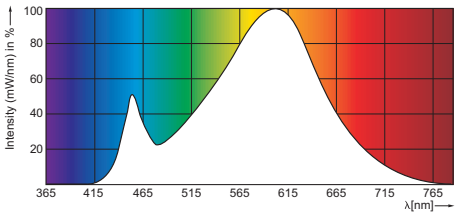
19A21/2700-WHT DIM 6/1

Product	C (Norm)	D (Norm)
LED D 19W E26/827 120V A21	125	60



E26

Photometric data



15 W, 19 W, 10-60 W /827

© 2014 Koninklijke Philips N.V. (Royal Philips)
All rights reserved.

Specifications are subject to change without notice. Trademarks are the property of Koninklijke Philips N.V. (Royal Philips) or their respective owners.

www.philips.com/lighting

2014, December 20
data subject to change



PAR20 Dimmable LED Lamps with AirFlux Technology

8PAR20/END/F36 2700 DIM 6/1

Philips PAR20 Dimmable LED Lamps with AirFlux Technology provide optimal thermal efficiency in a sleek, lightweight design.

Product data

• General Characteristics

Cap-Base	E26
Bulb	PAR20 [PAR20 mm]
Rated Avg. Life (Hours)	45000 hr

• Light Technical Characteristics

Color Code	WW
Color Designation	Warm White
Beam Angle	36 D
Beam Description	36D [Medium beam]
Correlated Color Temperature	2700 K
Approximate Lumens	450 Lm
CRI	85
Luminous Efficacy Lamp	56.25 Lm/W
Color Temp. (Kelvin)	2700 K [CCT 2700K]
Rated Luminous Flux	450 Lm

• Electrical Characteristics

Wattage	8 W
Wattage Technical	8 W
Voltage	120 V
Line Frequency	60 Hz
Power Factor	0.9 -
Lamp Current mA	78 mA
Dimmable	Yes
Wattage Equivalent	50 W
Starting Time	0.5 s

• Environmental characteristics

Energy consumption kWh/1000h	8 kWh

• Measuring Conditions

Switching cycle	20000X

• Product Dimensions

Overall Length C	81 mm
Overall Length C [inch]	3.189 (max) in
Diameter D	63 mm

• Product Data

Product number	426155
Full product name	8PAR20/END/F36 2700 DIM 6/1
Short product name	8PAR20/END/F36 2700 DIM 6/1
Pieces per Sku	1
eop_pck_cfg	6
Skus/Case	6
Bar code on pack	46677426156
Bar code on case	50046677426151
Logistics code(s)	929000233301
eop_net_weight_pp	0.117 kg

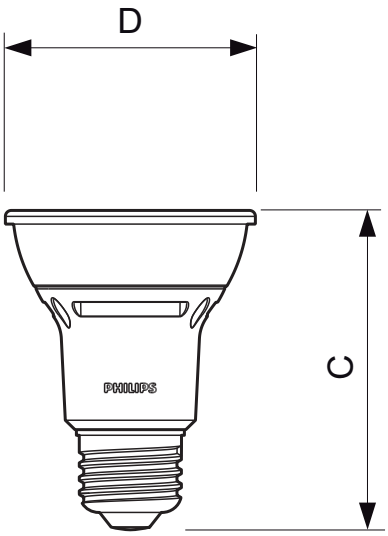
PHILIPS

PAR20 Dimmable LED Lamps with AirFlux Technology

Warnings and Safety

- Suitable for use in damp locations.
- Not for use in totally enclosed luminaires.
- Before replacing, turn off power and let lamp cool to avoid electrical shock or burn.

Dimensional drawing





E26

8PAR20/END/F36 2700 DIM 6/1

Product	C (Norm)	C1 (Max)	D (Norm)	D1 (Norm)
LED 8W E26 2700K 120V PAR20 36D	81	3.189	63	2.48

© 2014 Koninklijke Philips N.V. (Royal Philips)
All rights reserved.

Specifications are subject to change without notice. Trademarks are the property of Koninklijke Philips N.V. (Royal Philips) or their respective owners.

www.philips.com/lighting

2014, November 18
data subject to change



PAR38 LED with AirFlux Technology

17PAR38/F36 2700 DIM AF 6/1

Philips PAR38 Dimmable LED Lamps with AirFlux Technology provide optimal thermal efficiency in a sleek, lightweight design.

Product data

• General Characteristics

Cap-Base	E26
Bulb	PAR38 [PAR38 mm]
Rated Avg. Life (Hours)	45000 hr

• Light Technical Characteristics

Color Code	WW
Color Designation	Warm White
Beam Angle	36 D
Beam Description	36D [Medium beam]
Correlated Color Temperature	2700 K
Approximate Lumens	1100 Lm
Approx. MBCP	2520 cd
CRI	80
Luminous Efficacy	65 Lm/W
Lamp	
Color Temp. (Kelvin)	2700 K [CCT 2700K]
Rated Luminous Flux	1100 Lm

• Electrical Characteristics

Wattage	17 W
Wattage Technical	17 W
Voltage	120 V
Line Frequency	60 Hz
Power Factor	0.9 -
Lamp Current mA	172 mA
Dimmable	Yes
Wattage Equivalent	100 W
Starting Time	0.5 (max) s

• Environmental characteristics

Energy consumption kWh/1000h	17 kWh

• Measuring Conditions

Switching cycle	50000X

• Product Dimensions

Overall Length C	129 mm
Diameter D	121 mm

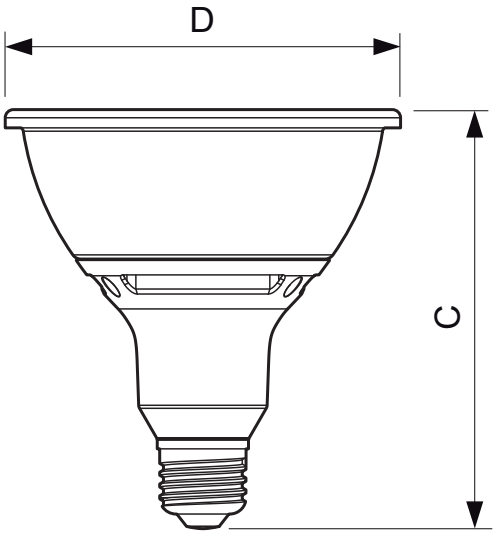
• Product Data

Product number	429050
Full product name	17PAR38/F36 2700 DIM AF 6/1
Short product name	17PAR38/F36 2700 DIM AF 6/1
Pieces per Sku	1
eop_pck_cfg	6
Skus/Case	6
Bar code on pack	46677429058
Bar code on case	50046677429053
Logistics code(s)	929000245904
eop_net_weight_pp	0.370 kg

PHILIPS

PAR38 LED with AirFlux Technology

Dimensional drawing





E26

17PAR38/F36 2700 DIM AF 6/1

Product	C (Norm)	C1 (Max)	D (Norm)	D1 (Norm)
LED 17W E26 2700K PAR38 36D DIM	129	-	121	-

© 2015 Koninklijke Philips N.V. (Royal Philips)
All rights reserved.

Specifications are subject to change without notice. Trademarks are the property of Koninklijke Philips N.V. (Royal Philips) or their respective owners.

www.philips.com/lighting

2015, April 15
data subject to change

UR Series

UR2-48™ and UR3-48™ LED Upgrade Kit – 4'

Product Description

The UR Series 4ft (1219mm) LED upgrade kit delivers 4500 lumens of enhanced spectrum 80 CRI light while achieving over 100 lumens per watt at the system level. This innovative kit is designed for upgrading existing 1'x4' (305mm x 1219mm) or 2'x4' (610mm x 1219mm) fixtures to energy saving LED. The UR Series is available in neutral or cool color temperatures and with step dimming or 0-10V dimming. The UR Series upgrade kit is easy to install and fits into almost any existing linear fluorescent fixture making it a perfect upgrade option where energy savings and long life are critical.

Performance Summary

- Upgrade Existing 1'x4' (305mm x 1219mm) & 2'x4' (610mm x 1219mm) fixtures
- **Efficacy:** 102 LPW at source level
- **System Delivered Light Output:** 4500 lumens
- **Target Fixture Delivered Light Output:** 4000 lumens*
- **Input Power:** 44 watts
- **CRI:** 80
- **CCT:** 3500K, 4000K
- **Input Voltage:** 120-277 VAC or 347 VAC
- **Limited Warranty†:** 7 years
- **Lifetime:** Designed to last 50,000 hours
- **Controls:** Step Level to 50% or 0-10V Dimming to 5%
- **Mounting:** Existing dry or damp rated linear fluorescent fixtures including troffers, parabolics, strips, wraps, volumetric/baskets and industrials; not intended for use in vaportights



4' (1219mm) LED Lightbar
MOL- 44" (1118mm)

The UR Series upgrade kit ships as two components: lightbars and driver. Each component must be ordered separately.

Accessories

Field-Installed
Emergency Backup UR-EB10W - 10W

Ordering Information

Fully assembled kit is composed of two components that must be ordered separately.
Example: **Lightbar:** UR 48 35K FD LB 2 + **Driver:** UR2 48 45L 10V FD DR

Lightbar (Driver must be ordered separately)					
UR	48		FD	LB	
Series	**Length**	**CCT**	**Options**	**Lightbar**	**Number of Lightbars**
UR	48	**35K** 3500 Kelvin **40K** 4000 Kelvin	**FD** 80 CRI	**LB** Lightbar	**2** 2 Lightbar Kit **3** 3 Lightbar Kit **6** 6 Lightbar Bulk Pack

Driver (Lightbar must be ordered separately)						
	48	45L			FD	DR
Product	**Length**	**Lumen Output**	**Voltage**	**Control**	**Options**	**Driver**
UR2 2 Lightbar **UR3** 3 Lightbar	48	**45L** 44W, 4500 lumens - 102 LPW	**Blank** 120-277 Volt (Standard) **34** 347 Volt (Optional) - Available with 10V control option only	**S** Step Dimming to 50% **10V** 0-10V Dimming to 5%	FD	**DR** Driver

* Varies by fixture
† See www.cree.com/lighting/products/warranty for warranty terms

Rev. Date: V3 01/13/2015

US: www.cree.com/lighting T (800) 236-6800 F (262) 504-5415
Canada: www.cree.com/canada T (800) 473-1234 F (800) 890-7507

Product Specifications

CREE LED TECHNOLOGY

Cree's total systems approach to product development is a comprehensive engineering philosophy that combines the most advanced LED sources, driver technologies, optics and forms. The result is highly-reliable luminaire solutions for indoor applications that reduce energy use, extend lifetimes, and maximize illumination performance and quality.

CONSTRUCTION & MATERIAL

- Lightweight aluminum heat sink housing provides strength and durability
- Durable plastic mounting clips with integrated magnets allow for simple snap on design to fixture
- Shatterproof design

OPTICAL SYSTEM

- Specialized polycarbonate lens design for optimal light distribution and smooth visual effect
- Measured and designed to achieve optimal light performance in existing fluorescent troffers

ELECTRICAL SYSTEM

- Integral, high-efficiency driver and power supply
- **Power Factor:** = 0.9 nominal
- **Input Power:** Stays constant over life
- **Input Voltage:** 120-277V, 347V, 50/60Hz
- **Operating Temperature Range:** 0°C - +35°C (32°F - +95°F)
- **Total Harmonic Distortion:** < 20%
- **Source Current:** 0.25mA

CONTROLS

- Step dimming to 50%. Reference www.cree.com/Lighting/Products/Indoor/Upgrade-Solutions/UR-Series
- Continuous dimming to 5% with 0-10V DC control protocol. Reference www.cree.com/Lighting/Products/Indoor/Upgrade-Solutions/UR-Series

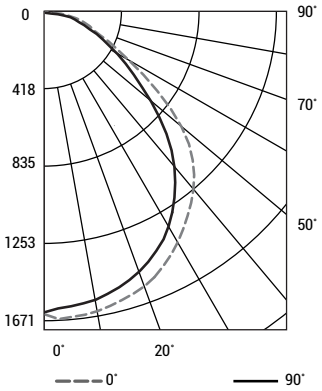
REGULATORY & VOLUNTARY QUALIFICATIONS

- DLC qualified. Please refer to www.designlights.org/QPL for most current information
- UL1598C (Retrofit Kit)
- This product is UL Classified for U.S. and Canada for use in existing linear fluorescent fixtures
- Suitable for damp locations
- Designed for indoor use
- Meets FCC Part 15 standards for conducted and radiated emissions

Photometry

UR2 48 45L 40K FD INSTALLED IN A 2X4 RECESSED TROFFER BASED ON CESTL REPORT TEST #: 2013-0080

Fixture photometry has been conducted by a NVLAP accredited testing laboratory in accordance with IESNA LM-79-08. IESNA LM-79-08 specifies the entire luminaire as the source resulting in a fixture efficiency of 100%.



Coefficients Of Utilization - Zonal Cavity Method				
RC %:	80			
RW%:	70	50	30	10
RCR: 0	119	119	119	119
1	110	105	101	98
2	100	93	86	81
3	92	82	74	68
4	85	73	65	59
5	78	66	57	51
6	72	60	51	45
7	67	54	46	40
8	63	50	41	36
9	59	46	38	32
10	55	42	34	29

Effective Floor Cavity Reflectance: 20%

Average Luminance Table (cd/m²)				
	Horizontal Angle			
Vertical Angle	0°	45°	90°	
45°	2,181	2,364	2,367	
55°	1,700	1,956	2,131	
65°	1,353	1,277	1,475	
75°	1,210	979	1,432	
85°	1,275	1,284	1,593	

Zonal Lumen Summary			
Zone	Lumens	% Lamp	Luminaire
0-30	1,286	N/A	31.2%
0-40	2,095	N/A	50.9%
0-60	3,488	N/A	84.7%
0-90	4,118	N/A	100%
0-180	4,118	N/A	100%

Reference www.cree.com/Lighting/Products/Indoor/Upgrade-Solutions/UR-Series for detailed photometric data

© 2015 Cree, Inc. and/or one of its subsidiaries. All rights reserved. For informational purposes only. Content is subject to change. See www.cree.com/patents for patents that cover these products. Cree® and the Cree logo are registered trademarks, and UR2-48™ and UR3-48™ are trademarks of Cree, Inc. The UL logo is a registered trademark of UL LLC. The DLC QPL logo is a registered trademark of Northeast Energy Efficiency Partnerships, Inc.

US: www.cree.com/lighting T (800) 236-6800 F (262) 504-5415 Canada: www.cree.com/canada T (800) 473-1234 F (800) 890-7507

UR Series

UR2-24™ and UR3-24™ LED Upgrade Kit – 2'

Product Description

The UR Series 2ft (610mm) LED upgrade kit delivers 3600 lumens of enhanced spectrum 80 CRI light while achieving 100 lumens per watt at the system level. This innovative kit is designed for upgrading existing 1'x2' (305mm x 610mm) or 2'x2' (610mm x 610mm) fixtures to energy saving LED. The UR Series is available in neutral or cool color temperatures and with step dimming or 0-10V dimming. The UR Series upgrade kit is easy to install and fits into almost any existing linear fluorescent fixture making it a perfect upgrade option where energy savings and long life are critical.



2' (610mm) LED Lightbar
MOL- 22" (559mm)

The UR Series upgrade kit ships as two components: lightbars and driver. Each component must be ordered separately.

Performance Summary

- Upgrade Existing 1'x2' (305mm x 610mm) or 2'x2' (610mm x 610mm) fixtures
- **Efficacy:** 100 LPW at source level
- **System Delivered Light Output:** 3600 lumens
- **Target Fixture Delivered Light Output:** 3200 lumens*
- **Input Power:** 36 watts
- **CRI:** 80
- **CCT:** 3500K, 4000K
- **Input Voltage:** 120-277 VAC or 347 VAC
- **Limited Warranty†:** 7 years
- **Lifetime:** Designed to last 50,000 hours
- **Controls:** Step Level to 50% or 0-10V Dimming to 5%
- **Mounting:** Existing dry or damp rated linear fluorescent fixtures including troffers, parabolics, strips, wraps, volumetric/baskets and industrials; not intended for use in vaportights

Accessories

Field-Installed
Emergency Backup UR-EB5W - 5W

Ordering Information

Fully assembled kit is composed of two components that must be ordered separately.
Example: **Lightbar:** UR 24 35K FD LB 2 + **Driver:** UR2 24 36L 10V FD DR

Lightbar (Driver must be ordered separately)					
UR	24		FD	LB	
Series	**Length**	**CCT**	**Options**	**Lightbar**	**Number of Lightbars**
UR	24	**35K** 3500 Kelvin **40K** 4000 Kelvin	**FD** 80 CRI	**LB** Lightbar	**2** 2 Lightbar Kit **3** 3 Lightbar Kit **6** 6 Lightbar Bulk Pack

Driver (Lightbar must be ordered separately)						
	24	36L			FD	DR
Product	**Length**	**Lumen Output**	**Voltage**	**Control**	**Options**	**Driver**
UR2 2 Lightbar **UR3** 3 Lightbar	24	**36L** 36W, 3600 lumens - 100 LPW	**Blank** 120-277 Volt (Standard) **34** 347 Volt (Optional) - Available with 10V control option only	**S** Step Dimming to 50% **10V** 0-10V Dimming to 5%	FD	**DR** Driver

* Varies by fixture
† See www.cree.com/lighting/products/warranty for warranty terms

Rev. Date: V3 01/13/2015

US: www.cree.com/lighting T (800) 236-6800 F (262) 504-5415
Canada: www.cree.com/canada T (800) 473-1234 F (800) 890-7507

Product Specifications

CREE LED TECHNOLOGY

Cree's total systems approach to product development is a comprehensive engineering philosophy that combines the most advanced LED sources, driver technologies, optics and forms. The result is highly-reliable luminaire solutions for indoor applications that reduce energy use, extend lifetimes, and maximize illumination performance and quality.

CONSTRUCTION & MATERIAL

- Lightweight aluminum heat sink housing provides strength and durability
- Durable plastic mounting clips with integrated magnets allow for simple snap on design to fixture
- Shatterproof design

OPTICAL SYSTEM

- Specialized polycarbonate lens design for optimal light distribution and smooth visual effect
- Measured and designed to achieve optimal light performance in existing fluorescent troffers

ELECTRICAL SYSTEM

- Integral, high-efficiency driver and power supply
- **Power Factor:** = 0.9 nominal
- **Input Power:** Stays constant over life
- **Input Voltage:** 120-277V, 347V, 50/60Hz
- **Operating Temperature Range:** 0°C - +35°C (32°F - +95°F)
- **Total Harmonic Distortion:** < 20%
- **Source Current:** 0.25mA

CONTROLS

- Step dimming to 50%. Reference www.cree.com/Lighting/Products/Indoor/Upgrade-Solutions/UR-Series
- Continuous dimming to 5% with 0-10V DC control protocol. Reference www.cree.com/Lighting/Products/Indoor/Upgrade-Solutions/UR-Series

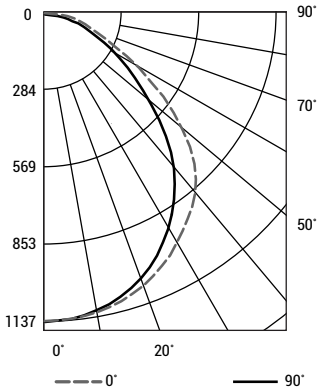
REGULATORY & VOLUNTARY QUALIFICATIONS

- DLC qualified. Please refer to www.designlights.org/QPL for most current information
- UL1598C (Retrofit Kit)
- This product is UL Classified for U.S. and Canada for use in existing linear fluorescent fixtures
- Suitable for damp locations
- Designed for indoor use
- Meets FCC Part 15 standards for conducted and radiated emissions

Photometry

UR2 24 36L 35K FD INSTALLED IN A 2X2 RECESSED TROFFER BASED ON CSA REPORT TEST #: 2638466-02

Fixture photometry has been conducted by a NVLAP accredited testing laboratory in accordance with IESNA LM-79-08. IESNA LM-79-08 specifies the entire luminaire as the source resulting in a fixture efficiency of 100%.



Coefficients Of Utilization - Zonal Cavity Method				
RC %:	80			
RW%:	70	50	30	10
RCR: 0	119	119	119	119
1	109	105	101	97
2	100	92	86	80
3	92	82	74	68
4	84	73	65	58
5	78	65	57	50
6	72	59	51	44
7	67	54	45	39
8	62	49	41	35
9	58	45	37	32
10	55	42	34	29

Effective Floor Cavity Reflectance: 20%

Average Luminance Table (cd/m²)				
	Horizontal Angle			
Vertical Angle	0°	45°	90°	
45°	3,899	3,470	3,152	
55°	3,288	2,936	2,503	
65°	2,397	2,118	2,006	
75°	2,110	1,563	1,731	
85°	2,318	2,027	1,899	

Zonal Lumen Summary			
Zone	Lumens	% Lamp	Luminaire
0-30	880	N/A	30.8%
0-40	1,431	N/A	50.0%
0-60	2,399	N/A	83.8%
0-90	2,860	N/A	100%
0-180	2,861	N/A	100%

Reference www.cree.com/Lighting/Products/Indoor/Upgrade-Solutions/UR-Series for detailed photometric data

© 2015 Cree, Inc. and/or one of its subsidiaries. All rights reserved. For informational purposes only. Content is subject to change. See www.cree.com/patents for patents that cover these products. Cree® and the Cree logo are registered trademarks, and UR2-24™ and UR3-24™ are trademarks of Cree, Inc. The UL logo is a registered trademark of UL LLC. The DLC QPL logo is a registered trademark of Northeast Energy Efficiency Partnerships, Inc.

US: www.cree.com/lighting T (800) 236-6800 F (262) 504-5415

Canada: www.cree.com/canada T (800) 473-1234 F (800) 890-7507

LITHONIA LIGHTING®

Catalog Number	
Notes	
Type	

2MRT

2' X 2' RELIGHT TWO LAMPS

FEATURES & SPECIFICATIONS

INTENDED USE — The 2MRT troffer retrofit kit is designed to fit easily in most commercial fluorescent troffers to provide maximum efficiency and full, even lamp imaging below. This series delivers high light levels for general lighting retrofits of normally spaced 2'x2' recessed troffer-style fixtures. Typical applications include classrooms, offices, hospitals and commercial areas.

CONSTRUCTION — Reflectors are precision-formed aluminum for optimal performance, durability and ease of handling. Segmented reflectors are available with high-reflectance white painted or highly specular anodized finishes. Reflector optics offer optimum photometric distribution to meet application and budget requirements. Socket brackets are white pre-painted, die-formed aluminum and are designed to fit in most troffers. Socket brackets may be mounted either to end plates or to the upper surface of the existing "host" fixture housing for maximum flexibility.

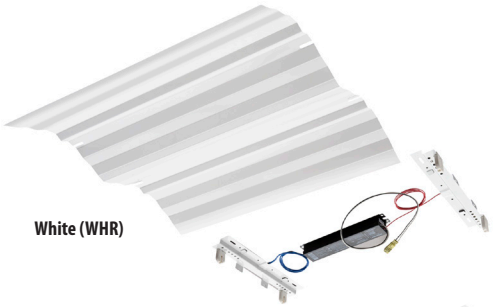
ELECTRICAL — Standard ballast is high-efficiency, CEE (Consortium for Energy Efficiency) qualified, instant start, <10% THD, universal voltage and sound rated A. Optional program start and step-dim bi-level ballasts are available as well as several ballast factor options to maximize energy savings and to allow the amount of light to be balanced to the application.

INSTALLATION — End bracket/electrical assembly installs quickly and easily using self-tapping screws (included). Reflectors install quickly and securely without requiring tools. Standard kits ship with factory pre-wired and pre-assembled electrical assembly with plug-in ballast disconnect for fast, simple installation. Reflectors are packed separately. All materials are shipped in optimized carton quantities to minimize jobsite waste. Lamps (not included) are secured with rotary locking lampholders for ease of relamping and to withstand vibration or incidental contact.

LISTINGS — UL/cUL Classified. Installation of the 2MRT does not impact existing fixture UL Listing.

WARRANTY — 1-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Specifications subject to change without notice.



White (WHR)



Specular (SSR)

Specifications

Intended to be installed in most existing recessed lensed troffers or parabolic fixtures.

ORDERING INFORMATION Lead times will vary depending on options selected. Consult with your sales representative.

Example: 2MRT 2 17 1/2 BINP SSR

2MRT											
Series	**Lamps**	**Lamp type**		**Ballast configuration**		**Voltage**		**Ballast**		**Reflector**	
2MRT	2	17	17W T8 (24")	(blank)	No ballast	(blank)	MVOLT (120-277)	T8		WHR	High reflectance white
	3	14T5	14W T5 (22")	1/2	One 2-lamp ballast	347	347V	BINP	IS, high efficiency, 0.88 BF (normal)	SSR	Specular (95% reflectance)
		24T5HO	24W T5HO (22")	1/3	One 3-lamp ballast[1]			BILP	IS, high efficiency, 0.78 BF (low)		
				1/2 1/1	One 2-lamp ballast One 1-lamp ballast[1]			BIHP	IS, high efficiency, 1.20 BF (high)		
								BSNP	PS, step dimming, high efficiency, 0.88 BF (normal)		
								BPNP	PS, high efficiency, 0.88 BF (normal)		
								BPLP	PS, high efficiency, 0.78 BF (low)		
								BPHP	PS, high efficiency, 1.20 BF (high)		
								T5			
								GEB95	0.95 BF (14W T5)		
								T5HO			
								GEB10PS	1.00 BF, programmed start (24W T5HO)		
								L/BIS	No ballast, shunted IS sockets[2]		
								L/BPS	No ballast, unshunted PS sockets[2]		

Notes

1 3-lamp T8 configuration only.

2 Kits less ballast must be ordered in multiples of 10 to optimize packaging.

PHOTOMETRICS

2MRT 2 17 WHR, (2) 32W T8 lamps, 1350 lumens per lamp, high reflectance white 2x2 reflector

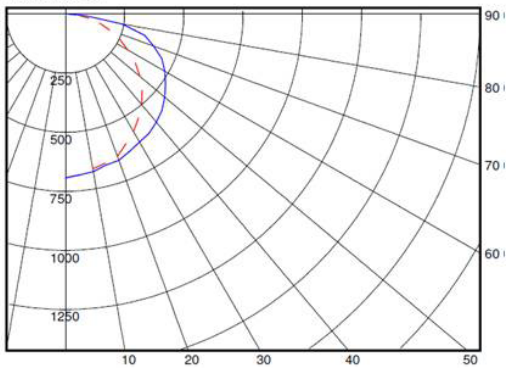
SUMMARY DATA

EFFICIENCY (Total):	90.5 %
EFFICIENCY (Downlight):	90.5 %
EFFICIENCY (Uplight):	0.0 %
CIE CLASSIFICATION:	DIRECT
SPACING CRITERION (0-Deg.):	1.23
SPACING CRITERION (90-Deg.):	1.37
LUMENS/LAMP:	1350
NO. OF LAMPS:	2
LUMINOUS OPENING: RECTANGULAR	
Width:	1.71 (Feet)
Length:	2.00
Height:	0.00
INPUT WATTS:	44

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Luminaire
0 - 30	539.3	20.0	22.1
0 - 40	900.1	33.3	36.8
0 - 60	1695.8	62.8	69.4
60 - 90	748.3	27.7	30.6
0 - 90	2444.1	90.5	100.0
90 - 180	0.0	0.0	0.0
0 - 180	2444.1	90.5	100.0

CANDELA PLOT



2MRT 2 17 SSR, (2) 32W T8 lamps, 1400 lumens per lamp, specular anodized aluminum 2x2 reflector

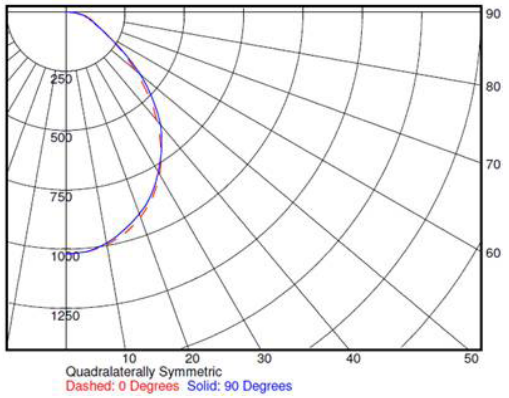
SUMMARY DATA

EFFICIENCY (Total):	75.8 %
EFFICIENCY (Downlight):	75.8 %
EFFICIENCY (Uplight):	0.0 %
CIE CLASSIFICATION:	DIRECT
SPACING CRITERION (0-Deg.):	1.16
SPACING CRITERION (90-Deg.):	1.15
LUMENS/LAMP:	1400
NO. OF LAMPS:	2
LUMINOUS OPENING: RECTANGULAR	
Width:	1.78 (Feet)
Length:	1.80
Height:	0.00
INPUT WATTS:	34.8

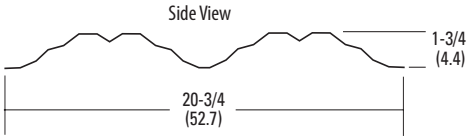
ZONAL LUMEN SUMMARY

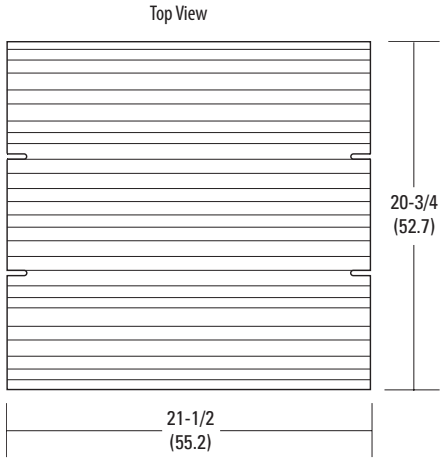
Zone	Lumens	% Lamp	% Luminaire
0 - 30	757.2	27.0	35.7
0 - 40	1192.2	42.6	56.2
0 - 60	1847.2	66.0	87.0
60 - 90	275.6	9.8	13.0
0 - 90	2122.8	75.8	100.0
90 - 180	0.0	0.0	0.0
0 - 180	2122.8	75.8	100.0

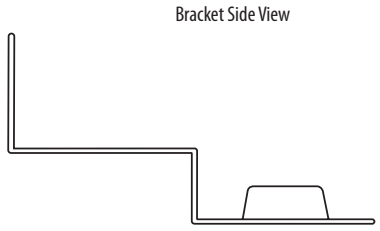
CANDELA PLOT

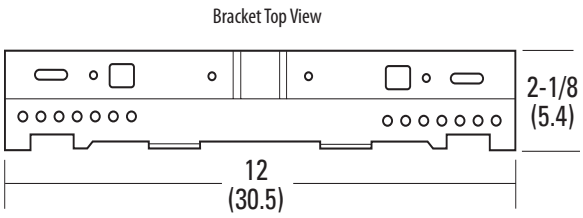


DIMENSIONS









Note: Bracket will be 16" on 3 lamp fixture.

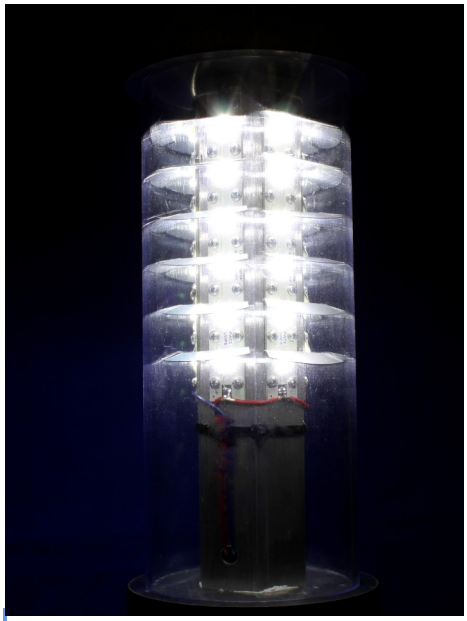
©2010-2014 Acuity Brands Lighting, Inc. All rights reserved.

Post Top LED Kit

Luminaire kit for retrofitting Pole Lamps with High Efficiency LED Lighting.



The Post Top LED Kit retrofits area pole lighting and fits common sized globes, lowering electric consumption by up to 70%.



Patented LED light reflector system, places light where it is most needed, leading to higher fixture efficiencies and lower operating costs.

U.S. and International Patents Issued and Pending.
US 7,578,605 B1

Quick Installation with Post Top LED Lamp Kit for Decorative Poles

The Post Top LED Kit from IntenCity retrofits pole lights with a LED light engine that greatly lowers costs by up to 70%. It is economical and long lasting, with LED L70 life rated at 70,000 hours. The LED light engine is self contained for easy retrofitting in common lamp poles, used to light walkways, area lighting and in decorative uses. The Post Top LED Kit reuses existing lamp poles or can be used with new ones. The kit is built for ease of field installation, and can be customized for most pole lamp fittings.

LED Lighting to Lower Maintenance, Reducing Electric Costs

The LED light engine is available in either a 40, 60, or 90 watt configuration, to replace HID discharge lamps, such as mercury vapor, metal halide, or high pressure sodium lamps. The Post Top LED Kit reduces electric consumption by up to 70% and has a rated life over 70,000 hours. This greatly reduces lamp changing, ballast replacements, and hazardous waste costs for the mercury lamps.

LED Pole Lighting Kit – Highly Efficient, Directed Light

Unique to the IntenCity Post Top LED Kit is a sealed LED units, which through a patented reflector system directs light to where it is most needed. This leads to directing more light where it is needed, high fixture efficiency, and a brighter safer appearance to the area, thus upgrading the quality of light.

Applications for Post Top LED Kit

- Walkways, Paths, Streetscapes, Decorative Area Lighting
- Residential Districts, Business Districts, Accent Lighting, Historical Districts, General Lighting
- Shopping Centers, Malls, Plaza Lighting
- College, Business Parks, and Campuses
- Parks and Recreational Lighting

LED Pole Top Kit Features:

- Saves up to 70% of electric cost, while greatly reducing maintenance
- Highly durable electronics, extensive heat management for long service life
- L70 Lifetime: 70,000 hours
- 100 to 277 Volts standard, 480 Volts available
- Adapts easily to existing or new pole lamps and globe configurations. Adapts to Acorn type decorative globes.
- Available in 40, 60, or 90 watt LED configurations
- Reduces light pollution by directing light where it is most needed

Compatibility Chart / Energy Savings

Traditional Source	PTLK	Energy Savings
HPS 100 watts	**40 watts**	60%
MH 100 watts	**40 watts**	60%
HPS 150 watts	**60 watts**	63%
MH 250 watts	**90 watts**	67%

Call: 518-409-8090 | Write: Info@IntenCityLighting.com | Visit: www.IntenCityLighting.com

© 2011 IntenCity Lighting™. All specifications subject to change without notice.

PTLK - Pole Top LED Lighting Kit

Solid-State Outdoor LED Luminaire for area lighting



The Pole Top LED Kit affords the opportunity to retrofit existing or new decorate pole lamps with high efficiency, lower cost LED lighting, while upgrading the area lighting appearance.

Made in USA

General Specifications	
General	LED replacement kit for post top pole lighting, Type V.
Initial Light Output	3,000 (40 Watt), 5,000 Lumens (60 Watt), 6500 Lumens (90 watts), 62 Lumens/ Watt
Durability, Dust, and Moisture	Intrusion Protection Rating — IP66 on light engine, and power supply.
Color	5,000K Typical, other options available, CRI: 66
L-70 Lifetime	10+ Year Design Life, over 70% of original lumen output after 70,000 hours at 30° C ambient temperature
Environmental Specifications	
Operating Temperature	-40° C to 55° C
Storage Temperature	-40° C to 85° C
Humidity	0% to 99%
Power and Compliance Standards	
Input Power	PF> 0.95, Current THD <10%, Zero energy consumption in off state.
Input Current	0.46A @ 120 V, 0.23A @ 220V, 0.20A @ 277V
Wattage	40, 60, or 90 watts
Operating Voltage	100 to 277VAC, 50 to 60 hertz
Line Connections	3 wire: line, neutral and ground
Physical Specifications	
Finish and Construction	Clear Anodized Aluminum, and Stainless Steel. Heavy gauge aluminum extrusion, stainless steel fasteners, gasket sealed Butyrate (high transmissive plastic) lens with UV inhibitor. Adapters to fit most pole lamp configurations, consult factory for fittings.
Dimensions	5 1/4" Diameter x 9" Tall, 5 1/4" Diameter x 13 1/2" Tall, Custom Available
Weight	12 Pounds

Ordering Information:

Family	Watts	Voltage	Color Temp.
PTLK	40 Watts 60 Watts 90 Watts	100 — 277 VAC Custom: Contact Factory	4,100K 5,000K 6,500K

IntenCity LIGHTING

Contact Information:

Phone: 1.518.409.8090
Fax: 1.518.409.8091
eMail: info@IntenCityLighting.com
Web: www.IntenCityLighting.com

Efficient, economical, highly engineered light fixtures saving our customer's energy

© 2011 IntenCity Lighting™, All specifications subject to change without notice.

SPECTRUM LIGHTING, INC
www.speclight.com

SPECTRUM LIGHTING LED NAVIGATOR

LOW CEILING 7'-10'



LE10W/12WLED
LE-CREE LED CHIP

BEST VALUE
GENERAL
DISTRIBUTION
MEDIUM BEAM
SPREAD

ROUND SQUARE
TRIM/TRIMLESS
DOWNLIGHT /ACCENT
TRACK / CYLINDER
RETROFIT

LM80 COMPLETE

Emitter in trim.
Easy to change &
adjust.
0-10v Dimming

typical model no.:
SGD3LEDLE

Similar To: MR16/
PAR20/PAR30

KELVIN°	WATTS	LUMENS
27K°	10W	175
	12W	210
31K°	10W	185
	12W	222
35K°	10W	200
	12W	240
41K°	10W	245
	12W	294

LOW CEILING 7'-10'



XI 9W-25W SERIES
XI-XICATO LED
REMOTE PHOSPHOR

GENERAL LIGHT
DISTRIBUTION
MEDIUM BEAM
SPREAD

ROUND SQUARE
DOWNLIGHT
ACCENT / TRACK

HIGH CRI (95)
OPTION

LM80 COMPLETE

0-10v and
LUTRON L3D/LTE
Dimming

typical model no.:
SGE6LEDXI25W

Similar To: MR16/
PAR20/PAR30

KELVIN°	WATTS	LUMENS
27K°	19W	1000
	22W	1300
	36W	2000
31K°	19W	1000
	22W	1300
	36W	2000
35K°	19W	1000
	22W	1300
	36W	2000
41K°	19W	1000
	22W	1300
	36W	2000

LOW CEILING 7'-10'



OS15W/18W/22W
OS-OSRAM LED
ENERGY STAR™

GENERAL LIGHT
DISTRIBUTION
MEDIUM BEAM
SPREAD

ROUND SQUARE
TRIM/TRIMLESS
DOWNLIGHT
LENSED WALL WASH
ACCENT
IC OPTION AVAILABLE

LM80 COMPLETE

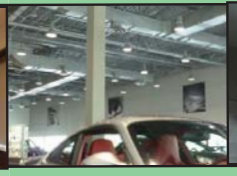
ENERGY STAR RATED
0-10v
LUTRON Dimming

typical model no.:
RDFO4OS15

Similar To:
PAR20/PAR30/PAR38
26W/32W/42W CFL

KELVIN°	WATTS	LUMENS
27K°	15W	780
	18W	1728
	22W	1100
31K°	15W	925
	18W	1867
	22W	1220
35K°	15W	925
	18W	1728
	22W	1350
41K°	15W	1180
	18W	1843
	22W	1475

LOW CEILING 7'-10'



OS15W/18W/22W
OS-OSRAM LED

GENERAL LIGHT
DISTRIBUTION
MEDIUM BEAM
SPREAD

ROUND SQUARE
DOWNLIGHT
LENSED WALL WASH
RETROFIT

LM80 COMPLETE

0-10v and
LUTRON L3D/LTE
Dimming

typical model no.:
SGE6LEDOS18W

Similar To:
26W/32W/42W CFL

KELVIN°	WATTS	LUMENS
27K°	15W	780
	18W	940
	22W	1100
31K°	15W	925
	18W	1075
	22W	1220
35K°	15W	1050
	18W	1220
	22W	1350
41K°	15W	1180
	18W	1340
	22W	1475

LOW / MID CEILING 7'-12'



FD14W-41W SERIES
REMOTE PHOSPHOR
FD-PHILIPS LED

GENERAL LIGHT
DISTRIBUTION
MEDIUM BEAM
SPREAD

ROUND SQUARE
DOWNLIGHT
OPEN WALL WASH

HIGH R9 OPTION

LM80 COMPLETE

0-10v and
LUTRON L3D/LTE
Dimming

typical model no.:
SGE6LEDFD14W

Similar To: 1 or 2 26W/
32W/42W CFL

KELVIN°	WATTS	LUMENS
All K° Temp	14W	1100
	16W	1300
	25W	2000
	41W	2800

MID CEILING 8'-14'



LE20W-30W SERIES
LE-CREE

POINT SOURCE
(CONTROLLED
BEAM)
12° 22° 38°

ROUND SQUARE
DOWNLIGHT•WALL WASH
ACCENT
MID BAY• CYLINDER
TRACK•RLM
RETROFIT

LM80 COMPLETE

0-10v and
LUTRON L3D/
LTE Dimming

typical model no.:
SGE6LEDLE30W

KELVIN°	WATTAGE	LUMENS	CRI
27K°	20W	780	85
	30W	1280	85
3HK°	**20W**	**980**	**95**
	30W	**1400**	**95**
31K°	20W	980	85
	30W	1400	85
35K°	20W	1030	85
	30W	1520	85
41K°	20W	1295	80
	30W	1850	80
55K°	20W	1470	80
	30W	2100	80

HIGH CRI

MID /HIGH CEILING 8'-24'



GI15W-46W SERIES
GI-GE INFUSION LED

POINT SOURCE
(CONTROLLED
BEAM)
15° 25° 36° 60°

ROUND SQUARE
DOWNLIGHT
ACCENT
HI BAY CYLINDER
TRACK
RETROFIT

LM80 COMPLETE

HIGH CRI (90) Option
Quick-Change optics
and emitter
0-10v Dimming

typical model no.:
SGE6LEDGI46W

Similar To: 39-70 W MH,
PAR56/ PAR30/PAR38
INCANDESCENT, HIGH
OUTPUT CFL

KELVIN	WATTS	LUMENS	CRI	SDCM
27K	15W	900	80	<4
	23W	1500	80	<4
	30W	1800	80	<4
	46W	3000	80	<4
30K	15W	1000	80	<4
	23W	1600	80	<4
	30W	2000	80	<4
	46W	3200	80	<4
3HK° High CRI	**15W**	**1000**	**87**	**<2**
	23W	**1600**	**87**	**<2**
	30W	**2000**	**87**	**<2**
	46W	**3200**	**87**	**<2**
40K	15W	1100	80	<4
	23W	1750	80	<4
	30W	2200	80	<4
	46W	3500	80	<4

MID /HIGH CEILING 8'-24'



GV14W-55W SERIES
GV-SAMSUNG

GENERAL LIGHT
DISTRIBUTION
MEDIUM /WIDE-
BEAM SPREAD

ROUND SQUARE
DOWNLIGHT
HI BAY CYLINDER
RETROFIT

LM80 COMPLETE

0-10v and
LUTRON L3D/LTE
Dimming

typical model no.:
SGE8LEDGV55W

Similar To: 39-70 W MH,
PAR56/ PAR30/PAR38
INCANDESCENT, HIGH
OUTPUT CFL

KELVIN°	WATTS	LUMENS
27K°/31K° 35K°	26W	2790
	37W	4553
	55W	6070
41K°	26W	2950
	37W	4823
	55W	6430

HIGH CEILING 14'-40'



LE60W-80W SERIES
LE-CREE

POINT SOURCE
(CONTROLLED
BEAM)
12° 22° 38°

ROUND
DOWNLIGHT
CYLINDER
RETROFIT

LM80 COMPLETE

0-10v Dimming
LUTRON L3D/LTE
Dimming

typical model no.:
SGE6LEDLE70W

Similar To:100 W MH
PAR56/ T4 QUARTZ/
PAR38
PS INCANDESCENT,

KELVIN°	WATTAGE	LUMENS
31K°	60W	2500
	80W	2750
41K°	60W	3300
	80W	3650
51K°	60W	3600
	80W	3960

994 Jefferson Street, Fall River, MA 02721 508.678.2303 FAX 508.678.2260

WPLED20NW/PC



Ultra-high efficiency 20 Watt wallpack. Patent Pending thermal management system. 100,000 hour L70 lifespan. 5 Year Warranty.

Color: White

Weight: 6.1 lbs

Project:	Type:
Prepared By:	Date:

Driver Info

Type:	Constant Current
120V:	0.19A
208V:	N/A
240V:	N/A
277V:	N/A
Input Watts:	22W
Efficiency:	91%

LED Info

Watts:	20W
Color Temp:	4000K (Neutral)
Color Accuracy:	74 CRI
L70 Lifespan:	100,000
Lumens:	1,111
Efficacy:	51 LPW

Copyright © 2014 RAB Lighting Inc. All Rights Reserved Note: Specifications are subject to change at any time without notice

Technical Specifications

Other

WPLED20 with Photocell:

120V Button Photocell Included.‰_ Photocell is only compatible with 120V.

Patents:

The LPACK design is protected under patents in the U.S. Pat. D634873, Canada Pat. 133207, China Pat. ZL201030129137, Taiwan Pat. D139540 and Mexico Pat. 32491

Warranty:

RAB warrants that our LED products will be free from defects in materials and workmanship for a period of five (5) years from the date of delivery to the end user, including coverage of light output, color stability, driver performance and fixture finish.

Equivalency:

The WPLED20NW is Equivalent in delivered lumens to a 150W Metal Halide Wallpack.

HID Replacement Range:

The WPLED20NW can be used to replace 100-175W Metal Halide Wallpacks based on delivered lumens.

Listings

UL Listing:

Suitable for wet locations. Suitable for mounting within 1.2m (4ft) of the ground.

Dark Sky Approved:

The International Dark Sky Association has approved this product as a full cutoff, fully shielded luminaire.

IESNA LM-79 & IESNA LM-80 Testing:

RAB LED luminaires have been tested by an independent laboratory in accordance with IESNA LM-79 and 80, and have received the Department of Energy "Lighting Facts" label.

LED Characteristics

Lifespan:

100,000-hour LED lifespan based on IES LM-80 results and TM-21 calculations.

Color Consistency:

7-step MacAdam Ellipse binning to achieve consistent fixture-to-fixture color.

Color Stability:

LED color temperature is warrantied to shift no more than 200K in CCT over a 5 year period.

Color Uniformity:

RAB's range of CCT (Correlated color temperature) follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2008.

Color Accuracy:

74 CRI

Color Temperature (Nominal CCT):

4000K

Construction

Finish:

Our environmentally friendly polyester powder coatings are formulated for high-durability and long-lasting color, and contains no VOC or toxic heavy metals.

Cold Weather Starting:

The minimum starting temperature is -30°C.

Ambient Temperature:

Suitable for use in 50°C (122°F) ambient temperatures.

Thermal Management:

Integral cast aluminum mounting pad and external fins for optimal heat sinking to ensure cool operation with maximum LED life and light output.

Housing:

Precision die cast aluminum housing, lens frame and mounting plate.

Two Mounting Options:

Junction Box with 5 Conduit Entry Points and Threaded Plugs for surface mounting plus Cover Plate for mounting over 4" recessed junction box included with WPLED20NW.

Green Technology:

RAB LEDs are Mercury, Arsenic and UV free.

For use on LEED Buildings:

IDA Dark Sky Approval means that this fixture can be used to achieve LEED Credits for Light Pollution Reduction.

Gaskets:

High Temperature Silicone.

Electrical

THD:

7.4% at 120V

Driver:

Automatic Voltage Sensing Driver for 120 - 277 volts.

Driver:

Constant Current, Class2, 100 -277V, 50/60 Hz, 100 - 240VAC 0.3 - 0.15A, 277VAC 0.15A

Technical Specifications (continued)

Electrical

Surge Protection:

4kV

Optical

Fixture Efficacy:

50.5 Lumens per Watt

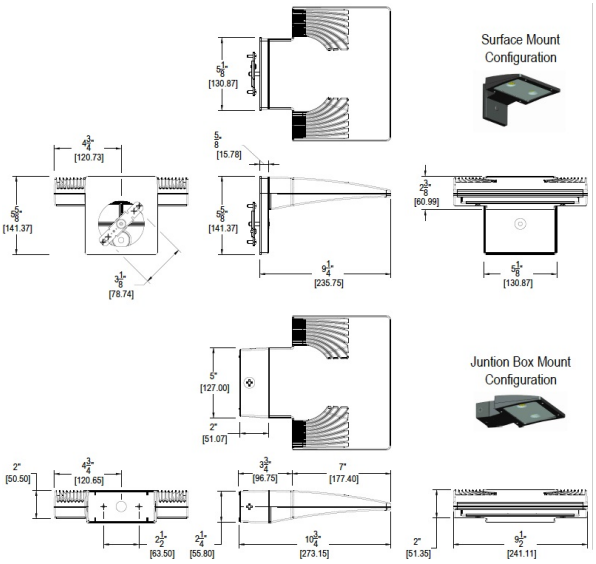
BUG Rating:

B1 U0 G0

Copyright © 2014 RAB Lighting Inc. All Rights Reserved Note: Specifications are subject to change at any time without notice

WPLED20NW/PC

Dimensions



Features

- Ultra-high efficiency 20 Watt wallpack
- Maintains 70% of initial lumens at 100,000 hours
- Weatherproof high temperature silicone gaskets
- Superior heat sinking with die cast aluminum housing and external fins
- Replaces 100W MH
- 100 up to 277 Volts
- 5-year warranty

Ordering Matrix

Family	Watts	Color Temp	Sensor	Surface Plate	Finish	Photocell
WPLED						
	20 = 20W	**Blank** = Cool **Y** = Warm **N** = Neutral	**Blank** = No Sensor **MS** = Mini Sensor	**Blank** = No Surface Plate **S** = Surface Plate	**Blank** = Bronze **W** = White	**Blank** = No Photocell **/PC** = 120V Button **/PCS** = 120V Swivel **/PC2** = 277V Button

Copyright © 2014 RAB Lighting Inc. All Rights Reserved Note: Specifications are subject to change at any time without notice

WPLED26NW/PC



LED 26W Wallpacks. Patent Pending thermal management system. 100,000 hour L70 lifespan. 5 Year Warranty.

Color: White

Weight: 7.5 lbs

Project:	Type:
Prepared By:	Date:

Driver Info		LED Info	
Type:	Constant Current	Watts:	26W
120V:	0.26A	Color Temp:	4000K (Neutral)
208V:	N/A	Color Accuracy:	83 CRI
240V:	N/A	L70 Lifespan:	100,000
277V:	N/A	Lumens:	2,415
Input Watts:	30W	Efficacy:	81 LPW
Efficiency:	88%		

Technical Specifications

Other

WPLED26 with Photocell:

120V Button Photocell Included. Photocell is only compatible with 120V.

California Title 24:

WPLED26/PC complies with 2013 California Title 24 building and electrical codes as a commercial outdoor non-pole-mounted fixture < 30 Watts.

Equivalency:

The WPLED26 is Equivalent in delivered lumens to a 175W Metal Halide Wallpack.

HID Replacement Range:

The WPLED26 can be used to replace 150 - 200W Metal Halide Wallpacks based on delivered lumens.

Patents:

The WPLED design is protected by U.S. Pat. D634878, Canada Pat 134878, China Pat. CN301649064S.

Country of Origin:

Designed by RAB in New Jersey and assembled in the USA by RAB's IBEW Local 3 workers.

Buy American Act Compliant:

This product is a COTS item manufactured in the United States, and is compliant with the Buy American Act.

Recovery Act (ARRA) Compliant:

This product complies with the 52.225-21 "Required Use of American Iron, Steel, and Manufactured Goods-- Buy American Act-- Construction Materials (October 2010).

Trade Agreements Act Compliant:

This product is a COTS item manufactured in the United States, and is compliant with the Trade Agreements Act.

GSA Schedule:

Suitable in accordance with FAR Subpart 25.4.

Listings

UL Listing:

Suitable for wet locations. Suitable for mounting within 1.2m (4ft) of the ground.

DLC Listed:

This product is on the Design Lights Consortium (DLC) Qualified Products List and is eligible for rebates from DLC Member Utilities.

Dark Sky Approved:

The International Dark Sky Association has approved this product as a full cutoff, fully shielded luminaire.

LED Characteristics

Lifespan:

100,000-hour LED lifespan based on IES LM-80 results and TM-21 calculations.

Color Consistency:

3-step MacAdam Ellipse binning to achieve consistent fixture-to-fixture color.

Color Stability:

LED color temperature is warrantied to shift no more than 200K in CCT over a 5 year period.

Color Uniformity:

RAB's range of CCT (Correlated color temperature) follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2008.

Construction

IP Rating:

Ingress Protection rating of IP66 for dust and water.

Finish:

Our environmentally friendly polyester powder coatings are formulated for high-durability and long-lasting color, and contains no VOC or toxic heavy metals.

Ambient Temperature:

Suitable for use in 40°C ambient temperatures.

Cold Weather Starting:

The minimum starting temperature is -40°F/-40°C.

Thermal Management:

Cast aluminum Thermal Management system for optimal heat sinking. The LPACK is designed for cool operation, most efficient output and maximum LED life by minimizing LED junction temperature.

Green Technology:

RAB LEDs are Mercury, Arsenic and UV free.

For use on LEED Buildings:

IDA Dark Sky Approval means that this fixture can be used to achieve LEED Credits for Light Pollution Reduction.

Electrical

Driver:

Multi-chip 26W high output long life LED Driver Constant Current, 720mA, Class 2, 6kV Surge Protection, 100V-277V, 50-60 Hz, 100-240V.4 Amps.

THD:

8.4% at 120V, 10.7% at 277V

Copyright © 2014 RAB Lighting Inc. All Rights Reserved Note: Specifications are subject to change at any time without notice

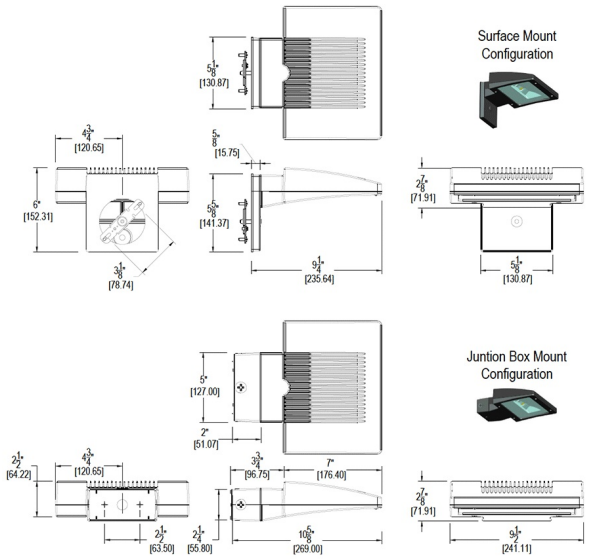
Technical Specifications (continued)

Optical

BUG Rating:

B1 U0 G0

Dimensions



Features

- High performance LED light engine
- Maintains 70% of initial lumens at 100,000 hours
- Weatherproof high temperature silicone gaskets
- Superior heat sinking with die cast aluminum housing and external fins
- 100 up to 277 Volts
- 5-year warranty

Ordering Matrix

Family	Watts	Color Temp	Sensor	Surface Plate	Finish	Photocell	Dimming
WPLED							
	20 = 20W	**Blank** = Cool **Y** = Warm **N** = Neutral	**Blank** = No Sensor **MS** = Mini Sensor	**Blank** = No Surface Plate **S** = Surface Plate	**Blank** = Bronze **W** = White	**Blank** = No Photocell **/PC** = 120V Button **/PCS** = 120V Swivel **/PC2** = 277V Button	**Blank** = No Dimming **/D10** = Dimmable

Copyright © 2014 RAB Lighting Inc. All Rights Reserved Note: Specifications are subject to change at any time without notice

ESM 2:
Lighting System Improvements - Exterior

ESM Overview

Ameresco will install a state-of-the-art lighting system to benefit the building occupants of the City of Bristol. Our project replaces or upgrades **1,129** exterior fixtures and will enhance the quality of the City's lighting system.



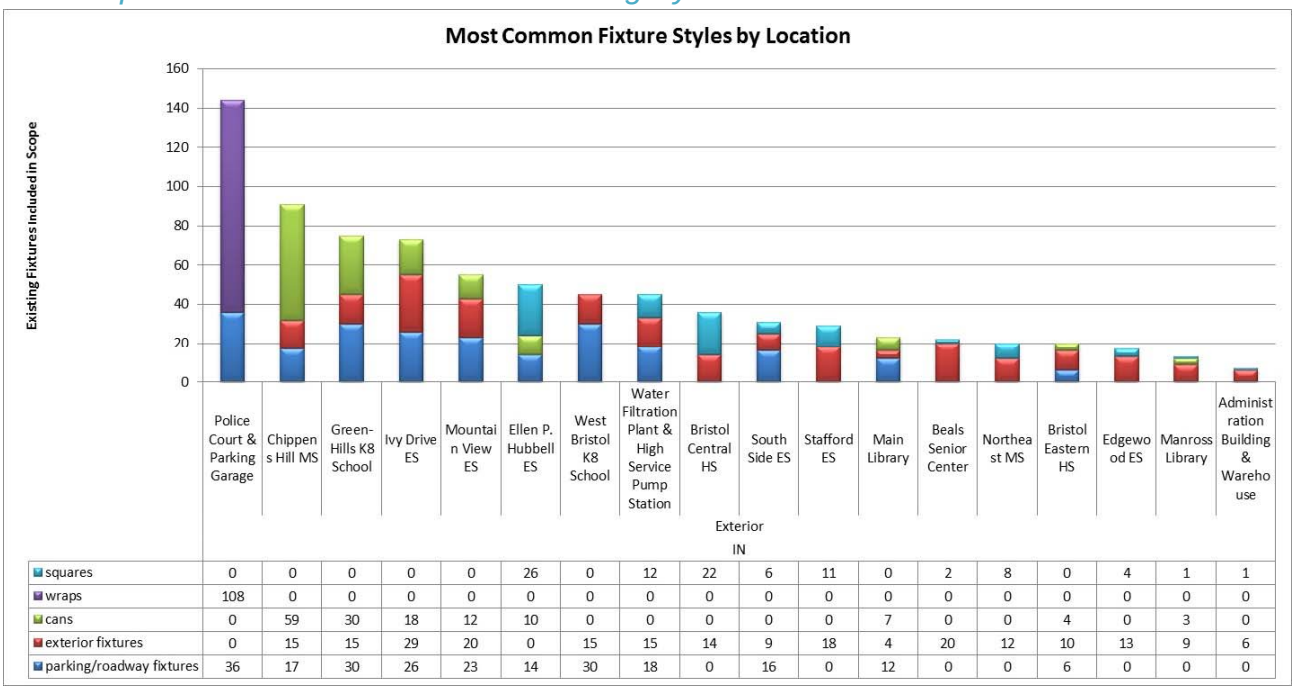
Figure 2.1: New fixtures will improve aesthetics and provide substantial energy savings.

ESM Detail

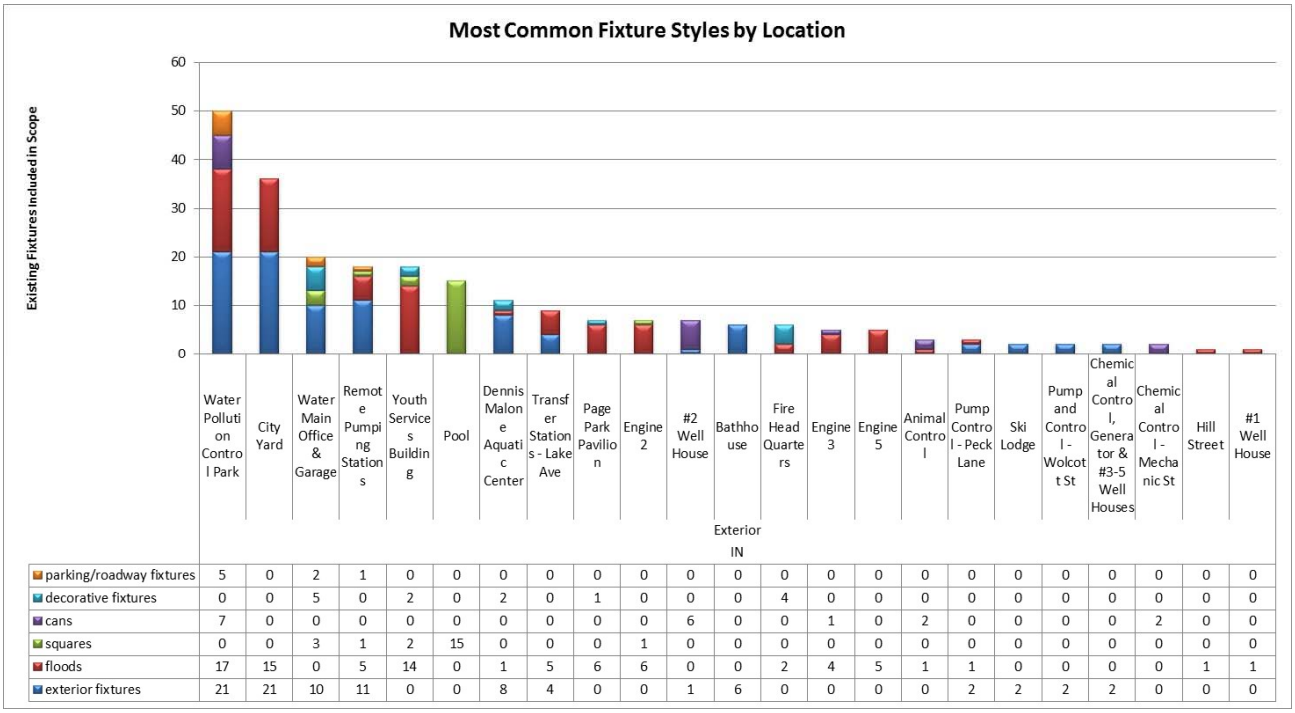
Existing System

Ameresco identified 102 different exterior lamp/ballast/fixture combinations. Metal Halide (MH) lamps are used in 36% of the fixtures. High Pressure Sodium (HPS) lamps are also used in 25% of the fixtures. All of these HID fixtures use standard magnetic ballasts. Compact fluorescent lamps are found in 13% of fixtures. Linear fluorescent T8 and T5 lamps are found in 12% of fixtures. LED lamps are already in use in 7% of fixtures. Incandescent lamps are installed in the remaining 7% of fixtures.

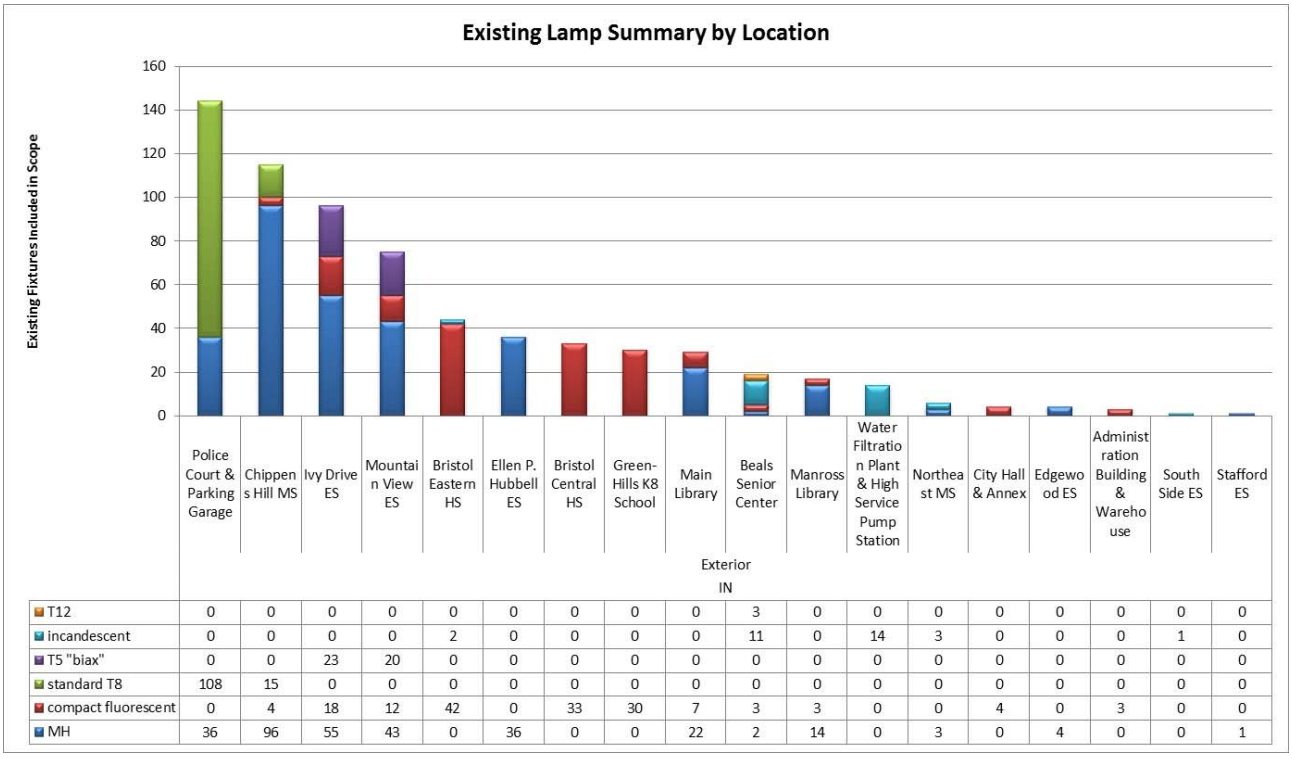
Specific Information about the Existing System



	Police Court & Parking Garage	Chippens Hill MS	Green-Hills K8 School	Ivy Drive ES	Mountain View ES	Ellen P. Hubbell ES	West Bristol K8 School	Water Filtration Plant & High Service Pump Station	Bristol Central HS	South Side ES	Stafford ES	Main Library	Beals Senior Center	Northeast MS	Bristol Eastern HS	Edgewood ES	Manross Library	Administration Building & Warehouse
squares	0	0	0	0	0	26	0	12	22	6	11	0	2	8	0	4	1	1
wraps	108	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
cans	0	59	30	18	12	10	0	0	0	0	0	7	0	0	4	0	3	0
exterior fixtures	0	15	15	29	20	0	15	15	14	9	18	4	20	12	10	13	9	6
parking/roadway fixtures	36	17	30	26	23	14	30	18	0	16	0	12	0	0	6	0	0	0

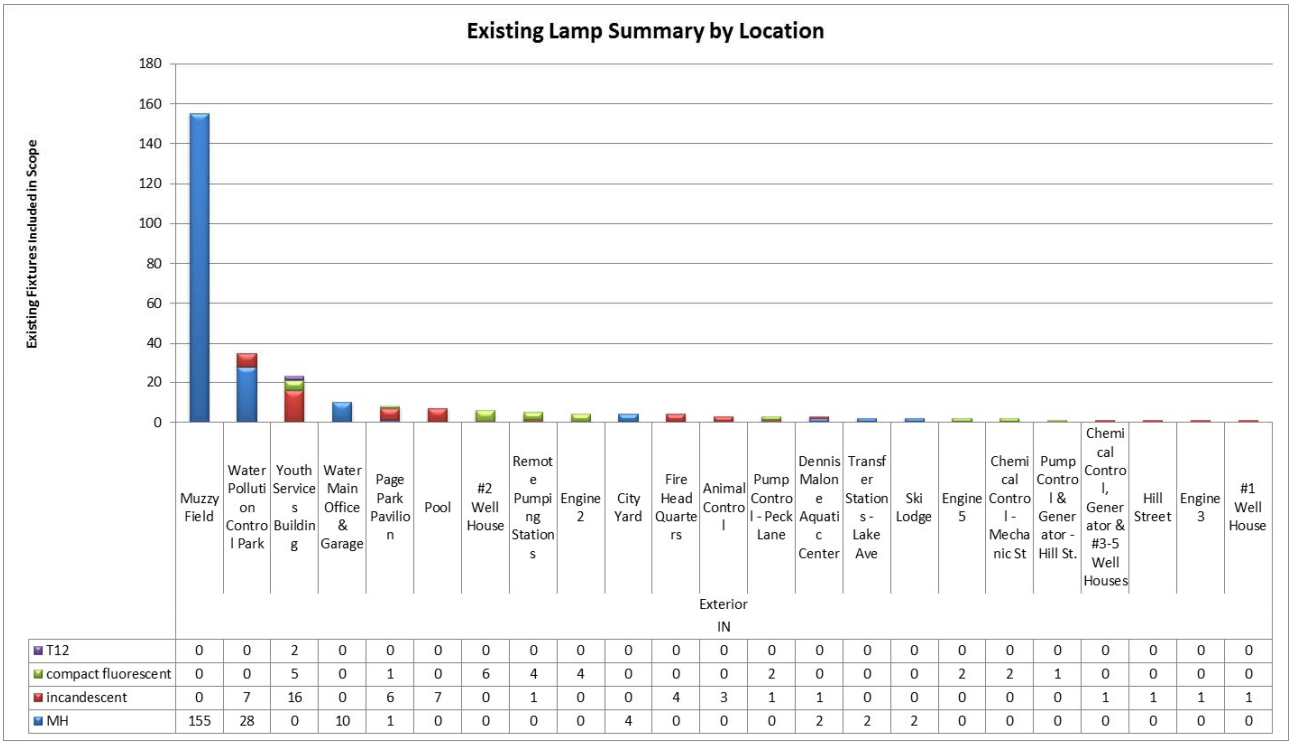


	Water Pollution Control Park	City Yard	Water Main Office & Garage	Remote Pumping Stations	Youth Services Building	Pool	Dennis Malone Aquatic Center	Transfer Stations - Lake Ave	Page Park Pavilion	Engine 2	#2 Well House	Bathhouse	Fire Head Quarters	Engine 3	Engine 5	Animal Control	Pump Control - Peck Lane	Ski Lodge	Pump and Control - Wolcott St	Chemical Control, Generator & #3-5 Well Houses	Chemical Control - Mechanic St	Hill Street	#1 Well House
parking/roadway fixtures	5	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
decorative fixtures	0	0	5	0	2	0	2	0	1	0	0	0	4	0	0	0	0	0	0	0	0	0	0
cans	7	0	0	0	0	0	0	0	0	0	6	0	0	1	0	2	0	0	0	0	2	0	0
squares	0	0	3	1	2	15	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
floods	17	15	0	5	14	0	1	5	6	6	0	0	2	4	5	1	1	0	0	0	0	1	1
exterior fixtures	21	21	10	11	0	0	8	4	0	0	1	6	0	0	0	0	2	2	2	2	0	0	0



	Police Court & Parking Garage	Chippens Hill MS	Ivy Drive ES	Mountain View ES	Bristol Eastern HS	Ellen P. Hubbell ES	Bristol Central HS	Green-Hills K8 School	Main Library	Beals Senior Center	Manross Library	Water Filtration Plant & High Service Pump Station	Northeast MS	City Hall & Annex	Edgewood ES	Administration Building & Warehouse	South Side ES	Stafford ES
T12	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
incandescent	0	0	0	0	2	0	0	0	0	11	0	14	3	0	0	0	1	0
T5 "biax"	0	0	23	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0
standard T8	108	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
compact fluorescent	0	4	18	12	42	0	33	30	7	3	3	0	0	4	0	3	0	0
MH	36	96	55	43	0	36	0	0	22	2	14	0	3	0	4	0	0	1

"Page content is subject to Confidentiality Restrictions"



Proposed System

Ameresco proposes to replace existing exterior HID fixtures with latest LED fixtures, which offer vastly improved product lifetimes, while providing appropriate light levels with minimal wasted light & trespass. LED fixtures produce light efficiently, and effectively direct that light onto the target areas.

Considering lifetime ratings of LED fixtures are 2 to 3 times greater than the HID's they replace, service intervals are greatly extended. Where HPS lamps exist, the change from "yellow" to "white" light will make the exterior appear much brighter, although future light readings taken with standard photopic meters may indicate non-compliance with IESNA recommended practice.

Following are highlights of the proposed scope, with predominant applications presented first. We then proceed in descending order, with each subsequent item representing a smaller portion of the scope. Please refer to the "Lighting System Analysis", as this is a complete list of work to be performed. Only locations that appear in that document are included in this project.

Specific Information about the Proposed System, by Strategy

365 existing fixtures shall be replaced with a new LED wall-pack.

154 existing fixtures will receive a customized LED conversion kit for recessed cans which is designed to increase fixture efficiency, save substantial energy, and greatly extend service intervals.

151 existing fixtures shall be replaced with a new LED flood.

"Page content is subject to Confidentiality Restrictions"

148 existing fixtures shall be replaced with a new LED shoebox.

123 existing fixtures will receive LED lamps and electronic ballasts.

82 existing fixtures shall be replaced with a new LED canopies.

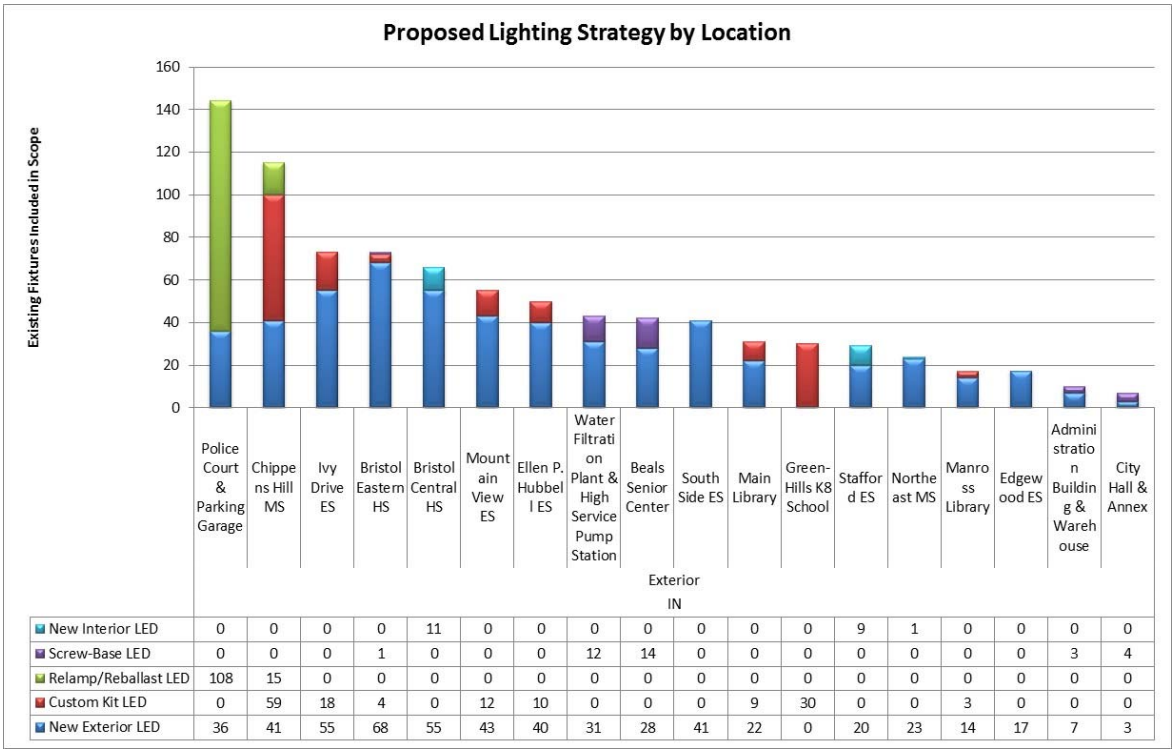
69 existing fixtures will receive screw-based LED lamps. They are highly efficient, and with lifetimes up to 50,000 hours, maintenance intervals are greatly extended.

25 existing fixtures shall be replaced with new LED drums.

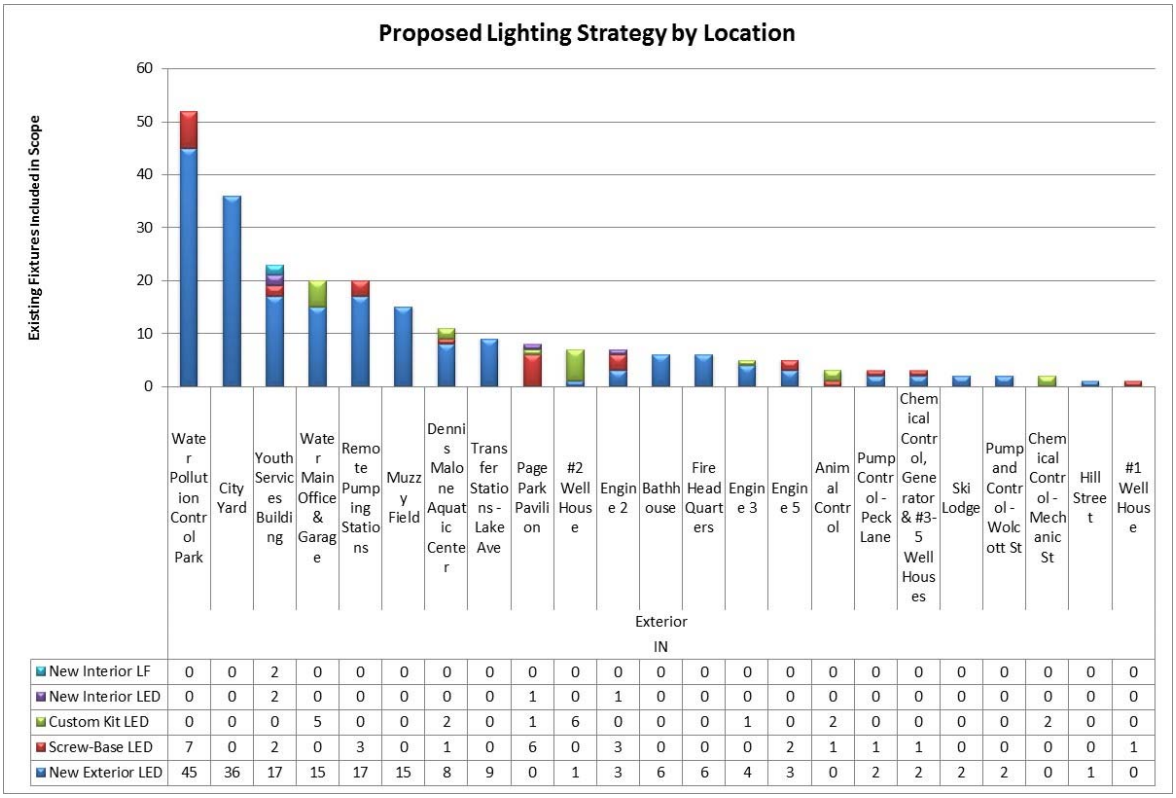
10 existing fixtures will receive a customized LED conversion kit for exterior area fixtures which is designed to increase fixture efficiency, save substantial energy, and greatly extend service intervals.

2 existing fixtures shall be replaced with new vaportights.

Specific Information about the Proposed System, by Building



	Police Court & Parking Garage	Chippens Hill MS	Ivy Drive ES	Bristol Eastern HS	Bristol Central HS	Mountain View ES	Ellen P. Hubbell ES	Water Filtration Plant & High Service Pump Station	Beals Senior Center	South Side ES	Main Library	Green-Hills K8 School	Stafford ES	Northeast MS	Manross Library	Edgewood ES	Administration Building & Wareh ouse	City Hall & Annex
New Interior LED	0	0	0	0	11	0	0	0	0	0	0	0	9	1	0	0	0	0
Screw-Base LED	0	0	0	1	0	0	0	12	14	0	0	0	0	0	0	0	3	4
Relamp/Reballast LED	108	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Custom Kit LED	0	59	18	4	0	12	10	0	0	0	9	30	0	0	3	0	0	0
New Exterior LED	36	41	55	68	55	43	40	31	28	41	22	0	20	23	14	17	7	3



New Interior LF	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New Interior LED	0	0	2	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
Custom Kit LED	0	0	0	5	0	0	2	0	1	6	0	0	0	1	0	2	0	0	0	0	2	0	0
Screw-Base LED	7	0	2	0	3	0	1	0	6	0	3	0	0	0	2	1	1	1	0	0	0	0	1
New Exterior LED	45	36	17	15	17	15	8	9	0	1	3	6	6	4	3	0	2	2	2	2	0	1	0

>Equipment, Design and Construction Documentation

Equipment will be identified in submittals provided for approval prior to procurement. The lighting system audit completed for each facility will be submitted as the basis for construction. The audit will include the existing descriptions, operating hours, and proposed retrofit description. These documents will be submitted for review and comment. Upon approval, these will constitute the construction documents. Upon completion of the construction phase, the documents will be revised as needed to reflect "As-Built" conditions, and submitted in multiple for record.

>Impact on Facility Operations and Performance

All installations will be conducted during normal business hours or after normal operating hours if interruption of functions is anticipated. Installations will be coordinated with appointed personnel.

Despite our best efforts, cataloguing every single fixture in every location is extremely difficult. **Therefore, fixtures or areas not listed are excluded from our scope.** Typical examples are low use areas such as closets and crawlspaces, areas inaccessible during the audit, areas to be renovated, high-security locations, and specialty fixtures such as medical or stage lighting.

>Integration of Proposed Equipment with Existing Systems

The new lighting system, and all components thereof, will be fully integrated into the existing lighting systems. We assume the entire lighting and lighting controls systems comply with, but not limited to, the latest codes, the latest standards, local jurisdictions, and work was done in a quality workmanship manner, per

"Page content is subject to Confidentiality Restrictions"

NECA, and other applicable recommend best practices universally accepted throughout the electrical industry. Further we assume that all existing devices, which are defined in NEC, which includes but not limited to switches, outlets, wiring, etc. are in acceptable condition in order to implement our scope as outlined in the contract documents. All existing junction boxes, poles, mounting surfaces and structures are assumed to be in acceptable condition to allow the installation of the products indicated in the scope. Required upgrades to meet safety or other codes, and/or to prepare the location for the installation as described above, can be performed on a time and material basis.

>Environmental Impact

There are no potential adverse environmental impacts associated with this lighting upgrade. During construction, Ameresco will remove, package, and recycle all existing lamps that contain mercury and ballasts that contain PCBs or DEHP according to applicable regulations.

Appendix for ESM 2:
Lighting System Improvements - Exterior

I. Energy Savings Calculations

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

City of Bristol, CT	
Energy and Demand Savings Summary	
Measure ID:	**2**
Measure Name:	**Lighting System Improvements - Exterior**
Measure Location:	
Engineers:	

Site Name:		**Central_High**	**Eastern_High**	**Chippens**	**NE_Middle**	**Green-Hills**
Item	Units	Savings	Savings	Savings	Savings	Savings
Electricity						
Energy On-Peak	kWh	42,440	41,794	42,688	12,814	5,716
Energy Off-Peak	kWh	0	0	0	0	0
Energy Total	kWh	42,440	41,794	42,688	12,814	5,716
Demand On-Peak, Monthly	kW	9.7	9.5	9.7	2.9	1.3
Demand On-Peak, Annual	kW	0.0	0.0	0.0	0.0	0.0
Demand Off-Peak, Monthly	kW	0.0	0.0	0.0	0.0	0.0
Demand Off-Peak, Annual	kW	0.0	0.0	0.0	0.0	0.0
Fossil Fuel						
Natural Gas (NG)	CCF					
Liquid Propane Gas (LPG)	Gallons					
Steam	Mlbs					
Fuel Oil, #2	Gallons					
Fuel Oil, #4	Gallons					
Fuel Oil, #6	Gallons					
Max Daily Demand (Natural Gas)	CCF (Demand)					
Water						
Water Savings	CF					
Sewer						
Sewer Savings	CF					

Hubbell	Stafford	Ivy_Drive	Edgewood	Mt_View	South_Side	Admin	City_Hall	Water_Main
Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings
25,560	19,747	5,651	9,015	18,954	31,194	6,307	1,022	8,715
0	0	0	0	0	0	0	1,897	0
25,560	19,747	5,651	9,015	18,954	31,194	6,307	2,919	8,715
5.8	4.5	5.7	2.1	4.3	7.1	1.4	0.7	3.3
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Filtration	Well_1	Well_2	Chem_Control	Chem_Mech_St	Pump_Peck_Lane	P_Control_Wolcott	Police	Bath
Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings
5,136	620	1,115	988	171	791	863	7,509	3,272
16,264	0	0	0	0	0	0	20,302	0
21,399	620	1,115	988	171	791	863	27,810	3,272
4.9	0.1	0.3	0.2	0.0	0.2	0.2	6.3	0.7
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Muzzy	Ski	Page_Park	Aquatic	Fire_HQ	Engine_2	Engine_3	Engine_5	Senior
Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings
5,082	740	4,603	7,392	3,593	1,892	6,904	5,042	15,925
0	0	0	0	0	0	0	0	8,204
5,082	740	4,603	7,392	3,593	1,892	6,904	5,042	24,129
1.5	0.2	0.9	1.7	0.8	0.4	1.6	1.2	5.5
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Main_Library	Manross_Library	Youth	Animal	Hill_St	City_Yard	Transfer_Lake_Ave	Water_Pollution	Pump_Stations
Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings
6,454	8,140	6,093	660	560	43,859	8,395	10,352	6,294
10,095	0	0	0	0	0	0	32,781	0
16,548	8,140	6,093	660	560	43,859	8,395	43,133	6,294
3.8	1.9	1.4	0.2	0.1	10.0	1.9	9.8	1.4
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Pool	Summary
Savings	
3,779	437,840
0	89,542
3,779	527,382
0.9	126.2
0.0	0.0
0.0	0.0
0.0	0.0
	0
	0
	0
	0
	0
	0
	0
	0
	0
	0
	0
	0

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
393	Bristol Central HS	Bldg Mt All	ext	250W HI PRESSURE SODIUM	wallpack	14	14	295	4.1	85 WATT LED/NEW	new LED wallpack	14	89	1.2	2.9	12,617	4,380	4,380
394	Bristol Central HS	Bldg Mt All	ext	2x32W CF HARDWIRED/EL	canopy	22	22	66	1.5	26 WATT LED/NEW	new LED canopy	22	27	0.6	0.9	3,729	4,380	4,380
395	Bristol Central HS	Bldg Mt All	ext	2x26W CF HARDWIRED/EL	circle	11	11	54	0.6	16 WATT LED/NEW	new LED drum	11	17	0.2	0.4	1,792	4,380	4,380
396	Bristol Central HS	Bldg Mt All	ext	100W HI PRESSURE SODIUM	flood	2	2	130	0.3	41 WATT LED/NEW	new LED flood	2	43	0.1	0.2	762	4,380	4,380
397	Bristol Central HS	Parking Lot All	ext	400W HI PRESSURE SODIUM	flood	17	17	460	7.8	137 WATT LED/NEW	new LED flood	17	144	2.4	5.4	23,541	4,380	4,380
577	South Side ES	Bldg Mt All	ext	150W HI PRESSURE SODIUM	flood	12	12	190	2.3	50 WATT LED/NEW	new LED flood	12	53	0.6	1.7	7,227	4,380	4,380
578	South Side ES	Bldg Mt All	ext	100W HI PRESSURE SODIUM	wallpack	1	1	130	0.1	30 WATT LED/NEW	new LED wallpack	1	32	0.0	0.1	431	4,380	4,380
579	South Side ES	Bldg Mt All	ext	250W HI PRESSURE SODIUM	wallpack	1	1	295	0.3	85 WATT LED/NEW	new LED wallpack	1	89	0.1	0.2	901	4,380	4,380
580	South Side ES	Bldg Mt All	ext	70W HI PRESSURE SODIUM	canopy	6	6	90	0.5	26 WATT LED/NEW	new LED canopy	6	27	0.2	0.4	1,648	4,380	4,380
581	South Side ES	Bldg Mt All	ext	3 WATT LED	wallpack	3		3	0.0	NO RETRO	no change		3	0.0			4,380	4,380
582	South Side ES	Bldg Mt All	ext	70W HI PRESSURE SODIUM	wallpack	4	4	90	0.4	10 WATT LED/NEW	new LED wallpack	4	11	0.0	0.3	1,393	4,380	4,380
583	South Side ES	Bldg Mt All	ext	150W INCANDESCENT	flood	1	1	150	0.2	21 WATT LED/NEW	new LED flood	1	22	0.0	0.1	560	4,380	4,380
584	South Side ES	Parking Lot All	ext	400W HI PRESSURE SODIUM	shoebox	10	10	460	4.6	137 WATT LED/NEW	new LED shoebox	10	144	1.4	3.2	13,847	4,380	4,380
585	South Side ES	Parking Lot All	ext	250W HI PRESSURE SODIUM	shoebox	6	6	295	1.8	93 WATT LED/NEW	new LED shoebox	6	98	0.6	1.2	5,186	4,380	4,380
941	Green-Hills K8 School	Bldg Mt Z	ext	2x26W CF HARDWIRED/EL	can rec	30	30	54	1.6	10 WATT LED/KIT	can kit LED Spectrum	30	11	0.3	1.3	5,716	4,380	4,380
942	Green-Hills K8 School	Bldg Mt Z	ext	3 WATT LED	wallpack	15		3	0.0	NO RETRO	no change		3	0.0			4,380	4,380
943	Green-Hills K8 School	Parking Lot Z	ext	3 WATT LED	shoebox	30		3	0.1	NO RETRO	no change		3	0.1			700	700
1230	Chippens Hill MS	Bldg Mt All	ext	400W METAL HALIDE	flood	9	9	455	4.1	137 WATT LED/NEW	new LED flood	9	144	1.3	2.8	11,039	4,380	4,380
1231	Chippens Hill MS	Bldg Mt All	ext	70W METAL HALIDE	can rec 8"	59	59	95	5.6	25 WATT LED/KIT	can kit LED Spectrum	59	26	1.5	4.1	15,990	4,380	4,380
1232	Chippens Hill MS	Parking Lot All	ext	175W METAL HALIDE	shoebox	17	17	205	3.5	50 WATT LED/NEW	new LED shoebox	17	53	0.9	2.6	10,220	4,380	4,380
1233	Chippens Hill MS	Bldg Mt All	ext	175W METAL HALIDE	wallpack	2	2	205	0.4	50 WATT LED/NEW	new LED wallpack	2	53	0.1	0.3	1,202	4,380	4,380
1234	Chippens Hill MS	Bldg Mt All	ext	26W CF HARDWIRED	wallpack	4	4	28	0.1	10 WATT LED/NEW	new LED wallpack	4	11	0.0	0.1	276	4,380	4,380
1235	Chippens Hill MS	Bldg Mt All	ext	70W METAL HALIDE	wallpack	9	9	95	0.9	10 WATT LED/NEW	new LED wallpack	9	11	0.1	0.8	2,998	4,380	4,380
1236	Chippens Hill MS	Bldg Mt All	ext	2L4' T8 32w/EL-8'	vapor tight	7	7	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	7	36	0.2	0.2	671	4,380	4,380
1237	Chippens Hill MS	Bldg Mt All	ext	1L4' T8 32w/EL	vapor tight	3	3	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	18	0.1	0.0	144	4,380	4,380
1238	Chippens Hill MS	Bldg Mt All	ext	1L2' T8 17w/EL	vapor tight	5	5	17	0.1	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	5	9	0.0	0.0	149	4,380	4,380
1656	Bristol Eastern HS	Bldg Mt All	ext	400W HI PRESSURE SODIUM	flood	1	1	460	0.5	137 WATT LED/NEW	new LED flood	1	144	0.1	0.3	1,385	4,380	4,380
1657	Bristol Eastern HS	Bldg Mt All	ext	2x26W CF HARDWIRED/EL	dome	38	38	54	2.1	10 WATT LED/NEW	new LED wallpack	38	11	0.4	1.7	7,240	4,380	4,380
1658	Bristol Eastern HS	Bldg Mt All	ext	250W HI PRESSURE SODIUM	wallpack	9	9	295	2.7	85 WATT LED/NEW	new LED wallpack	9	89	0.8	1.9	8,111	4,380	4,380
1659	Bristol Eastern HS	Bldg Mt All	ext	400W HI PRESSURE SODIUM	wallpack	1	1	460	0.5	85 WATT LED/NEW	new LED wallpack	1	89	0.1	0.4	1,624	4,380	4,380
1660	Bristol Eastern HS	Bldg Mt All	ext	2x26W CF HARDWIRED/EL	can rec 8"	4	4	54	0.2	15 WATT LED/KIT	can kit LED Spectrum	4	16	0.1	0.2	670	4,380	4,380
1661	Bristol Eastern HS	Bldg Mt All	ext	100W INCANDESCENT	flood	1	1	100	0.1	21 WATT LED/NEW	new LED flood	1	22	0.0	0.1	341	4,380	4,380
1662	Bristol Eastern HS	Bldg Mt All	ext	2x75W INCANDESCENTS	dual head flood	1	1	150	0.2	8 WATT LED SI	screw in LED par20	1	8	0.0	0.1	620	4,380	4,380
1663	Bristol Eastern HS	Parking Lot All	ext	400W HI PRESSURE SODIUM	flood	11	11	460	5.1	137 WATT LED/NEW	new LED flood	11	144	1.6	3.5	15,232	4,380	4,380
1664	Bristol Eastern HS	Driveway All	ext	250W HI PRESSURE SODIUM	shoebox	6	6	295	1.8	93 WATT LED/NEW	new LED shoebox	6	98	0.6	1.2	5,186	4,380	4,380
1665	Bristol Eastern HS	Parking Lot All	ext	400W HI PRESSURE SODIUM	flood	1	1	460	0.5	137 WATT LED/NEW	new LED flood	1	144	0.1	0.3	1,385	4,380	4,380
1910	West Bristol K8 School	Bldg Mt Z	ext	3 WATT LED	wallpack	15		3	0.0	NO RETRO	no change		3	0.0			4,380	4,380
1911	West Bristol K8 School	Parking Lot Z	ext	3 WATT LED	shoebox	30		3	0.1	NO RETRO	no change		3	0.1			4,380	4,380
2021	Northeast MS	Walkway Courtyard	ext	70W METAL HALIDE	canopy	1	1	95	0.1	26 WATT LED/NEW	new LED canopy	1	27	0.0	0.1	297	4,380	4,380
2022	Northeast MS	Walkway Courtyard	ext	70W METAL HALIDE	wallpack	2	2	95	0.2	10 WATT LED/NEW	new LED wallpack	2	11	0.0	0.2	740	4,380	4,380
2054	Northeast MS	Walkway All	ext	250W HI PRESSURE SODIUM	flood	4	4	295	1.2	93 WATT LED/NEW	new LED flood	4	98	0.4	0.8	3,458	4,380	4,380
2055	Northeast MS	Bldg Mt All	ext	70W HI PRESSURE SODIUM	wallpack	3	3	90	0.3	10 WATT LED/NEW	new LED wallpack	3	11	0.0	0.2	1,045	4,380	4,380
2056	Northeast MS	Bldg Mt All	ext	70W HI PRESSURE SODIUM	square surface mt.	1	1	90	0.1	16 WATT LED/NEW	new LED drum	1	17	0.0	0.1	321	4,380	4,380
2057	Northeast MS	Bldg Mt All	ext	100W HI PRESSURE SODIUM	canopy	6	6	130	0.8	26 WATT LED/NEW	new LED canopy	6	27	0.2	0.6	2,699	4,380	4,380
2058	Northeast MS	Bldg Mt All	ext	60W INCANDESCENT	wallpack	3	3	60	0.2	10 WATT LED/NEW	new LED wallpack	3	11	0.0	0.1	650	4,380	4,380
2059	Northeast MS	Bldg Mt All	ext	250W HI PRESSURE SODIUM	wallpack	4	4	295	1.2	85 WATT LED/NEW	new LED wallpack	4	89	0.4	0.8	3,605	4,380	4,380
2215	Mountain View ES	Bldg Mt Z	ext	2x26W CF HARDWIRED/EL	can rec	12	12	54	0.6	10 WATT LED/KIT	can kit LED Spectrum	12	11	0.1	0.5	2,286	4,380	4,380
2216	Mountain View ES	Bldg Mt Z	ext	100W METAL HALIDE	wallpack	20	20	120	2.4	30 WATT LED/NEW	new LED wallpack	20	32	0.6	1.8	7,753	4,380	4,380
2217	Mountain View ES	Bldg Mt Z	ext	2L1' F24 BIAX/EL	sconce	20		50	1.0	NO RETRO	no change		53	1.0			4,380	4,380
2218	Mountain View ES	Parking Lot Z	ext	100W METAL HALIDE	shoebox	23	23	120	2.8	30 WATT LED/NEW	new LED shoebox	23	32	0.7	2.0	8,915	4,380	4,380
2427	Ellen P. Hubbell ES	Bldg Mt All	ext	100W METAL HALIDE	square recessed	25	25	120	3.0	26 WATT LED/NEW	new LED canopy	25	27	0.7	2.3	10,151	4,380	4,380
2428	Ellen P. Hubbell ES	Bldg Mt All	ext	70W METAL HALIDE	square surface mt.	1	1	95	0.1	26 WATT LED/NEW	new LED canopy	1	27	0.0	0.1	297	4,380	4,380
2429	Ellen P. Hubbell ES	Bldg Mt All	ext	70W METAL HALIDE	can rec 6"	10	10	95	1.0	25 WATT LED/KIT	can kit LED Spectrum	10	26	0.3	0.7	3,011	4,380	4,380
2430	Ellen P. Hubbell ES	Parking Lot All	ext	250W HI PRESSURE SODIUM	shoebox	14	14	295	4.1	93 WATT LED/NEW	new LED shoebox	14	98	1.4	2.8	12,102	4,380	4,380
2539	Main Library	Parking Lot All	ext	175W METAL HALIDE	shoebox	12	12	205	2.5	50 WATT LED/NEW	new LED shoebox	12	53	0.6	1.8	8,015	4,380	4,380
2540	Main Library	Bldg Mt All	ext	2x42W CF HARDWIRED/EL	can rec 8"	7	7	86	0.6	25 WATT LED/KIT	can kit LED Spectrum	7	26	0.2	0.4	1,832	4,380	4,380
2541	Main Library	Walkway In Ground Flag Flood	ext	100W METAL HALIDE	specialty application	2		120	0.2	NO RETRO	no change		126	0.2			4,380	4,380
2542	Main Library	Bldg Mt All	ext	100W METAL HALIDE	sconce	6	6	120	0.7	30 WATT LED/NEW	new LED wallpack	6	32	0.2	0.5	2,326	4,380	4,380
2543	Main Library	Stair Entry	ext	100W METAL HALIDE	globe	2	2	120	0.2	40 WATT LED/KIT	area kit LED	2	42	0.1	0.2	771	4,940	4,940
2544	Main Library	Bldg Mt All	ext	250W HI PRESSURE SODIUM	wallpack	4	4	295	1.2	85 WATT LED/NEW	new LED wallpack	4	89	0.4	0.8	3,605	4,380	4,380
2585	Manross Library	Bldg Mt All	ext	26W CF HARDWIRED	can rec 8"	3	3	28	0.1	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	0.1	230	4,380	4,380
2586	Manross Library	Bldg Mt All	ext	175W METAL HALIDE	wallpack	4	4	205	0.8	50 WATT LED/NEW	new LED wallpack	4	53	0.2	0.6	2,672	4,380	4,380
2587	Manross Library	Bldg Mt All	ext	70W METAL HALIDE	wallpack	4	4	95	0.4	10 WATT LED/NEW	new LED wallpack	4	11	0.0	0.3	1,480	4,380	4,380
2588	Manross Library	Bldg Mt All	ext	150W METAL HALIDE	wallpack	1	1	190	0.2	50 WATT LED/NEW	new LED wallpack	1	53	0.1	0.1	602	4,380	4,380
2589	Manross Library	Walkway All	ext	175W METAL HALIDE	flood	5	5	205	1.0	58 WATT LED/NEW	new LED flood	5	61	0.3	0.7	3,156	4,380	4,380
2590	Manross Library	Walkway All	ext	3 WATT LED	flood	2		3	0.0	NO RETRO	no change		3	0.0			4,380	4,380
2591	Manross Library	Bldg Mt All	ext	3 WATT LED	canopy	1		3	0.0	NO RETRO	no change		3	0.0			4,380	4,380
2594	Water Main Office & Garage	Storage Garage	ext	250W HI PRESSURE SODIUM	wallpack	7	7	295	2.1	85 WATT LED/NEW	new LED wallpack	7	89	0.6	1.4	720	500	500
2621	Water Main Office & Garage	Bldg Mt All	ext	250W METAL HALIDE	shoebox	2	2	295	0.6	93 WATT LED/NEW	new LED shoebox	2	98	0.2	0.4	1,729	4,380	4,380
2622	Water Main Office & Garage	Bldg Mt All	ext	175W METAL HALIDE	wallpack	3	3	205	0.6	50 WATT LED/NEW	new LED wallpack	3	53	0.2	0.5	2,004	4,380	4,380
2623	Water Main Office & Garage	Bldg Mt All	ext	100W HI PRESSURE SODIUM	decorative	3	3	130	0.4	40 WATT LED/KIT	area kit LED	3	42	0.1	0.3	1,156	4,380	4,380
2624	Water Main Office & Garage	Bldg Mt All	ext	70W METAL HALIDE	square recessed	3	3	95	0.3	26 WATT LED/NEW	new LED canopy	3	27	0.1	0.2	890	4,380	4,380
2625	Water Main Office & Garage	Parking Lot All	ext	250W METAL HALIDE	decorative	2	2	295	0.6	40 WATT LED/KIT	area kit LED	2	42	0.1	0.5	2,216	4,380	4,380

Line	Building Name	Location	FI	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
2644	Water Pollution Control Park	Bldg Mt Main Office	ext	70W METAL HALIDE	wallpack	1	1	95	0.1	10 WATT LED/NEW	new LED wallpack	1	11	0.0	0.1	370	4,380	4,380
2645	Water Pollution Control Park	Bldg Mt Main Office	ext	100W INCANDESCENT	can large rec	7	7	100	0.7	11 WATT LED SI	screw in LED Alamp	7	12	0.1	0.6	2,712	4,380	4,380
2647	Water Pollution Control Park	Bldg Mt Generator Bldg	ext	70W METAL HALIDE	wallpack	1	1	95	0.1	10 WATT LED/NEW	new LED wallpack	1	11	0.0	0.1	370	4,380	4,380
2651	Water Pollution Control Park	Bldg Mt Pump House	ext	70W METAL HALIDE	wallpack	2	2	95	0.2	10 WATT LED/NEW	new LED wallpack	2	11	0.0	0.2	740	4,380	4,380
2654	Water Pollution Control Park	Bldg Mt Air Blowers	ext	70W METAL HALIDE	wallpack	2	2	95	0.2	10 WATT LED/NEW	new LED wallpack	2	11	0.0	0.2	740	4,380	4,380
2655	Water Pollution Control Park	Walkway Plant Pump Station	ext	175W METAL HALIDE	keyless	2	2	205	0.4	52 WATT LED/NEW	new LED canopy	2	55	0.1	0.3	1,318	4,380	4,380
2656	Water Pollution Control Park	Walkway Plant Pump Station	ext	175W METAL HALIDE	wallpack	1	1	205	0.2	50 WATT LED/NEW	new LED wallpack	1	53	0.1	0.2	668	4,380	4,380
2658	Water Pollution Control Park	Walkway Aeration Tanks (4)	ext	400W METAL HALIDE	flood	8	8	455	3.6	137 WATT LED/NEW	new LED flood	8	144	1.2	2.5	10,903	4,380	4,380
2659	Water Pollution Control Park	Walkway Aeration Tanks	ext	400W METAL HALIDE	flood	1	1	455	0.5	137 WATT LED/NEW	new LED flood	1	144	0.1	0.3	1,363	4,380	4,380
2661	Water Pollution Control Park	Bldg Mt Sludge	ext	250W HI PRESSURE SODIUM	wallpack	7	7	295	2.1	85 WATT LED/NEW	new LED wallpack	7	89	0.6	1.4	6,308	4,380	4,380
2670	Water Pollution Control Park	Bldg Mt Sludge	ext	250W HI PRESSURE SODIUM	wallpack	4	4	295	1.2	85 WATT LED/NEW	new LED wallpack	4	89	0.4	0.8	3,605	4,380	4,380
2671	Water Pollution Control Park	Bldg Mt Sludge	ext	100W HI PRESSURE SODIUM	wallpack	1	1	130	0.1	30 WATT LED/NEW	new LED wallpack	1	32	0.0	0.1	431	4,380	4,380
2680	Water Pollution Control Park	Bldg Mt Admin Bldg	ext	50W METAL HALIDE	wallpack	2	2	65	0.1	10 WATT LED/NEW	new LED wallpack	2	11	0.0	0.1	477	4,380	4,380
2682	Water Pollution Control Park	Walkway Storage Thickening	ext	175W METAL HALIDE	area light	5	5	205	1.0	58 WATT LED/NEW	new LED flood	5	61	0.3	0.7	3,156	4,380	4,380
2683	Water Pollution Control Park	Walkway Storage Thickening	ext	400W METAL HALIDE	flood	3	3	455	1.4	137 WATT LED/NEW	new LED flood	3	144	0.4	0.9	4,089	4,380	4,380
2686	Water Pollution Control Park	Walkway Grit And Septage Gallery	ext	250W HI PRESSURE SODIUM	flood	2	2	295	0.6	93 WATT LED/NEW	new LED flood	2	98	0.2	0.4	1,729	4,380	4,380
2687	Water Pollution Control Park	Walkway Primary Pump Gallery	ext	400W HI PRESSURE SODIUM	flood	2	2	460	0.9	137 WATT LED/NEW	new LED flood	2	144	0.3	0.6	2,769	4,380	4,380
2688	Water Pollution Control Park	Walkway Primary Pump Gallery	ext	400W HI PRESSURE SODIUM	flood	1	1	460	0.5	137 WATT LED/NEW	new LED flood	1	144	0.1	0.3	1,385	4,380	4,380
2708	City Yard	Bldg Mt Bldg Mt	ext	400W HI PRESSURE SODIUM	flood	1	1	460	0.5	137 WATT LED/NEW	new LED flood	1	144	0.1	0.3	969	4,380	4,380
2709	City Yard	Bldg Mt Bldg Mt	ext	250W HI PRESSURE SODIUM	wallpack	4	4	295	1.2	85 WATT LED/NEW	new LED wallpack	4	89	0.4	0.8	2,523	4,380	4,380
2722	City Yard	Bldg Mt Perimeter	ext	1000W HI PRESSURE SODIUM	flood	1	1	1,085	1.1	233 WATT LED/NEW	new LED flood	1	245	0.2	0.8	3,681	4,380	4,380
2723	City Yard	Bldg Mt Perimeter	ext	400W HI PRESSURE SODIUM	wallpack	12	12	460	5.5	85 WATT LED/NEW	new LED wallpack	12	89	1.1	4.4	13,641	4,380	4,380
2724	City Yard	Walkway Flag	ext	400W INC HALOGEN	wallpack	1	1	400	0.4	30 WATT LED/NEW	new LED wallpack	1	32	0.0	0.4	1,614	4,380	4,380
2726	City Yard	Bldg Mt All	ext	3 WATT LED	industrial	2		3	0.0	NO RETRO	no change		3	0.0			4,380	4,380
2727	City Yard	Bldg Mt All	ext	400W METAL HALIDE	flood	3	3	455	1.4	137 WATT LED/NEW	new LED flood	3	144	0.4	0.9	2,862	4,380	4,380
2728	City Yard	Bldg Mt Salt Shed	ext	400W HI PRESSURE SODIUM	flood	4	4	460	1.8	137 WATT LED/NEW	new LED flood	4	144	0.6	1.3	3,877	4,380	4,380
2729	City Yard	Bldg Mt Perimeter	ext	400W HI PRESSURE SODIUM	wallpack	4	4	460	1.8	85 WATT LED/NEW	new LED wallpack	4	89	0.4	1.5	4,547	4,380	4,380
2730	City Yard	Parking Lot Rear Pole Near Salt Shed	ext	400W HI PRESSURE SODIUM	flood	2	2	460	0.9	137 WATT LED/NEW	new LED flood	2	144	0.3	0.6	2,769	4,380	4,380
2731	City Yard	Parking Lot Gas Pumps	ext	400W HI PRESSURE SODIUM	flood	2	2	460	0.9	137 WATT LED/NEW	new LED flood	2	144	0.3	0.6	2,769	4,380	4,380
2732	City Yard	Parking Lot All	ext	1000W METAL HALIDE	flood	1	1	1,075	1.1	233 WATT LED/NEW	new LED flood	1	245	0.2	0.8	3,637	4,380	4,380
2733	City Yard	Parking Lot All	ext	400W HI PRESSURE SODIUM	flood	1	1	460	0.5	137 WATT LED/NEW	new LED flood	1	144	0.1	0.3	969	4,380	4,380
2737	Transfer Stations - Lake Ave	Bldg Mt Quonset	ext	400W HI PRESSURE SODIUM	flood	1	1	460	0.5	137 WATT LED/NEW	new LED flood	1	144	0.1	0.3	1,385	4,380	4,380
2738	Transfer Stations - Lake Ave	Bldg Mt Quonset	ext	70W HI PRESSURE SODIUM	wallpack	2	2	90	0.2	10 WATT LED/NEW	new LED wallpack	2	11	0.0	0.2	696	4,380	4,380
2741	Transfer Stations - Lake Ave	Bldg Mt Attendant Shack Brown	ext	400W HI PRESSURE SODIUM	flood	1	1	460	0.5	137 WATT LED/NEW	new LED flood	1	144	0.1	0.3	1,385	4,380	4,380
2742	Transfer Stations - Lake Ave	Bldg Mt Recycling Shed	ext	400W HI PRESSURE SODIUM	flood	2	2	460	0.9	137 WATT LED/NEW	new LED flood	2	144	0.3	0.6	2,769	4,380	4,380
2746	Transfer Stations - Lake Ave	Bldg Mt Trailer	ext	400W HI PRESSURE SODIUM	flood	1	1	460	0.5	137 WATT LED/NEW	new LED flood	1	144	0.1	0.3	1,385	4,380	4,380
2748	Transfer Stations - Lake Ave	Bldg Mt Scale House	ext	100W METAL HALIDE	wallpack	2	2	120	0.2	30 WATT LED/NEW	new LED wallpack	2	32	0.1	0.2	775	4,380	4,380
2759	Animal Control	Bldg Mt Entry	ext	60W INCANDESCENT	rectangular	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	226	4,380	4,380
2760	Animal Control	Bldg Mt Entry	ext	3 WATT LED	flood	1		3	0.0	NO RETRO	no change		3	0.0			4,380	4,380
2761	Animal Control	Bldg Mt Entry	ext	60W INCANDESCENT	can rec	2	2	60	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.1	434	4,380	4,380
2804	Fire Head Quarters	Bldg Mt All (4)	ext	60W INCANDESCENT	decorative	4	4	60	0.2	10 WATT LED/NEW	new LED wallpack	4	11	0.0	0.2	867	4,380	4,380
2805	Fire Head Quarters	Bldg Mt All (2)	ext	400W MERCURY VAPOR	flood	2	2	455	0.9	137 WATT LED/NEW	new LED flood	2	144	0.3	0.6	2,726	4,380	4,380
2817	Engine 2	Bldg Mt All	ext	2x13W CF HARDWIRED	square surface mt.	1	1	30	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	58	4,380	4,380
2818	Engine 2	Bldg Mt All	ext	150W INC HALOGEN	flood	3	3	150	0.5	21 WATT LED/NEW	new LED flood	3	22	0.1	0.4	1,681	4,380	4,380
2819	Engine 2	Bldg Mt All	ext	18W CF SCREWIN	dual head flood	3	3	20	0.1	8 WATT LED SI	screw in LED par20	3	8	0.0	0.0	152	4,380	4,380
2829	Engine 5	Bldg Mt All	ext	400W INC HALOGEN	flood	3	3	400	1.2	21 WATT LED/NEW	new LED flood	3	22	0.1	1.1	4,966	4,380	4,380
2830	Engine 5	Bldg Mt All	ext	15W CF SCREWIN	dual head flood	2	2	17	0.0	8 WATT LED SI	screw in LED par20	2	8	0.0	0.0	75	4,380	4,380
2843	Engine 3	Bldg Mt All	ext	400W INC HALOGEN	flood	4	4	400	1.6	21 WATT LED/NEW	new LED flood	4	22	0.1	1.5	6,622	4,380	4,380
2844	Engine 3	Bldg Mt Entry	ext	75W INCANDESCENT	can rec 6"	1	1	75	0.1	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	0.1	283	4,380	4,380
2896	Youth Services Building	Bldg Mt Perimeter (4)	ext	100W INCANDESCENT	flood	12	12	100	1.2	21 WATT LED/NEW	new LED flood	12	22	0.3	0.9	4,097	4,380	4,380
2897	Youth Services Building	Bldg Mt Perimeter (2)	ext	75W INCANDESCENT	coach light	2	2	75	0.2	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.1	583	4,380	4,380
2898	Youth Services Building	Bldg Mt Perimeter (2)	ext	2x13W CF HARDWIRED	square surface mt.	2	2	30	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	0.0	116	4,380	4,380
2899	Youth Services Building	Bldg Mt Perimeter	ext	100W INCANDESCENT	flood	2	2	100	0.2	21 WATT LED/NEW	new LED flood	2	22	0.0	0.2	683	4,380	4,380
2900	Youth Services Building	Bldg Mt Perimeter	ext	18W CF HARDWIRED	dome	2	2	20	0.0	10 WATT LED/NEW	new LED wallpack	2	11	0.0	0.0	83	4,380	4,380
2901	Youth Services Building	Bldg Mt Canopy Main Entry	ext	2L8' T12 60w EE/EEMAG	strip	2	2	123	0.2	2L4' T8 28w/ELEE HI/NEW-8'	new LF vaportight	2	67	0.1	0.1	489	4,380	4,380
2902	Youth Services Building	Bldg Mt Canopy Main Entry	ext	18W CF HARDWIRED	dome	1	1	20	0.0	10 WATT LED/NEW	new LED wallpack	1	11	0.0	0.0	42	4,380	4,380
3028	Beals Senior Center	Bldg Mt Sign	ext	1L8' T12 60w EE/STD	strip	2		83	0.2	NO RETRO	no change -specialized fixture		87	0.2			4,380	4,380
3029	Beals Senior Center	Bldg Mt Sign	ext	1L4' T12 34w EE/EEMAG	strip	1		40	0.0	NO RETRO	no change -specialized fixture		42	0.0			4,380	4,380
3030	Beals Senior Center	Bldg Mt All	ext	70W HI PRESSURE SODIUM	wallpack	4	4	90	0.4	10 WATT LED/NEW	new LED wallpack	4	11	0.0	0.3	1,393	4,380	4,380
3031	Beals Senior Center	Bldg Mt All	ext	150W HI PRESSURE SODIUM	wallpack	16	16	190	3.0	50 WATT LED/NEW	new LED wallpack	16	53	0.8	2.2	9,636	4,380	4,380
3032	Beals Senior Center	Bldg Mt All	ext	13W CF HARDWIRED	jar	3	3	15	0.0	8 WATT LED SI	screw in LED Alamp	3	8	0.0	0.0	87	4,380	4,380
3033	Beals Senior Center	Bldg Mt All	ext	2x50W INCANDESCENTS	dual head flood	10	10	100	1.0	8 WATT LED SI	screw in LED par20	10	8	0.1	0.9	4,012	4,380	4,380
3034	Beals Senior Center	Bldg Mt All	ext	250W HI PRESSURE SODIUM	flood	1	1	295	0.3	93 WATT LED/NEW	new LED flood	1	98	0.1	0.2	864	4,380	4,380
3035	Beals Senior Center	Bldg Mt All	ext	2x75W INCANDESCENTS	dual head flood	1	1	150	0.2	8 WATT LED SI	screw in LED par20	1	8	0.0	0.1	620	4,380	4,380
3036	Beals Senior Center	Bldg Mt All	ext	70W METAL HALIDE	canopy	2	2	95	0.2	26 WATT LED/NEW	new LED canopy	2	27	0.1	0.1	593	4,380	4,380
3037	Beals Senior Center	Bldg Mt All	ext	400W HI PRESSURE SODIUM	flood	1	1	460	0.5	137 WATT LED/NEW	new LED flood	1	144	0.1	0.3	1,385	4,380	4,380
3038	Beals Senior Center	Parking Lot All	ext	400W HI PRESSURE SODIUM	flood	4	4	460	1.8	137 WATT LED/NEW	new LED flood	4	144	0.6	1.3	5,539	4,380	4,380
3063	Dennis Malone Aquatic Center	Bldg Mt Entry	ext	175W METAL HALIDE	decorative	2	2	205	0.4	40 WATT LED/KIT	area kit LED	2	42	0.1	0.3	1,428	4,380	4,380
3064	Dennis Malone Aquatic Center	Bldg Mt All	ext	2x75W INCANDESCENTS	dual head flood	1	1	150	0.2	8 WATT LED SI	screw in LED par20	1	8	0.0	0.1	620	4,380	4,380
3065	Dennis Malone Aquatic Center	Bldg Mt All	ext	175W MERCURY VAPOR	wallpack	8	8	205	1.6	50 WATT LED/NEW	new LED wallpack	8	53	0.4	1.2	5,344	4,380	4,380
3133	Water Filtration Plant & High Service Pump Station	Bldg Mt All	ext	75W INCANDESCENT	square recessed	12	12	75	0.9	8 WATT LED SI	screw in LED Alamp	12	8	0.1	0.8	3,500	4,380	4,380
3134	Water Filtration Plant & High Service Pump Station	Bldg Mt All	ext	60W INCANDESCENT	wallpack	2	2	60	0.1	10 WATT LED/NEW	new LED wallpack	2	11	0.0	0.1	434	4,380	4,380
3135	Water Filtration Plant & High Service Pump Station	Bldg Mt All	ext	150W HI PRESSURE SODIUM	wallpack	11	11	190	2.1	50 WATT LED/NEW	new LED wallpack	11	53	0.6	1.5	6,625	4,380	4,380

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	kW Saved	kWH Saved	Annual Hours	Hours With Controls
3136	Water Filtration Plant & High Service Pump Station	Bldg Mt All	ext	70W HI PRESSURE SODIUM	bollard	2		90	0.2	NO RETRO	no change		95	0.2			4,380	4,380
3137	Water Filtration Plant & High Service Pump Station	Driveway All	ext	150W HI PRESSURE SODIUM	shoebox	18	18	190	3.4	50 WATT LED/NEW	new LED shoebox	18	53	0.9	2.5	10,841	4,380	4,380
3139	#1 Well House	Bldg Mt All	ext	2x75W INCANDESCENTS	dual head flood	1	1	150	0.2	8 WATT LED SI	screw in LED par20	1	8	0.0	0.1	620	4,380	4,380
3142	#2 Well House	Bldg Mt All	ext	150W HI PRESSURE SODIUM	wallpack	1	1	190	0.2	50 WATT LED/NEW	new LED wallpack	1	53	0.1	0.1	602	4,380	4,380
3143	#2 Well House	Bldg Mt All	ext	28W CF HARDWIRED	cylinder wall mt.	6	6	30	0.2	10 WATT LED/KIT	can kit LED Spectrum	6	11	0.1	0.1	512	4,380	4,380
3150	Chemical Control, Generator & #3-5 Well Houses	Bldg Mt All	ext	70W HI PRESSURE SODIUM	wallpack	2	2	90	0.2	10 WATT LED/NEW	new LED wallpack	2	11	0.0	0.2	696	4,380	4,380
3151	Chemical Control, Generator & #3-5 Well Houses	Bldg Mt All	ext	75W INCANDESCENT	explosion	1	1	75	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.1	292	4,380	4,380
3154	Chemical Control - Mechanic St	Bldg Mt All	ext	28W CF HARDWIRED	cylinder wall mt.	2	2	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	0.0	171	4,380	4,380
3156	Pump Control - Peck Lane	Bldg Mt All	ext	28W CF HARDWIRED	wallpack	2	2	30	0.1	10 WATT LED/NEW	new LED wallpack	2	11	0.0	0.0	171	4,380	4,380
3157	Pump Control - Peck Lane	Bldg Mt All	ext	2x75W INCANDESCENTS	dual head flood	1	1	150	0.2	8 WATT LED SI	screw in LED par20	1	8	0.0	0.1	620	4,380	4,380
3160	Pump Control & Generator - Hill St.	Bldg Mt All	ext	13W CF HARDWIRED	jar	1		15	0.0	NO RETRO	no change per customer		16	0.0			4,380	4,380
3162	Pump and Control - Wolcott St	Bldg Mt All	ext	100W HI PRESSURE SODIUM	wallpack	2	2	130	0.3	30 WATT LED/NEW	new LED wallpack	2	32	0.1	0.2	863	4,380	4,380
3177	Bathhouse	Bldg Mt All	ext	150W HI PRESSURE SODIUM	wallpack	4	4	190	0.8	50 WATT LED/NEW	new LED wallpack	4	53	0.2	0.6	2,409	4,380	4,380
3178	Bathhouse	Bldg Mt All	ext	100W HI PRESSURE SODIUM	wallpack	2	2	130	0.3	30 WATT LED/NEW	new LED wallpack	2	32	0.1	0.2	863	4,380	4,380
3179	Muzzy Field	Field Ball Field (10)	ext	1500W METAL HALIDE	flood	140		1,615	226.1	NO RETRO	no change		1,696	226.1			140	140
3187	Muzzy Field	Bldg Mt Near Boiler Room	ext	100W METAL HALIDE	wallpack	6	6	120	0.7	30 WATT LED/NEW	new LED wallpack	6	32	0.2	0.5	2,326	4,380	4,380
3196	Muzzy Field	Bldg Mt Near Officials Locker Room	ext	100W METAL HALIDE	wallpack	7	7	120	0.8	30 WATT LED/NEW	new LED wallpack	7	32	0.2	0.6	2,713	4,380	4,380
3199	Muzzy Field	Field Bull Pen	ext	175W METAL HALIDE	shoebox	2	2	205	0.4	50 WATT LED/NEW	new LED shoebox	2	53	0.1	0.3	43	140	140
3204	Ski Lodge	Bldg Mt All	ext	70W METAL HALIDE	wallpack	2	2	95	0.2	10 WATT LED/NEW	new LED wallpack	2	11	0.0	0.2	740	4,380	4,380
3213	Page Park Pavilion	Bldg Mt Canopy	ext	2x13W CF HARDWIRED	rectangular	1	1	30	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	0.0	58	4,380	4,380
3214	Page Park Pavilion	Walkway All	ext	175W METAL HALIDE	decorative	1	1	205	0.2	40 WATT LED/KIT	area kit LED	1	42	0.0	0.2	1,428	8,760	4,380
3215	Page Park Pavilion	Bldg Mt All (2)	ext	150W INCANDESCENT	flood	4	4	150	0.6	17 WATT LED SI	screw in LED par38	4	18	0.1	0.5	2,315	4,380	4,380
3216	Page Park Pavilion	Bldg Mt All	ext	2x50W INCANDESCENTS	dual head flood	2	2	100	0.2	8 WATT LED SI	screw in LED par20	2	8	0.0	0.2	802	4,380	4,380
3232	Pool	Bldg Mt Canopy	ext	60W INCANDESCENT	square recessed	7	7	60	0.4	8 WATT LED SI	screw in LED Alamp	7	8	0.1	0.4	1,582	4,380	4,380
3233	Pool	Bldg Mt Canopy	ext	70W HI PRESSURE SODIUM	square surface mt.	8	8	90	0.7	26 WATT LED/NEW	new LED canopy	8	27	0.2	0.5	2,197	4,380	4,380
3250	Hill Street	Bldg Mt All	ext	2x75W INCANDESCENTS	dual head flood	1	1	150	0.2	21 WATT LED/NEW	new LED flood	1	22	0.0	0.1	560	4,380	4,380
3256	Remote Pumping Stations	Bldg Mt Cross	ext	150W INCANDESCENT	wallpack	1	1	150	0.2	10 WATT LED/NEW	new LED wallpack	1	11	0.0	0.1	611	4,380	4,380
3257	Remote Pumping Stations	Bldg Mt Cross	ext	70W HI PRESSURE SODIUM	wallpack	2	2	90	0.2	10 WATT LED/NEW	new LED wallpack	2	11	0.0	0.2	696	4,380	4,380
3258	Remote Pumping Stations	Walkway Cross	ext	150W HI PRESSURE SODIUM	shoebox	1	1	190	0.2	50 WATT LED/NEW	new LED shoebox	1	53	0.1	0.1	602	4,380	4,380
3260	Remote Pumping Stations	Bldg Mt Drayla	ext	70W HI PRESSURE SODIUM	flood	1	1	90	0.1	21 WATT LED/NEW	new LED flood	1	22	0.0	0.1	298	4,380	4,380
3262	Remote Pumping Stations	Bldg Mt East Main	ext	70W HI PRESSURE SODIUM	wallpack	1	1	90	0.1	10 WATT LED/NEW	new LED wallpack	1	11	0.0	0.1	348	4,380	4,380
3264	Remote Pumping Stations	Bldg Mt Wooster	ext	70W HI PRESSURE SODIUM	flood	3	3	90	0.3	21 WATT LED/NEW	new LED flood	3	22	0.1	0.2	893	4,380	4,380
3268	Remote Pumping Stations	Bldg Mt Julia	ext	70W HI PRESSURE SODIUM	flood	1	1	90	0.1	21 WATT LED/NEW	new LED flood	1	22	0.0	0.1	298	4,380	4,380
3270	Remote Pumping Stations	Bldg Mt Lake	ext	18W CF HARDWIRED	canopy	1		20	0.0	NO RETRO	no change		21	0.0			4,380	4,380
3271	Remote Pumping Stations	Bldg Mt Lake	ext	18W CF HARDWIRED	explosion	3	3	20	0.1	11 WATT LED SI	screw in LED Alamp	3	12	0.0	0.0	111	4,380	4,380
3273	Remote Pumping Stations	Bldg Mt Lufkin	ext	70W HI PRESSURE SODIUM	wallpack	1	1	90	0.1	10 WATT LED/NEW	new LED wallpack	1	11	0.0	0.1	348	4,380	4,380
3275	Remote Pumping Stations	Bldg Mt Matthews	ext	70W HI PRESSURE SODIUM	wallpack	1	1	90	0.1	10 WATT LED/NEW	new LED wallpack	1	11	0.0	0.1	348	4,380	4,380
3277	Remote Pumping Stations	Bldg Mt Middle	ext	70W HI PRESSURE SODIUM	wallpack	1	1	90	0.1	10 WATT LED/NEW	new LED wallpack	1	11	0.0	0.1	348	4,380	4,380
3279	Remote Pumping Stations	Bldg Mt Minor	ext	70W HI PRESSURE SODIUM	wallpack	1	1	90	0.1	10 WATT LED/NEW	new LED wallpack	1	11	0.0	0.1	348	4,380	4,380
3283	Remote Pumping Stations	Bldg Mt Allentown	ext	70W HI PRESSURE SODIUM	wallpack	1	1	90	0.1	10 WATT LED/NEW	new LED wallpack	1	11	0.0	0.1	348	4,380	4,380
3285	Remote Pumping Stations	Bldg Mt Tyler	ext	70W HI PRESSURE SODIUM	wallpack	2	2	90	0.2	10 WATT LED/NEW	new LED wallpack	2	11	0.0	0.2	696	4,380	4,380
3289	Administration Building & Warehouse	Bldg Mt Warehouse	ext	250W HI PRESSURE SODIUM	wallpack	4	4	295	1.2	85 WATT LED/NEW	new LED wallpack	4	89	0.4	0.8	3,605	4,380	4,380
3290	Administration Building & Warehouse	Bldg Mt Admin	ext	150W HI PRESSURE SODIUM	wallpack	2	2	190	0.4	50 WATT LED/NEW	new LED wallpack	2	53	0.1	0.3	1,205	4,380	4,380
3291	Administration Building & Warehouse	Bldg Mt Admin	ext	400W HI PRESSURE SODIUM	flood	1	1	460	0.5	137 WATT LED/NEW	new LED flood	1	144	0.1	0.3	1,385	4,380	4,380
3292	Administration Building & Warehouse	Bldg Mt Admin	ext	15W CF SCREWIN	globe	2	2	17	0.0	8 WATT LED SI	screw in LED Alamp	2	8	0.0	0.0	75	4,380	4,380
3293	Administration Building & Warehouse	Bldg Mt Admin	ext	15W CF SCREWIN	square surface mt.	1	1	17	0.0	8 WATT LED SI	screw in LED Alamp	1	8	0.0	0.0	38	4,380	4,380
3541	Stafford ES	Bldg Mt All	ext	100W METAL HALIDE	square surface mt.	1	1	120	0.1	26 WATT LED/NEW	new LED canopy	1	27	0.0	0.1	406	4,380	4,380
3542	Stafford ES	Bldg Mt All	ext	400W HI PRESSURE SODIUM	flood	2	2	460	0.9	137 WATT LED/NEW	new LED flood	2	144	0.3	0.6	2,769	4,380	4,380
3543	Stafford ES	Bldg Mt All	ext	3 WATT LED	wallpack	3		3	0.0	NO RETRO	no change		3	0.0			4,380	4,380
3544	Stafford ES	Bldg Mt All	ext	50W HI PRESSURE SODIUM	square surface mt.	9	9	65	0.6	16 WATT LED/NEW	new LED drum	9	17	0.2	0.4	1,900	4,380	4,380
3545	Stafford ES	Bldg Mt All	ext	150W HI PRESSURE SODIUM	square surface mt.	1	1	190	0.2	52 WATT LED/NEW	new LED canopy	1	55	0.1	0.1	593	4,380	4,380
3546	Stafford ES	Bldg Mt All	ext	250W HI PRESSURE SODIUM	wallpack	15	15	295	4.4	85 WATT LED/NEW	new LED wallpack	15	89	1.3	3.1	13,518	4,380	4,380
3547	Stafford ES	Bldg Mt All	ext	150W INC HALOGEN	flood	1	1	150	0.2	21 WATT LED/NEW	new LED flood	1	22	0.0	0.1	560	4,380	4,380
3704	Edgewood ES	Bldg Mt All	ext	70W METAL HALIDE	square surface mt.	4	4	95	0.4	26 WATT LED/NEW	new LED canopy	4	27	0.1	0.3	1,186	4,380	4,380
3705	Edgewood ES	Bldg Mt All	ext	150W HI PRESSURE SODIUM	wallpack	13	13	190	2.5	50 WATT LED/NEW	new LED wallpack	13	53	0.7	1.8	7,829	4,380	4,380
3863	Ivy Drive ES	Bldg Mt Z	ext	2x26W CF HARDWIRED/EL	can rec	18	18	54	1.0	10 WATT LED/KIT	can kit LED Spectrum	18	11	0.2	0.8	783	1,000	1,000
3864	Ivy Drive ES	Bldg Mt Z	ext	100W METAL HALIDE	wallpack	29	29	120	3.5	30 WATT LED/NEW	new LED wallpack	29	32	0.9	2.6	2,567	1,000	1,000
3865	Ivy Drive ES	Bldg Mt Z	ext	2L1' F24 BIAX/EL	sconce	23		50	1.2	NO RETRO	no change		53	1.2			1,000	1,000
3866	Ivy Drive ES	Parking Lot Z	ext	100W METAL HALIDE	shoebox	26	26	120	3.1	30 WATT LED/NEW	new LED shoebox	26	32	0.8	2.3	2,301	1,000	1,000
4110	City Hall & Annex	Bldg Mt Annex	ext	25W CF SCREWIN	jar	4	4	27	0.1	8 WATT LED SI	screw in LED Alamp	4	8	0.0	0.1	326	4,380	4,380
4111	City Hall & Annex	Parking Lot All	ext	250W HI PRESSURE SODIUM	flood	3	3	295	0.9	93 WATT LED/NEW	new LED flood	3	98	0.3	0.6	2,593	4,380	4,380
4312	Police Court & Parking Garage	Bldg Mt All	ext	100W METAL HALIDE	shoebox	25	25	120	3.0	30 WATT LED/NEW	new LED wallpack	25	32	0.8	2.2	9,691	4,380	4,380
4313	Police Court & Parking Garage	Parking Deck Roof	ext	150W METAL HALIDE	shoebox	11	11	190	2.1	50 WATT LED/NEW	new LED shoebox	11	53	0.6	1.5	6,625	4,380	4,380
4314	Police Court & Parking Garage	Parking Deck Deck	ext	2L4' T8 32w/EL	wrap	32	32	60	1.9	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	32	36	1.1	0.8	3,406	4,380	4,380
4315	Police Court & Parking Garage	Parking Deck Ramp Up	ext	2L4' T8 32w/EL	wrap	29	29	60	1.7	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	29	36	1.0	0.7	3,087	4,380	4,380
4316	Police Court & Parking Garage	Parking Deck Ramp Down	ext	2L4' T8 32w/EL	wrap	29	29	60	1.7	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	29	36	1.0	0.7	3,087	4,380	4,380
4317	Police Court & Parking Garage	Parking Deck Stairs	ext	2L4' T8 32w/EL	wrap	18	18	60	1.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	18	36	0.6	0.4	1,916	4,380	4,380
Totals						**1,423**	**1,129**					**1,129**				**527,382**		

Appendix for ESM 2:
Lighting System Improvements - Exterior

II. Manufacturer Specification Sheets

Please See ESM 1 for Manufacturer Specification Sheets

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

ESM 3:
Lighting Controls

ESM Overview

Ameresco proposes to install new lighting controls in the City of Bristol buildings and schools to ensure that lighting does not operate unnecessarily. Energy waste occurs when a fixture is energized but not used and when illuminance exceeds what is necessary for task performance. Ameresco noted some occupants are not careful about turning off lights when they leave the room, making automated controls advantageous.

Ameresco has proposed occupancy sensors to be installed in many classrooms, offices, and bathrooms, plus a number of facility-specific control strategies.



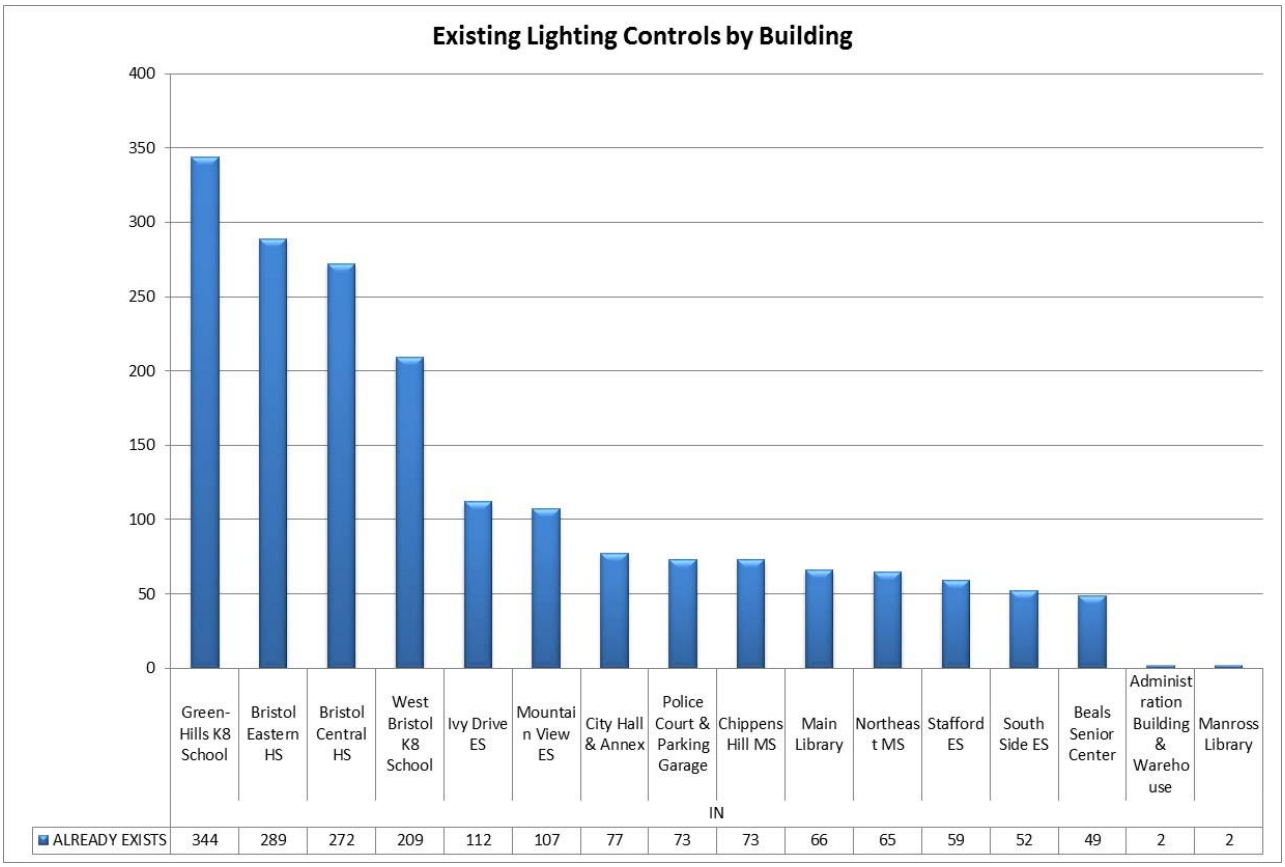
Figure 3.1: Wireless controls offer occupancy control of rooms with spline or hard ceilings and provide substantial energy savings.

ESM Detail

Existing System

There are both standard toggle style light switches and existing occupancy sensors in use. The table below shows the number of existing occupancy sensors at each building where they were identified.

"Page content is subject to Confidentiality Restrictions"



Proposed System

Project wide, Ameresco will install **1,399** local lighting controls employing a variety of strategies, each of which was customized to the unique space. We selected appropriate areas that contain several controllable fixtures, which have intermittent occupancy, and where a safety hazard will not be created if the sensor inadvertently turns the lights off. Applicable areas include classrooms, offices, baths, the cafeteria, and the library.

Please Note: For the two lighting options presented in ESM 1, (the base option and the LED option), the proposed lighting controls scope will remain the same, however the energy savings would be slightly less with the LED option due to the LEDs using less power and therefore less wattage to control.

Bathrooms or other areas without direct line-of-sight to the sensor, will receive dual-technology sensors that "listen" for activity in addition to "looking" for motion.

The high-bays in gyms will have motion sensors, allowing each one to operate independently for maximum savings and flexibility. The photocell option can also prevent fixtures from operating when ample daylight is available, if desired.

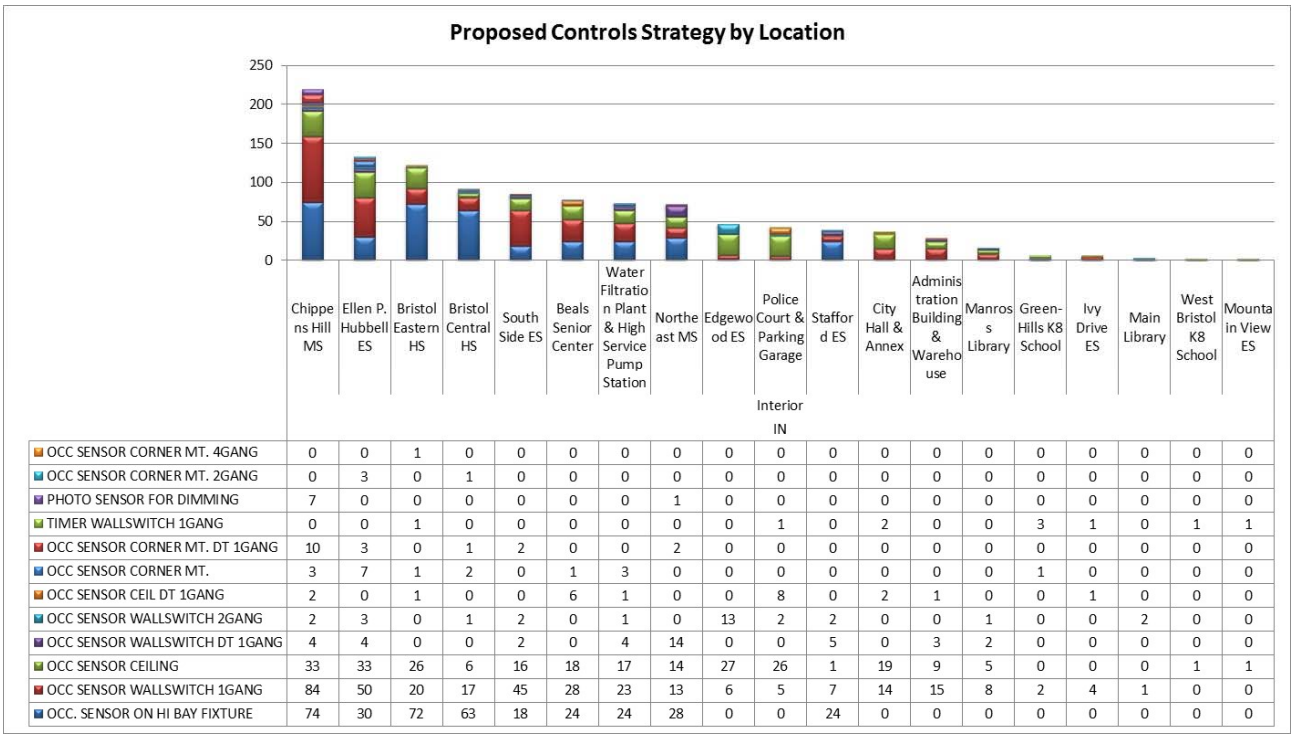
For some mechanical spaces, programmable timers will be installed. Staff will simply push the button to receive a preset amount of time. They can see the time running as it counts down on the display. Before the time runs out, the lights will flash, indicating that the occupant has a few minutes before the timer automatically turns off the lights.

Auto-dimming Ballasts

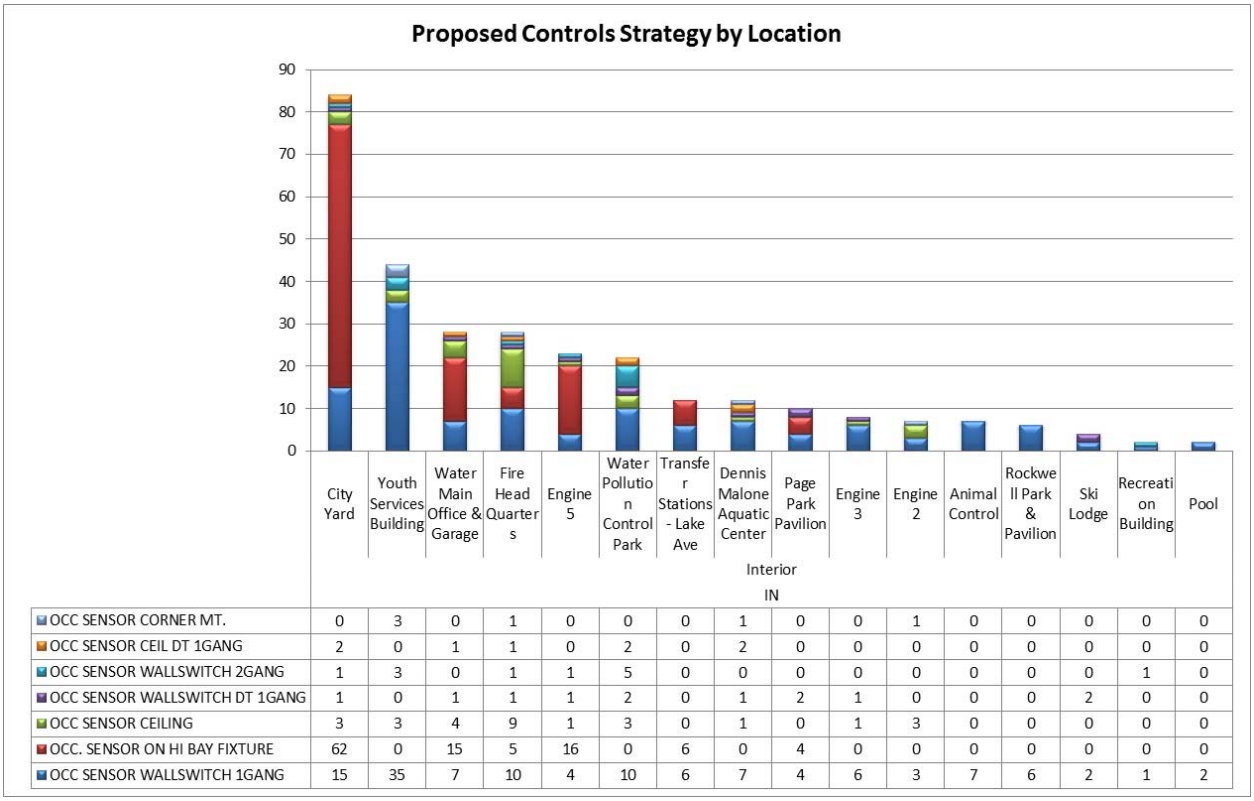
For stairwells and the auditorium lobby at Chippens Hill MS, specialized daylight harvesting ballasts will automatically dim each fixture based on how much natural light is available. When windows provide natural daylight to a room, the ballast uses integrated automatic controls to reduce your energy and daytime peak demand load. The ballast automatically responds to daylight, reducing electric light only when the room grows brighter, and then increasing electric light only when the room grows dimmer. The light levels never drop below the minimum designed levels. The system was designed to be simple and effective, offering easy installation, no maintenance, no commissioning, and no external controls. The automatic energy savings comes without distraction to room occupants. The change in daylight ambient light level is far more significant in the room then the change in the electric light, allowing the dimming and brightening to go unnoticed.

Specific Information about the Proposed System, by Building

Below is a brief description of some of the work to be accomplished. Please refer to the "Lighting System Analysis" in Appendix I, as this is a complete list of work to be performed.



	Chippens Hill MS	Ellen P. Hubbell ES	Bristol Eastern HS	Bristol Central HS	South Side ES	Beals Senior Center	Water Filtration Plant & High Service Pump Station	Northeast MS	Edgewood ES	Police Court & Parking Garage	Stafford ES	City Hall & Annex	Administration Building & Warehouse	Manross Library	Green-Hills K8 School	Ivy Drive ES	Main Library	West Bristol K8 School	Mountain View ES
OCC SENSOR CORNER MT. 4GANG	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OCC SENSOR CORNER MT. 2GANG	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHOTO SENSOR FOR DIMMING	7	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
TIMER WALLSWITCH 1GANG	0	0	1	0	0	0	0	0	0	1	0	2	0	0	3	1	0	1	1
OCC SENSOR CORNER MT. DT 1GANG	10	3	0	1	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0
OCC SENSOR CORNER MT.	3	7	1	2	0	1	3	0	0	0	0	0	0	0	1	0	0	0	0
OCC SENSOR CEIL DT 1GANG	2	0	1	0	0	6	1	0	0	8	0	2	1	0	0	1	0	0	0
OCC SENSOR WALLSWITCH 2GANG	2	3	0	1	2	0	1	0	13	2	2	0	0	1	0	0	2	0	0
OCC SENSOR WALLSWITCH DT 1GANG	4	4	0	0	2	0	4	14	0	0	5	0	3	2	0	0	0	0	0
OCC SENSOR CEILING	33	33	26	6	16	18	17	14	27	26	1	19	9	5	0	0	0	1	1
OCC SENSOR WALLSWITCH 1GANG	84	50	20	17	45	28	23	13	6	5	7	14	15	8	2	4	1	0	0
OCC. SENSOR ON HI BAY FIXTURE	74	30	72	63	18	24	24	28	0	0	24	0	0	0	0	0	0	0	0



	City Yard	Youth Services Building	Water Main Office & Garage	Fire Head Quarters	Engine 5	Water Pollution Control Park	Transfer Stations - Lake Ave	Dennis Malone Aquatic Center	Page Park Pavilion	Engine 3	Engine 2	Animal Control	Rockwell Park & Pavilion	Ski Lodge	Recreation Building	Pool
	Interior															
	IN															
OCC SENSOR CORNER MT.	0	3	0	1	0	0	0	1	0	0	1	0	0	0	0	0
OCC SENSOR CEIL DT 1GANG	2	0	1	1	0	2	0	2	0	0	0	0	0	0	0	0
OCC SENSOR WALLSWITCH 2GANG	1	3	0	1	1	5	0	0	0	0	0	0	0	0	1	0
OCC SENSOR WALLSWITCH DT 1GANG	1	0	1	1	1	2	0	1	2	1	0	0	0	2	0	0
OCC SENSOR CEILING	3	3	4	9	1	3	0	1	0	1	3	0	0	0	0	0
OCC. SENSOR ON HI BAY FIXTURE	62	0	15	5	16	0	6	0	4	0	0	0	0	0	0	0
OCC SENSOR WALLSWITCH 1GANG	15	35	7	10	4	10	6	7	4	6	3	7	6	2	1	2

>Equipment, Design and Construction Documentation

Equipment will be identified in submittals provided for approval prior to procurement. The lighting system audit completed for each facility will be submitted as the basis for construction. The audit will include the existing descriptions, operating hours, and proposed retrofit description. These documents will be submitted for review and comment. Upon approval, these will constitute the construction documents. Upon completion of the construction phase, the documents will be revised as needed to reflect "As-Built" conditions, and submitted in multiple for record.

>Impact on Facility Operations and Performance

All installations will be conducted after school hours, and will be coordinated with the appointed personnel.

Typically, automated lighting controls are not installed in every single location due to practicality, payback, or safety considerations. Therefore, fixtures or areas not listed are excluded from our scope.

>Integration of Proposed Equipment with Existing Systems

The new lighting system, and all components thereof, will be fully integrated into the existing lighting systems. We assume the entire lighting and lighting controls systems comply with, but not limited to, the latest codes, the latest standards, local jurisdictions, and work was done in a quality workmanship manner, per NECA, and other applicable recommend best practices universally accepted throughout the electrical industry. Further we assume that all existing devices, which are defined in NEC, which includes but not

"Page content is subject to Confidentiality Restrictions"

limited to switches, outlets, wiring, etc. are in acceptable condition in order to implement our scope as outlined in the contract documents. All existing junction boxes, poles, mounting surfaces and structures are assumed to be in acceptable condition to allow the installation of the products indicated in the scope. Required upgrades to meet safety or other codes, and/or to prepare the location for the installation as described above, can be performed on a time and material basis.

>Environmental Impact

There are no potential adverse environmental impacts associated with these lighting controls.

This page is left intentionally blank

Appendix for ESM 3: Lighting Controls

I. Energy Savings Calculations

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

City of Bristol, CT	
Energy and Demand Savings Summary	
Measure ID:	**3**
Measure Name:	**Lighting Controls**
Measure Location:	
Engineers:	

Site Name:		**Central_High**	**Eastern_High**	**Chippens**	**NE_Middle**	**W_Bristol**
Item	Units	Savings	Savings	Savings	Savings	Savings
Electricity						
Energy On-Peak	kWh	10,071	23,583	34,302	7,526	182
Energy Off-Peak	kWh	0	0	0	0	0
Energy Total	kWh	10,071	23,583	34,302	7,526	182
Demand On-Peak, Monthly	kW					
Demand On-Peak, Annual	kW					
Demand Off-Peak, Monthly	kW					
Demand Off-Peak, Annual	kW					
Fossil Fuel						
Natural Gas (NG)	CCF	0	-535	-776	0	0
Liquid Propane Gas (LPG)	Gallons	0	0	0	0	0
Steam	Mlbs	0	0	0	0	0
Fuel Oil, #2	Gallons	-164	0	0	-129	0
Fuel Oil, #4	Gallons	0	0	0	0	0
Fuel Oil, #6	Gallons	0	0	0	0	0
Max Daily Demand (Natural Gas)	CCF (Demand)	0	0	0	0	0
Water						
Water Savings	CF					
Sewer						
Sewer Savings	CF					

Green-Hills	Hubbell	Stafford	Ivy_Drive	Edgewood	Mt_View	South_Side	Admin	City_Hall
Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings
235	21,967	2,700	559	12,719	237	6,824	5,971	4,929
0	0	0	0	0	0	0	0	7,093
235	21,967	2,700	559	12,719	237	6,824	5,971	12,022
0	0	0	-12	0	-5	-162	-122	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	-378	-49	0	-203	0	0	0	-184
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

Water_Main	Filtration	Police	Rockwell_Park	Ski	Page_Park	Rec_Bldg	Aquatic	Fire_HQ
Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings
2,431	1,762	4,889	16	21	260	5	703	4,405
0	4,767	10,274	0	0	184	0	0	0
2,431	6,529	15,162	16	21	444	5	703	4,405
0	0	0	0	0	0	0	-17	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
-40	-111	-237	0	0	-8	0	0	-73
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

Engine_2	Engine_3	Engine_5	Senior	Main_Library	Manross_Library	Youth	Animal	City_Yard
Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings
399	241	510	8,257	147	1,237	2,451	87	3,499
0	0	0	3,831	196	0	0	0	0
399	241	510	12,088	343	1,237	2,451	87	3,499
0	-6	0	-244	-7	-28	0	-2	-79
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
-7	0	-8	0	0	0	-41	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

Transfer_Lake_Ave	Water_Pollution	Pool	Summary
Savings	Savings	Savings	
220	337	16	163,696
0	1,066	0	27,410
220	1,402	16	191,105
			0.0
			0.0
			0.0
			0.0
			0
0	-33	0	-2,026
0	0	0	0
0	0	0	0
0	0	0	-1,633
0	0	0	0
0	0	0	0
0	0	0	0
			0
			0
			0
			0

City of Bristol, CT
Interactive Lighting Savings Calculation

AMERESCO

	Lighting Savings		Heating Penalty				Cooling Benefit			
A	B	C	D	E	F	G	H	I	J	K
Facility	Annual kW	Annual kWh	Heat Gain to Space	Heating Months	Heating System Efficiency	Heating Penalty MMBtu	Total Space Cooled	Cooling Months	Cooling System COP	Cooling Benefit MMBtu
Bristol Central High School	0.0	9,773	80.0%	8.0	78.0%	(22.8)	75.0%	2.0	3.28	1.0
Bristol Eastern High School	0.0	22,878	80.0%	8.0	76.0%	(54.8)	75.0%	2.0	3.25	2.4
Chippens Hill Middle Schoo	0.0	34,070	80.0%	8.0	78.0%	(79.5)	15.0%	2.0	2.93	0.8
Northeast Middle School	0.0	7,492	80.0%	8.0	76.0%	(17.9)	10.0%	2.0	2.93	0.1
West Bristol K8 School	0.0	199	80.0%	8.0	400.0%	(0.1)	100.0%	2.0	2.93	0.0
Green-Hills K8 Schoo	0.0	258	80.0%	8.0	400.0%	(0.1)	100.0%	2.0	2.93	0.0
Ellen P. Hubbell Elementary Schoo	0.0	21,917	80.0%	8.0	76.0%	(52.5)	5.0%	2.0	2.93	0.2
Stafford Elementary School	0.0	2,688	80.0%	8.0	72.0%	(6.8)	10.0%	2.0	2.93	0.0
Ivy Drive Elementary Schoo	0.0	535	80.0%	8.0	78.0%	(1.2)	100.0%	2.0	2.93	0.1
Edgewood Elementary Schoo	0.0	12,696	80.0%	8.0	82.0%	(28.2)	4.0%	2.0	2.93	0.1
Mountain View Elementary Schoo	0.0	228	80.0%	8.0	84.0%	(0.5)	95.0%	2.0	3.22	0.0
South Side Elementary Schoo	0.0	6,556	80.0%	8.0	72.0%	(16.6)	90.0%	2.0	2.93	0.9
Board of Education Administration Building & Warehous	0.0	5,621	80.0%	8.0	82.0%	(12.5)	65.0%	4.0	2.78	1.2
City Hall & Annex	0.0	10,912	80.0%	8.0	78.0%	(25.5)	95.0%	4.0	2.49	3.8
Water Main Office & Garage	0.0	2,314	80.0%	8.0	76.0%	(5.5)	50.0%	4.0	2.64	0.4
Water Filtration Plant & High Service Pump Station	0.0	6,272	80.0%	8.0	74.0%	(15.4)	45.0%	4.0	2.93	0.9
Police Court & Parking Garage	0.0	14,074	80.0%	8.0	78.0%	(32.8)	85.0%	4.0	2.93	3.7
Rockwell Park & Pavilion	0.0	15	80.0%	8.0	76.0%	(0.0)	60.0%	4.0	2.34	0.0
Ski Lodge	0.0	45	80.0%	8.0	100.0%	(0.1)	0.0%	4.0	2.93	0.0
Page Park Pavilion	0.0	444	80.0%	8.0	76.0%	(1.1)	0.0%	4.0	2.93	0.0
Recreation Building	0.0	5	80.0%	8.0	76.0%	(0.0)	0.0%	4.0	2.93	0.0
Dennis Malone Aquatic Center	0.0	699	80.0%	8.0	74.0%	(1.7)	5.0%	4.0	2.34	0.0
Fire Head Quarters	0.0	4,234	80.0%	8.0	76.0%	(10.1)	40.0%	4.0	2.64	0.6
Engine 2	0.0	390	80.0%	8.0	76.0%	(0.9)	25.0%	4.0	2.93	0.0
Engine 3	0.0	235	80.0%	8.0	76.0%	(0.6)	25.0%	4.0	2.93	0.0
Engine 5	0.0	499	80.0%	8.0	78.0%	(1.2)	25.0%	4.0	2.93	0.0
Beals Senior Center	0.0	11,267	80.0%	8.0	82.0%	(25.0)	80.0%	4.0	2.93	2.8
Main Library	0.0	321	80.0%	8.0	82.0%	(0.7)	85.0%	4.0	3.37	0.1
Manross Library	0.0	1,183	80.0%	8.0	76.0%	(2.8)	50.0%	4.0	2.93	0.2
Youth Services Building	0.0	2,361	80.0%	8.0	76.0%	(5.7)	50.0%	4.0	3.52	0.3
Animal Control	0.0	85	80.0%	8.0	78.0%	(0.2)	25.0%	4.0	2.93	0.0
City Yard	0.0	3,483	80.0%	8.0	78.0%	(8.1)	5.0%	4.0	2.93	0.1
Transfer Stations - Lake Ave	0.0	640	80.0%	8.0	76.0%	(1.5)	50.0%	4.0	2.93	0.1
Water Pollution Control Park	0.0	1,402	80.0%	8.0	76.0%	(3.4)	0.0%	4.0	2.93	0.0
Pool	0.0	16	80.0%	8.0	76.0%	(0.0)	0.0%	4.0	2.93	0.0
Totals	**0.0**	**185,805**				**(436.0)**				**19.9**

Notes:	
A	Applicable building included in comprehensive energy audit
B	Lighting demand savings {kW} associated with lighting retrofit measures
C	Lighting energy savings {kWh} associated with lighting retrofit measures
D	Estimated percentage of lighting energy transmitted to conditioned space
E	Estimated length of heating season
F	Estimated heating system efficiency, interacted with other measures
G	Resulting heating penalty due to lighting upgrades = [col C] x [col D] x 3,413 x ([col E] / 12) / [col F] / 1,000,000
H	Estimated percentage of space cooled
I	Estimated Length of cooling season
J	Estimated cooling system efficiency, interacted with other measures
K	Resulting cooling benefit due to lighting upgrades = [col C] x [col D] x 3,413 x ([col I] / 12) / [col J] / 1,000,000

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	Annual Hours	Hours With Controls	*Control Description*	*Control Qty*	Control kWH Saved
84	Bristol Central HS	Storage Near Wrestling	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	11
95	Bristol Central HS	Gym Main	1	4L4' T5 HO/EL	high bay	63	63	234	14.7	98 WATT LED/NEW	new LED hibay wg	63	103	6.5	2,980	2,086	OCC. SENSOR ON HI BAY FIXTURE	63	4,926
144	Bristol Central HS	Office Open 131	1	2x26W CF HARDWIRED/EL	can rec 8"	4	4	54	0.2	15 WATT LED/KIT	can kit LED Spectrum	4	16	0.1	2,750	1,925	OCC SENSOR WALLSWITCH 1GANG	1	44
145	Bristol Central HS	Office Open 131	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	2,750	1,925	OCC SENSOR WALLSWITCH 1GANG	1	49
146	Bristol Central HS	Hall 131	1	2x26W CF HARDWIRED/EL	can rec 8"	13	13	54	0.7	15 WATT LED/KIT	can kit LED Spectrum	13	16	0.2	3,200	2,240	OCC SENSOR CEILING	1	130
147	Bristol Central HS	Lounge 131	1	2x26W CF HARDWIRED/EL	can rec 8"	6	6	54	0.3	15 WATT LED/KIT	can kit LED Spectrum	6	16	0.1	2,300	1,610	OCC SENSOR WALLSWITCH 1GANG	1	55
181	Bristol Central HS	Storage Near Stair 1	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	6
213	Bristol Central HS	Office 119	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	42
214	Bristol Central HS	Storage 119	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	4
256	Bristol Central HS	Storage 26	b	4L4' T8 32w/EL-8'	strip cage	4	4	112	0.4	4L4' T8 28w/ELEE LO-8'	rlrb LF	4	87	0.3	500	350	OCC SENSOR CORNER MT.	1	44
257	Bristol Central HS	Storage 26	b	4L4' T8 32w/EL-8'	strip cage	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	500	350	INCLUDED ABOVE		11
285	Bristol Central HS	Lab 18	b	4L4' T8 32w/EL-8'	vapor tight	20	20	112	2.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	20	87	1.7	2,700	1,890	OCC SENSOR CORNER MT. DT 1GANG	1	1,200
288	Bristol Central HS	Office 18	b	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	85
291	Bristol Central HS	Storage 17B	b	4L2' T8 17w/EL	box acrylic	1	1	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	4
292	Bristol Central HS	Storage 17C	b	4L2' T8 17w/EL	box acrylic	1	1	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	9
293	Bristol Central HS	Storage Clamps	b	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	1,000	700	OCC SENSOR CEILING	1	35
295	Bristol Central HS	Classroom 16	b	4L2' T8 17w/EL	trof acr	3	3	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	2,800	1,960	OCC SENSOR WALLSWITCH 1GANG	1	74
297	Bristol Central HS	Storage 16	b	4L4' T8 32w/EL-8'	vapor tight	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	11
318	Bristol Central HS	Office 6A	b	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	42
337	Bristol Central HS	Cafeteria Senior	b	4L2' T8 17w/EL	trof acr	25	25	62	1.6	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	25	35	0.9	2,000	1,400	OCC SENSOR CEILING	1	442
341	Bristol Central HS	Kitchen 42	b	4L2' T8 17w/EL	trof acr	21	21	62	1.3	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	21	35	0.7	2,400	1,680	OCC SENSOR CEILING	1	445
342	Bristol Central HS	Kitchen 42	b	4L2' T8 17w/EL	trof acr	36	36	62	2.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	36	35	1.2	2,400	1,680	OCC SENSOR CEILING	1	763
349	Bristol Central HS	Hall 42	b	4L2' T8 17w/EL	box acrylic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	3,200	2,240	OCC SENSOR WALLSWITCH 1GANG	1	44
355	Bristol Central HS	Storage Supplies	b	4L4' T8 32w/EL-8'	strip cage	4	4	112	0.4	4L4' T8 28w/ELEE LO-8'	rlrb LF	4	87	0.3	1,000	700	OCC SENSOR CORNER MT.	1	89
359	Bristol Central HS	Hall Custodian	b	4L4' T8 32w/EL-8'	strip cage	13	13	112	1.5	4L4' T8 28w/ELEE LO-8'	rlrb LF	13	87	1.1	3,200	2,240	OCC SENSOR CORNER MT. 2GANG	1	924
368	Bristol Central HS	Office 1	b	4L2' T8 17w/EL	trof acr	3	3	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	2,400	1,680	OCC SENSOR CEILING	1	64
369	Bristol Central HS	Office 1	b	1L4' T5 HO/EL	task strip	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1	2,400	1,680	INCLUDED ABOVE		72
371	Bristol Central HS	Storage Elevator	b	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	6
372	Bristol Central HS	Storage 38	b	4L2' T8 17w/EL	trof acr	5	5	62	0.3	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	5	35	0.2	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	44
379	Bristol Central HS	Bath 37A	b	2L4' T8 32w/EL	vapor tight	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	3,200	2,240	OCC SENSOR WALLSWITCH 2GANG	1	36
380	Bristol Central HS	Bath 37A	b	2x26W CF HARDWIRED/EL	square recessed	1	1	54	0.1	16 WATT LED/NEW	new LED drum	1	17	0.0	3,200	2,240	INCLUDED ABOVE		14
392	Bristol Central HS	Storage 32	b	2L4' T8 32w/EL	strip cage	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	45
415	South Side ES	Office Library	2	4L4' T8 32w/EL-8'	box acrylic	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	2,000	1,400	OCC SENSOR CEILING	1	89
416	South Side ES	Office Library	2	2L4' T8 32w/EL	box acrylic	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	45
418	South Side ES	Storage A	2	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	11
419	South Side ES	Lobby Elevator	2	2L4' T8 32w U/EL	box acrylic	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	27
420	South Side ES	Office Conf ljk	2	2L4' T8 32w/EL	box acrylic	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	45
425	South Side ES	Hall Lib-Conf K	2	2L4' T8 32w U/EL	box acrylic	12	12	60	0.7	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	12	35	0.4	3,000	2,100	OCC SENSOR CEILING	1	318
426	South Side ES	Hall 24-20	2	2L4' T8 U 32wELEE	box acrylic	12	12	53	0.6	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	12	35	0.4	3,000	2,100	OCC SENSOR CEILING	1	318
432	South Side ES	Hall 25-30	2	2L4' T8 32w U/EL	box acrylic	18	18	60	1.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	18	35	0.6	3,000	2,100	OCC SENSOR CEILING	1	477
433	South Side ES	Conference Room H	2	4L4' T8 32w/EL-8'	box acrylic	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	2,000	1,400	OCC SENSOR CEILING	1	89
438	South Side ES	Bath Boys	2	2L4' T8 32w/EL-8'	wrap narrow	2	2	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	2	44	0.1	3,000	2,100	OCC SENSOR CORNER MT. DT 1GANG	1	67
439	South Side ES	Bath Boys	2	1L4' T8 32w/EL	wrap narrow	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	3,000	2,100	INCLUDED ABOVE		18
440	South Side ES	Bath Girls	2	2L4' T8 32w/EL-8'	wrap narrow	2	2	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	2	44	0.1	3,000	2,100	OCC SENSOR CORNER MT. DT 1GANG	1	67
441	South Side ES	Bath Girls	2	1L4' T8 32w/EL	wrap narrow	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	3,000	2,100	INCLUDED ABOVE		18
456	South Side ES	Hall 8-14	1	2L4' T8 32w U/EL	box acrylic	18	18	60	1.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	18	35	0.6	3,000	2,100	OCC SENSOR CEILING	1	477
457	South Side ES	Hall 5-Conf D	1	2L4' T8 32w U/EL	box acrylic	19	19	60	1.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	19	35	0.7	3,000	2,100	OCC SENSOR CEILING	1	504
460	South Side ES	Lobby Main	1	2L4' T8 32w U/EL	box acrylic	4	4	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	3,000	2,100	OCC SENSOR CEILING	1	106
461	South Side ES	Lobby Main	1	4L4' T8 32w/EL	trof opaque 4x4	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	3,000	2,100	INCLUDED ABOVE		133
462	South Side ES	Hall Caf-Gym	1	2L4' T8 32w U/EL	box acrylic	17	17	60	1.0	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	17	35	0.6	3,000	2,100	OCC SENSOR CEILING	1	451
464	South Side ES	Office K	1	4L4' T8 32w/EL-8'	wrap	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	2,000	1,400	OCC SENSOR CEILING	1	89
466	South Side ES	Bath Kitchen	1	1L4' T8 32w/EL	wrap narrow	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	18
467	South Side ES	Bath Kitchen	1	60W INCANDESCENT	jar	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	3,000	2,100	INCLUDED ABOVE		6
468	South Side ES	Bath Kitchen	1	2L2' T8 17w/EL	wrap	1	1	33	0.0	2L2' T8 15w/ELEE LO	rlrb LF	1	28	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	22
469	South Side ES	Office Kitchen	1	4L4' T8 32w/EL-8'	strip	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	2,000	1,400	OCC SENSOR CEILING	1	44
470	South Side ES	Office Kitchen	1	2L4' T8 32w/EL	strip	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	2,000	1,400	INCLUDED ABOVE		22
471	South Side ES	Storage Cups	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	6
472	South Side ES	Cafeteria Main	1	4L4' T8 32w/EL	trof opaque 4x4	13	13	112	1.5	4L4' T8 28w/ELEE LO	rlrb LF	13	87	1.1	1,700	1,190	OCC SENSOR CEILING	1	491
474	South Side ES	Stage Cafeteria	1	3x13W CF HARDWIRED	drum	2	2	45	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	1,600	1,120	OCC SENSOR CEILING	1	14
475	South Side ES	Stage Cafeteria	1	4L4' T8 32w/EL-8'	wrap	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	1,600	1,120	INCLUDED ABOVE		213
476	South Side ES	Office Music	1	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	22
477	South Side ES	Gym Main	1	4L4' T5 HO/EL	high bay	18	18	234	4.2	98 WATT LED/NEW	new LED hibay wg	18	103	1.9	2,000	1,400	OCC. SENSOR ON HI BAY FIXTURE	18	945
479	South Side ES	Office Phys Ed	1	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	22
480	South Side ES	Bath Phys Ed	1	3x13W CF HARDWIRED	drum	2	2	45	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	26
485	South Side ES	Storage Book Room	1	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	6
491	South Side ES	Office Nurse	1	4L4' T8 32w/EL	box acrylic	7	7	112	0.8	4L4' T8 28w/ELEE LO	rlrb LF	7	87	0.6	2,000	1,400	OCC SENSOR CEILING	1	311
492	South Side ES	Office Nurse	1	4L4' T8 32w/EL	box acrylic dbl switch	1	1	112	0.1	4L4' T8 28w/ELEE LO (2Lx2 BAL)	rlrb LF dbl switched	1	88	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	45
494	South Side ES	Conference Main Office	1	2L4' T8 32w/EL	box acrylic	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	45
495	South Side ES	Bath Main Office	1	32W CIRCLELINE HARDWIRED	drum	1	1	34	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	13
496	South Side ES	Office Principal	1	4L4' T8 32w/EL	box acrylic	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	2,000	1,400	OCC SENSOR WALLSWITCH 2GANG	1	178
497	South Side ES	Bath Main Office	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	13
498	South Side ES	Storage Main Office	1	4L4' T8 32w/EL	box acrylic	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	1,000	700	OCC SENSOR WALLSWITCH 2GANG	1	44
499	South Side ES	Conference Room C	1	2L4' T8 32w/EL	box acrylic	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	22
500	South Side ES	Conference Room B	1	2L4' T8 32w/EL	box acrylic	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	22
501	South Side ES	Conference Room D	1	4L4' T8 32w/EL-8'	box acrylic	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	89
503	South Side ES	Bath Women	1	2L4' T8 32w/EL-8'	wrap narrow	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	3,000	2,100	OCC SENSOR WALLSWITCH DT 1GANG	1	34
504	South Side ES	Bath Women	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	3,000	2,100	INCLUDED ABOVE		34
505	South Side ES	Storage Women	1	100W INCANDESCENT	old drum	2	2	100	0.2	16 WATT LED/NEW	new LED drum	2	17	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	9
506	South Side ES	Bath Men	1	2L4' T8 32w/EL-8'	wrap narrow	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	3,000	2,100	OCC SENSOR WALLSWITCH DT 1GANG	1	34
507	South Side ES	Bath Men	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	3,000	2,100	INCLUDED ABOVE		34
508	South Side ES	Lobby Elevator	1	2L4' T8 32w U/EL	box acrylic	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	27
514	South Side ES	Bath 1	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	13

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	Annual Hours	Hours With Controls	*Control Description*	*Control Qty*	Control kWH Saved
517	South Side ES	Bath 2	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	13
520	South Side ES	Storage 5	1	1L4' T12 34w EE/EEMAG	strip	1	1	40	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	6
524	South Side ES	Bath 6	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	13
525	South Side ES	Storage 6	1	1L4' T8 32w/EL	strip	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	3
528	South Side ES	Bath 3	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	13
529	South Side ES	Storage 3	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	6
530	South Side ES	Office Therapy	1	2L4' T8 32w/EL	box acrylic	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	45
531	South Side ES	Storage Therapy	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	11
532	South Side ES	Storage Therapy	1	2L4' T8 32w U/EL	box acrylic	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	9
535	South Side ES	Bath 4	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	13
536	South Side ES	Storage 4	1	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	6
539	South Side ES	Bath 7	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	13
540	South Side ES	Storage 7	1	1L4' T8 32w/EL	strip	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	3
541	South Side ES	Storage Workroom	1	4L4' T8 32w/EL-8'	box acrylic	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	44
542	South Side ES	Office Custodian	1	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	2,000	1,400	OCC SENSOR CEILING	1	22
543	South Side ES	Storage Custodian	1	1L4' T8 32w/EL	strip	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	6
547	South Side ES	Bath 8	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	13
550	South Side ES	Bath 9	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	13
553	South Side ES	Bath 10	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	13
556	South Side ES	Bath 16	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	13
559	South Side ES	Bath 11	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	13
562	South Side ES	Bath 15	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	13
565	South Side ES	Bath 12	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	13
568	South Side ES	Bath 14	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	13
573	South Side ES	Storage Electric	b	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	6
574	South Side ES	Storage Chairs Desks	b	2L4' T8 32w/EL-8'	strip	4	4	60	0.2	2L4' T8 28w/ELEE LO-8'	rlrb LF	4	44	0.2	500	350	OCC SENSOR CEILING	1	22
575	South Side ES	Storage Chairs Desks	b	4L4' T8 32w/EL-8'	strip	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	500	350	INCLUDED ABOVE		22
576	South Side ES	Storage Chairs Desks	b	2L4' T8 32w/EL	strip	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	500	350	INCLUDED ABOVE		6
586	Green-Hills K8 School	Mechanical 140	1	2L4' T8 32w/EL	trof acr 1' wide	12	12	60	0.7	2L4' T8 28w/ELEE LO	rlrb LF	12	44	0.5	500	350	TIMER WALLSWITCH 1GANG	1	79
587	Green-Hills K8 School	Mechanical 140B	1	2L4' T8 32w/EL	trof acr 1' wide	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	500	350	OCC SENSOR WALLSWITCH 1GANG	1	26
588	Green-Hills K8 School	Mechanical 140A	1	2L4' T8 32w/EL	trof acr 1' wide	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	20
589	Green-Hills K8 School	Storage 142	1	2L4' T8 32w/EL	trof acr 1' wide	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	1,000	700	OCC SENSOR CORNER MT.	1	13
822	Green-Hills K8 School	Mechanical 238B	2	2L4' T8 32w/EL	trof acr 1' wide	12	12	60	0.7	2L4' T8 28w/ELEE LO	rlrb LF	12	44	0.5	500	350	TIMER WALLSWITCH 1GANG	1	79
857	Green-Hills K8 School	Mechanical 207A	2	2L4' T8 32w/EL	trof acr 1' wide	6	6	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	6	44	0.3	500	350	TIMER WALLSWITCH 1GANG	1	40
947	Chippens Hill MS	Classroom Resource	3	4L4' T8 32w/EL	trof acr	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	2,700	1,890	OCC SENSOR WALLSWITCH 1GANG	1	254
948	Chippens Hill MS	Storage Science	3	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	18
949	Chippens Hill MS	Storage Electric	3	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	9
950	Chippens Hill MS	Office Faculty Workroom	3	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	171
953	Chippens Hill MS	Hall 311-315	3	2L4' T8 32w/EL	trof para 1' wide	15	15	60	0.9	2L4' T8 28w/ELEE LO	rlrb LF	15	44	0.7	3,200	2,240	OCC SENSOR CEILING	1	572
954	Chippens Hill MS	Hall 311-315	3	2x13W CF HARDWIRED	can rec 8"	9	9	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	9	11	0.1	3,200	2,240	INCLUDED ABOVE		82
958	Chippens Hill MS	Bath Boys (2)	3	3L4' T8 32w/EL	industrial	24	24	88	2.1	3L4' T8 28w/ELEE LO	rlrb LF	24	66	1.6	2,800	1,960	OCC SENSOR CORNER MT. DT 1GANG	2	1,200
961	Chippens Hill MS	Office Faculty Workroom	3	4L4' T8 32w/EL	trof acr	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	226
962	Chippens Hill MS	Office Multi Purpose Room	3	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	171
967	Chippens Hill MS	Storage Custodian	3	3L4' T8 32w/EL	industrial cage	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	9
968	Chippens Hill MS	Storage Science	3	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	18
969	Chippens Hill MS	Storage Janitor Supplies	3	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	9
970	Chippens Hill MS	Bath Men (2)	3	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	2,800	1,960	OCC SENSOR CORNER MT. DT 1GANG	2	200
971	Chippens Hill MS	Hall 320-325	3	2L4' T8 32w/EL	trof parabolic	18	18	60	1.1	2L4' T8 28w/ELEE LO	rlrb LF	18	44	0.8	3,200	2,240	OCC SENSOR CEILING	1	686
975	Chippens Hill MS	Bath Boys (2)	3	3L4' T8 32w/EL	industrial	24	24	88	2.1	3L4' T8 28w/ELEE LO	rlrb LF	24	66	1.6	2,800	1,960	OCC SENSOR CORNER MT. DT 1GANG	2	1,200
981	Chippens Hill MS	Office Resource Room	3	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	171
982	Chippens Hill MS	Storage Electric	3	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	9
983	Chippens Hill MS	Storage Science	3	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	18
984	Chippens Hill MS	Office Faculty Work Room	3	4L4' T8 32w/EL	trof acr	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	226
985	Chippens Hill MS	Hall 331-335	3	2L4' T8 32w/EL	trof parabolic	15	15	60	0.9	2L4' T8 28w/ELEE LO	rlrb LF	15	44	0.7	3,200	2,240	OCC SENSOR CEILING	1	572
986	Chippens Hill MS	Hall 331-335	3	2x13W CF HARDWIRED	can rec 8"	9	9	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	9	11	0.1	3,200	2,240	INCLUDED ABOVE		82
995	Chippens Hill MS	Office Resource Room	2	4L4' T8 32w/EL	trof acr	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	226
996	Chippens Hill MS	Storage Science	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	18
997	Chippens Hill MS	Storage Ladder	2	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	9
998	Chippens Hill MS	Office Faculty Workroom	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	171
999	Chippens Hill MS	Bath Boys (2)	2	3L4' T8 32w/EL	industrial	24	24	88	2.1	3L4' T8 28w/ELEE LO	rlrb LF	24	66	1.6	2,800	1,960	OCC SENSOR CORNER MT. DT 1GANG	2	1,200
1000	Chippens Hill MS	Hall 211-215	2	2L4' T8 32w/EL	trof parabolic	15	15	60	0.9	2L4' T8 28w/ELEE LO	rlrb LF	15	44	0.7	3,200	2,240	OCC SENSOR CEILING	1	572
1002	Chippens Hill MS	Hall To Stair 4	2	2L4' T8 32w/EL	trof parabolic	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	3,200	2,240	OCC SENSOR CEILING	1	152
1003	Chippens Hill MS	Hall To Stair 4	2	2x13W CF HARDWIRED	can rec 8"	10	10	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	10	11	0.1	3,200	2,240	INCLUDED ABOVE		91
1004	Chippens Hill MS	Hall Elevator Lobby	2	2x13W CF HARDWIRED	can rec 8"	6	6	30	0.2	10 WATT LED/KIT	can kit LED Spectrum	6	11	0.1	3,200	2,240	OCC SENSOR CEILING	1	54
1012	Chippens Hill MS	Office Faculty Work Room	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	171
1013	Chippens Hill MS	Office Multi Purpose	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	171
1014	Chippens Hill MS	Storage Custodian	2	3L4' T8 32w/EL	industrial cage	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	9
1015	Chippens Hill MS	Storage Science	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	18
1016	Chippens Hill MS	Office Resource	2	4L4' T8 32w/EL	trof acr	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	226
1017	Chippens Hill MS	Storage File	2	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	9
1018	Chippens Hill MS	Hall 220-225	2	2L4' T8 32w/EL	trof para 1' wide	18	18	60	1.1	2L4' T8 28w/ELEE LO	rlrb LF	18	44	0.8	3,200	2,240	OCC SENSOR CEILING	1	686
1019	Chippens Hill MS	Hall 220-225	2	2x13W CF HARDWIRED	can rec 6"	14	14	30	0.4	10 WATT LED/KIT	can kit LED Spectrum	14	11	0.1	3,200	2,240	INCLUDED ABOVE		127
1022	Chippens Hill MS	Bath Boys (2)	2	3L4' T8 32w/EL	industrial	24	24	88	2.1	3L4' T8 28w/ELEE LO	rlrb LF	24	66	1.6	2,800	1,960	OCC SENSOR CORNER MT. DT 1GANG	2	1,200
1028	Chippens Hill MS	Storage Science	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	18
1029	Chippens Hill MS	Office Faculty Room	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	4L4' T8 28w/ELEE LO	rlrb LF	3	87	0.3	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	169
1030	Chippens Hill MS	Hall 231-235	2	2L4' T8 32w/EL	trof para 1' wide	15	15	60	0.9	2L4' T8 28w/ELEE LO	rlrb LF	15	44	0.7	3,200	2,240	OCC SENSOR CEILING	1	572
1031	Chippens Hill MS	Hall 231-235	2	2x13W CF HARDWIRED	can rec 6"	10	10	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	10	11	0.1	3,200	2,240	INCLUDED ABOVE		91
1035	Chippens Hill MS	Storage Stage	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	18
1036	Chippens Hill MS	Lobby Aud	2	100W MERCURY VAPOR	can rec 8"	19	19	120	2.3	25 WATT LED/KIT	can kit LED Spectrum	19	26	0.5	3,200	2,240	PHOTO SENSOR FOR DIMMING	1	431
1037	Chippens Hill MS	Lobby Aud	2	2x13W CF HARDWIRED	can rec 8"	8	8	30	0.2	10 WATT LED/KIT	can kit LED Spectrum	8	11	0.1	3,200	2,240	PHOTO SENSOR FOR DIMMING	1	73
1038	Chippens Hill MS	Storage Mechanical Room	2	3L4' T8 32w/EL	industrial cage	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	9
1045	Chippens Hill MS	Office Open Guidance	2	3L4' T8 32w/EL	trof acr	6	6	88	0.5	3L4' T8 28w/ELEE LO	rlrb LF	6	66	0.4	2,750	1,925	OCC SENSOR CEILING	1	295

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	Annual Hours	Hours With Controls	*Control Description*	*Control Qty*	Control kWH Saved
1047	Chippens Hill MS	Office Kids In The Middle	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	86
1048	Chippens Hill MS	Office A	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	86
1049	Chippens Hill MS	Office B	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	86
1050	Chippens Hill MS	Office C	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	86
1051	Chippens Hill MS	Office Social Worker	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	86
1052	Chippens Hill MS	Office Psych	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	86
1053	Chippens Hill MS	Office File	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	86
1054	Chippens Hill MS	Conference Guidance	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	171
1056	Chippens Hill MS	Office Open Main	2	3L4' T8 32w/EL	trof acr	9	9	88	0.8	3L4' T8 28w/ELEE LO	rlrb LF	9	66	0.6	2,453	1,717	OCC SENSOR CEILING	1	394
1057	Chippens Hill MS	Hall Main Office	2	2x26W CF HARDWIRED/EL	can rec 6"	12	12	54	0.6	15 WATT LED/KIT	can kit LED Spectrum	12	16	0.2	3,200	2,240	OCC SENSOR CEILING	1	163
1058	Chippens Hill MS	Office Asst Principal (2)	2	3L4' T8 32w/EL	trof acr	8	8	88	0.7	3L4' T8 28w/ELEE LO	rlrb LF	8	66	0.5	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	2	343
1059	Chippens Hill MS	Office Principal	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	2,400	1,680	OCC SENSOR CEILING	1	171
1060	Chippens Hill MS	Office Open Workroom	2	4L4' T8 32w/EL	trof acr	6	6	112	0.7	4L4' T8 28w/ELEE LO	rlrb LF	6	87	0.5	2,750	1,925	OCC SENSOR CEILING	1	388
1067	Chippens Hill MS	Storage Music	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	18
1068	Chippens Hill MS	Office Music	2	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	43
1069	Chippens Hill MS	Storage Percussion	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	1,000	700	OCC SENSOR CEILING	1	36
1070	Chippens Hill MS	Storage Practice A	2	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	9
1072	Chippens Hill MS	Hall Music	2	2x13W CF HARDWIRED	can rec 8"	3	3	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	3,200	2,240	OCC SENSOR CORNER MT.	1	27
1073	Chippens Hill MS	Office Open Nurse	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	2,750	1,925	OCC SENSOR CORNER MT.	1	196
1075	Chippens Hill MS	Office Nurse	2	3L4' T8 32w/EL	trof acr	3	3	88	0.3	3L4' T8 28w/ELEE LO	rlrb LF	3	66	0.2	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	129
1076	Chippens Hill MS	Bath Nurse	2	2L4' T8 32w/EL	trof para 1' wide	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	2,800	1,960	OCC SENSOR WALLSWITCH 1GANG	1	33
1082	Chippens Hill MS	Storage Art C	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	1,000	700	OCC SENSOR CEILING	1	36
1083	Chippens Hill MS	Storage Kiln	2	3L4' T8 32w/EL	trof minicube	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	500	350	OCC SENSOR CEILING	1	9
1085	Chippens Hill MS	Classroom Art B	2	2L4' T8 32w/EL	indirect/direct	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	2,700	1,890	INCLUDED ABOVE		32
1086	Chippens Hill MS	Classroom Art B	2	2L4' T8 32w/EL	indirect/direct	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	2,700	1,890	INCLUDED ABOVE		32
1087	Chippens Hill MS	Storage Art B	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	36
1088	Chippens Hill MS	Storage Kiln	2	3L4' T8 32w/EL	trof minicube	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	9
1090	Chippens Hill MS	Classroom Art A	2	2L4' T8 32w/EL	indirect/direct	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	2,700	1,890	INCLUDED ABOVE		32
1091	Chippens Hill MS	Classroom Art A	2	2L4' T8 32w/EL	indirect/direct	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	2,700	1,890	INCLUDED ABOVE		32
1092	Chippens Hill MS	Storage Art A	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	36
1093	Chippens Hill MS	Storage Near Art A	2	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	18
1096	Chippens Hill MS	Storage Computer	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	47
1097	Chippens Hill MS	Storage Drama	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	500	350	OCC SENSOR WALLSWITCH 1GANG	1	24
1107	Chippens Hill MS	Storage Capitani	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	36
1108	Chippens Hill MS	Storage Av	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	47
1109	Chippens Hill MS	Storage Av	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	71
1110	Chippens Hill MS	Office Home Ec	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	171
1115	Chippens Hill MS	Stair 1	stair	6L4' T8 32w/EL	indirect/direct	6	6	180	1.1	6L4' T8 28w/ELEE LO	rlrb LF	6	132	0.8	3,200	2,240	PHOTO SENSOR FOR DIMMING	1	686
1124	Chippens Hill MS	Storage Garage	1	3L4' T8 32w/EL	industrial cage	6	6	88	0.5	3L4' T8 28w/ELEE LO	rlrb LF	6	66	0.4	1,000	700	OCC SENSOR CEILING	1	107
1126	Chippens Hill MS	Storage Electric	1	3L4' T8 32w/EL	industrial cage	10	10	88	0.9	3L4' T8 28w/ELEE LO	rlrb LF	10	66	0.7	1,000	700	OCC SENSOR CORNER MT.	1	179
1127	Chippens Hill MS	Office Bldg Super	1	4L4' T8 32w/EL	industrial cage	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	56
1128	Chippens Hill MS	Locker Men/Women (2)	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	2,800	1,960	OCC SENSOR WALLSWITCH 1GANG	2	100
1129	Chippens Hill MS	Locker Men/Women (2)	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	2,800	1,960	OCC SENSOR WALLSWITCH 2GANG	2	100
1130	Chippens Hill MS	Locker Men/Women (2)	1	22W & 32W CIRCLELINE HARDWIRED	drum	4	4	58	0.2	16 WATT LED/NEW	new LED drum	4	17	0.1	2,800	1,960	INCLUDED ABOVE		51
1131	Chippens Hill MS	Hall Locker Room	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	3,200	2,240	OCC SENSOR WALLSWITCH 1GANG	1	114
1132	Chippens Hill MS	Kitchen Disposal	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	1,700	1,190	OCC SENSOR CEILING	1	61
1133	Chippens Hill MS	Kitchen Main	1	3L4' T8 32w/EL	trof acr	26	26	88	2.3	3L4' T8 28w/ELEE LO	rlrb LF	26	66	1.7	1,700	1,190	OCC SENSOR CEILING	1	789
1134	Chippens Hill MS	Kitchen Main	1	2x26W CF HARDWIRED/EL	can rec 8"	19	19	54	1.0	15 WATT LED/KIT	can kit LED Spectrum	19	16	0.3	1,700	1,190	INCLUDED ABOVE		137
1136	Chippens Hill MS	Office Main Kitchen	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	86
1137	Chippens Hill MS	Storage Main Kitchen	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	36
1138	Chippens Hill MS	Storage Cans	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	36
1139	Chippens Hill MS	Storage Garage	1	3L4' T8 32w/EL	industrial cage	6	6	88	0.5	3L4' T8 28w/ELEE LO	rlrb LF	6	66	0.4	1,000	700	OCC SENSOR CEILING	1	107
1140	Chippens Hill MS	Storage Can Wash	1	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	18
1144	Chippens Hill MS	Bath Men (2)	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	2,800	1,960	OCC SENSOR WALLSWITCH DT 1GANG	2	200
1146	Chippens Hill MS	Hall Gym-Caf	1	2L4' T8 32w/EL	trof para 1' wide	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	3,200	2,240	OCC SENSOR CEILING	1	305
1147	Chippens Hill MS	Gym Main	1	4L4' T5 HO/EL	high bay	74	74	234	17.3	98 WATT LED/NEW	new LED hibay wg	74	103	7.6	2,980	2,086	OCC. SENSOR ON HI BAY FIXTURE	74	6,127
1148	Chippens Hill MS	Storage Janitor	1	3L4' T8 32w/EL	industrial cage	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	9
1149	Chippens Hill MS	Storage Balls	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	500	350	OCC SENSOR WALLSWITCH 1GANG	1	24
1150	Chippens Hill MS	Storage Elevator	1	3L4' T8 32w/EL	industrial cage	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	9
1151	Chippens Hill MS	Hall Gym-Stair 5	1	2L4' T8 32w/EL	trof para 1' wide	19	19	60	1.1	2L4' T8 28w/ELEE LO	rlrb LF	19	44	0.8	3,200	2,240	OCC SENSOR CEILING	1	724
1152	Chippens Hill MS	Hall Gym-Stair 5	1	2x13W CF HARDWIRED	can rec 8"	10	10	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	10	11	0.1	3,200	2,240	INCLUDED ABOVE		91
1154	Chippens Hill MS	Storage Tech A	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	1,000	700	OCC SENSOR CEILING	1	71
1155	Chippens Hill MS	Storage Tech A	1	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	500	350	OCC SENSOR CEILING	1	9
1156	Chippens Hill MS	Storage Custodian	1	3L4' T8 32w/EL	industrial cage	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	9
1158	Chippens Hill MS	Storage Tech B	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	1,000	700	OCC SENSOR CEILING	1	71
1159	Chippens Hill MS	Storage Tech B	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	500	350	OCC SENSOR CEILING	1	18
1163	Chippens Hill MS	Hall Boys Locker-Girls Locker	1	2x13W CF HARDWIRED	can rec 8"	6	6	30	0.2	10 WATT LED/KIT	can kit LED Spectrum	6	11	0.1	3,200	2,240	OCC SENSOR CEILING	1	54
1164	Chippens Hill MS	Locker Boys (2)	1	3L4' T8 32w/EL	trof acr	36	36	88	3.2	3L4' T8 28w/ELEE LO	rlrb LF	36	66	2.4	2,800	1,960	OCC SENSOR CEIL DT 1GANG	2	1,800
1165	Chippens Hill MS	Locker Boys (2)	1	22W & 32W CIRCLELINE HARDWIRED	drum	14	14	58	0.8	16 WATT LED/NEW	new LED drum	14	17	0.2	2,800	1,960	INCLUDED ABOVE		178
1167	Chippens Hill MS	Locker Boys (2)	1	2x13W CF HARDWIRED	square recessed	2	2	30	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	2,800	1,960	INCLUDED ABOVE		25
1168	Chippens Hill MS	Locker Boys (2)	1	2x13W CF HARDWIRED	can rec 8"	10	10	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	10	11	0.1	2,800	1,960	INCLUDED ABOVE		79
1169	Chippens Hill MS	Storage Locker (2)	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	1,000	700	OCC SENSOR WALLSWITCH 1GANG	2	71
1170	Chippens Hill MS	Office Trainer (2)	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	2	171
1171	Chippens Hill MS	Bath Trainer (2)	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	2,800	1,960	OCC SENSOR WALLSWITCH DT 1GANG	2	100
1172	Chippens Hill MS	Bath Trainer (2)	1	22W & 32W CIRCLELINE HARDWIRED	drum	2	2	58	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	2,800	1,960	INCLUDED ABOVE		25
1173	Chippens Hill MS	Office Pe (2)	1	3L4' T8 32w/EL	trof acr	6	6	88	0.5	3L4' T8 28w/ELEE LO	rlrb LF	6	66	0.4	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	2	257
1179	Chippens Hill MS	Office Faculty Work Room	1	4L4' T8 32w/EL	trof acr	3	3	112	0.3	4L4' T8 28w/ELEE LO	rlrb LF	3	87	0.3	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	169
1180	Chippens Hill MS	Storage Science	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	18
1181	Chippens Hill MS	Storage Band	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	12
1182	Chippens Hill MS	Office Resource	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	171
1183	Chippens Hill MS	Hall 135-131	1	2L4' T8 32w/EL	trof para 1' wide	15	15	60	0.9	2L4' T8 28w/ELEE LO	rlrb LF	15	44	0.7	3,200	2,240	OCC SENSOR CEILING	1	572
1184	Chippens Hill MS	Hall 135-131	1	2x13W CF HARDWIRED	can rec 8"	9	9	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	9	11	0.1	3,200	2,240	INCLUDED ABOVE		82

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	Annual Hours	Hours With Controls	*Control Description*	*Control Qty*	Control kWH Saved
1185	Chippens Hill MS	Hall Stair 6-B	1	2L4' T8 32w/EL	trof para 1' wide	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	3,200	2,240	OCC SENSOR CEILING	1	114
1186	Chippens Hill MS	Hall Stair 6-B	1	2x13W CF HARDWIRED	can rec 8"	10	10	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	10	11	0.1	3,200	2,240	INCLUDED ABOVE		91
1189	Chippens Hill MS	Stair 6 (2)	stair	6L4' T8 32w/EL-12'	indirect/direct	4	4	180	0.7	6L4' T8 28w/ELEE LO-12'	rlrb LF	4	132	0.5	3,200	2,240	PHOTO SENSOR FOR DIMMING	2	457
1190	Chippens Hill MS	Stair 6 (2)	stair	4L4' T8 32w/EL-8'	indirect/direct	4	4	112	0.4	4L4' T8 28w/ELEE LO-8'	rlrb LF	4	87	0.3	3,200	2,240	INCLUDED ABOVE		301
1191	Chippens Hill MS	Stair 6	stair	4L4' T8 32w/EL-8'	strip cage	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	3,200	2,240	INCLUDED ABOVE		151
1198	Chippens Hill MS	Hall 125-120	1	2L4' T8 32w/EL	trof para 1' wide	18	18	60	1.1	2L4' T8 28w/ELEE LO	rlrb LF	18	44	0.8	3,200	2,240	OCC SENSOR CEILING	1	686
1199	Chippens Hill MS	Storage Janitor	1	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	9
1200	Chippens Hill MS	Storage Science	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	18
1201	Chippens Hill MS	Storage Custodian	1	3L4' T8 32w/EL	industrial cage	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	9
1202	Chippens Hill MS	Office Multipurpose	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	171
1203	Chippens Hill MS	Office Faculty Workroom	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	171
1205	Chippens Hill MS	Hall Stair 4-B	1	2L4' T8 32w/EL	trof para 1' wide	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	3,200	2,240	OCC SENSOR CEILING	1	114
1206	Chippens Hill MS	Hall Stair 4-B	1	2x13W CF HARDWIRED	can rec 8"	10	10	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	10	11	0.1	3,200	2,240	INCLUDED ABOVE		91
1209	Chippens Hill MS	Stair 4	stair	6L4' T8 32w/EL-12'	indirect/direct	2	2	180	0.4	6L4' T8 28w/ELEE LO-12'	rlrb LF	2	132	0.3	3,200	2,240	PHOTO SENSOR FOR DIMMING	1	229
1210	Chippens Hill MS	Stair 4	stair	4L4' T8 32w/EL-8'	indirect/direct	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	3,200	2,240	INCLUDED ABOVE		151
1211	Chippens Hill MS	Stair 4	stair	4L4' T8 32w/EL-8'	strip cage	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	3,200	2,240	INCLUDED ABOVE		151
1217	Chippens Hill MS	Office Faculty Workroom	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	171
1218	Chippens Hill MS	Storage Cleaning Supplies	1	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	9
1219	Chippens Hill MS	Storage Science	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	18
1220	Chippens Hill MS	Office Resources	1	4L4' T8 32w/EL	trof acr	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	226
1221	Chippens Hill MS	Stair 3	stair	70W METAL HALIDE	can rec 8"	10	10	95	1.0	15 WATT LED/KIT	can kit LED Spectrum	10	16	0.2	3,200	2,240	PHOTO SENSOR FOR DIMMING	1	136
1222	Chippens Hill MS	Stair 3	stair	2x13W CF HARDWIRED	can rec 8"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	3,200	2,240	INCLUDED ABOVE		9
1226	Chippens Hill MS	Storage Paper	1	3L4' T8 32w/EL	industrial cage	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	36
1227	Chippens Hill MS	Storage Wood Shop	1	3L4' T8 32w/EL	industrial cage	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	1,000	700	OCC SENSOR CEILING	1	71
1228	Chippens Hill MS	Storage Garage	1	3L4' T8 32w/EL	industrial cage	16	16	88	1.4	3L4' T8 28w/ELEE LO	rlrb LF	16	66	1.1	1,000	700	OCC SENSOR CEILING	1	286
1241	Bristol Eastern HS	Storage 200B	1	4L2' T8 17w/EL	trof acr	3	3	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	500	350	OCC SENSOR CEILING	1	13
1247	Bristol Eastern HS	Storage 224B	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	4
1288	Bristol Eastern HS	Storage Electric	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	6
1292	Bristol Eastern HS	Office Kalfayan	1	4L4' T8 32w/EL-8'	indirect/direct	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	2,400	1,680	OCC SENSOR CEILING	1	107
1293	Bristol Eastern HS	Office Kalfayan	1	2x26W CF HARDWIRED/EL	can rec 8"	6	6	54	0.3	15 WATT LED/KIT	can kit LED Spectrum	6	16	0.1	2,400	1,680	INCLUDED ABOVE		58
1296	Bristol Eastern HS	Office Lefrancois	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	2,400	1,680	OCC SENSOR CEILING	1	85
1333	Bristol Eastern HS	Storage 246A	1	2L4' T8 32w/EL	strip	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	500	350	TIMER WALLSWITCH 1GANG	1	11
1369	Bristol Eastern HS	Hall Stair2-Stair 1	1	4L2' T8 17w/EL	box acrylic	12	12	62	0.7	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	12	35	0.4	3,200	2,240	OCC SENSOR CEILING	1	339
1375	Bristol Eastern HS	Hall Stair 1-C200	1	4L2' T8 17w/EL	box acrylic	18	18	62	1.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	18	35	0.6	3,200	2,240	OCC SENSOR CEILING	1	509
1376	Bristol Eastern HS	Hall Stair 1-C200	1	2x26W CF HARDWIRED/EL	can rec 8"	2	2	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	2	16	0.0	3,200	2,240	INCLUDED ABOVE		26
1378	Bristol Eastern HS	Hall 200-Stair 5	1	4L2' T8 17w/EL	box acrylic	14	14	62	0.9	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	14	35	0.5	3,200	2,240	OCC SENSOR CEILING	1	396
1379	Bristol Eastern HS	Hall 200-Stair 5	1	8L4' T8 32w/EL	box acr 4x4	1	1	224	0.2	8L4' T8 28w/ELEE LO	rlrb LF	1	174	0.2	3,200	2,240	INCLUDED ABOVE		142
1382	Bristol Eastern HS	Hall Stair 5-C241	1	4L2' T8 17w/EL	box acrylic	12	12	62	0.7	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	12	35	0.4	3,200	2,240	OCC SENSOR CEILING	1	339
1391	Bristol Eastern HS	Hall C220-C225	1	4L2' T8 17w/EL	box acrylic	11	11	62	0.7	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	11	35	0.4	3,200	2,240	OCC SENSOR CEILING	1	311
1394	Bristol Eastern HS	Storage 140	1	2L4' T8 32w/EL	strip	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	6
1408	Bristol Eastern HS	Hall 133-141	1	4L2' T8 17w/EL	box acrylic	11	11	62	0.7	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	11	35	0.4	3,200	2,240	OCC SENSOR CEILING	1	311
1409	Bristol Eastern HS	Hall 133-141	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	3,200	2,240	INCLUDED ABOVE		28
1412	Bristol Eastern HS	Storage 131A	1	4L2' T8 17w/EL	box acrylic	1	1	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	4
1413	Bristol Eastern HS	Storage 131A	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	6
1424	Bristol Eastern HS	Hall C124-C131	1	4L2' T8 17w/EL	box acrylic	11	11	62	0.7	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	11	35	0.4	3,200	2,240	OCC SENSOR CEILING	1	311
1425	Bristol Eastern HS	Hall C124-C131	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	3,200	2,240	INCLUDED ABOVE		28
1426	Bristol Eastern HS	Hall C124-C131	1	8L4' T8 32w/EL	box acr 4x4	1	1	224	0.2	8L4' T8 28w/ELEE LO	rlrb LF	1	174	0.2	3,200	2,240	INCLUDED ABOVE		142
1438	Bristol Eastern HS	Hall C109-C113	1	4L2' T8 17w/EL	box acrylic	15	15	62	0.9	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	15	35	0.5	3,200	2,240	OCC SENSOR CEILING	1	424
1439	Bristol Eastern HS	Hall C109-C113	1	8L4' T8 32w/EL	box acr 4x4	2	2	224	0.4	8L4' T8 28w/ELEE LO	rlrb LF	2	174	0.3	3,200	2,240	INCLUDED ABOVE		284
1461	Bristol Eastern HS	Hall C105-C102	1	4L2' T8 17w/EL	box acrylic	15	15	62	0.9	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	15	35	0.5	3,200	2,240	OCC SENSOR CEILING	1	424
1462	Bristol Eastern HS	Hall C105-C102	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	3,200	2,240	INCLUDED ABOVE		57
1463	Bristol Eastern HS	Hall C105-C102	1	8L4' T8 32w/EL	box acr 4x4	2	2	224	0.4	8L4' T8 28w/ELEE LO	rlrb LF	2	174	0.3	3,200	2,240	INCLUDED ABOVE		284
1470	Bristol Eastern HS	Lounge 100C	1	4L2' T8 17w/EL	trof parabolic	11	11	62	0.7	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	11	35	0.4	2,300	1,610	OCC SENSOR CEILING	1	224
1471	Bristol Eastern HS	Cafeteria Main	1	3L4' T8 32w/EL	trof parabolic	48	48	88	4.2	3L4' T8 28w/ELEE LO	rlrb LF	48	66	3.2	2,000	1,400	OCC SENSOR CEILING	1	1,619
1494	Bristol Eastern HS	Storage Conf	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	4
1495	Bristol Eastern HS	Hall Caf-Gym	1	4L2' T8 17w/EL	box acrylic	13	13	62	0.8	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	13	35	0.5	3,200	2,240	OCC SENSOR CEILING	1	368
1496	Bristol Eastern HS	Hall Caf-Gym	1	8L4' T8 32w/EL	box acr 4x4	3	3	224	0.7	8L4' T8 28w/ELEE LO	rlrb LF	3	174	0.5	3,200	2,240	INCLUDED ABOVE		427
1497	Bristol Eastern HS	Hall Caf-Gym	1	2x26W CF HARDWIRED/EL	can rec 8"	1	1	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	1	16	0.0	3,200	2,240	INCLUDED ABOVE		13
1526	Bristol Eastern HS	Hall C119-C141	1	4L2' T8 17w/EL	box acrylic	15	15	62	0.9	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	15	35	0.5	3,200	2,240	OCC SENSOR CEILING	1	424
1527	Bristol Eastern HS	Hall Gymnasium	1	4L2' T8 17w/EL	box acrylic	9	9	62	0.6	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	9	35	0.3	3,200	2,240	OCC SENSOR CEILING	1	254
1528	Bristol Eastern HS	Storage Trainer	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	9
1536	Bristol Eastern HS	Gym 2	1	4L4' T5 HO/EL	high bay	24	24	234	5.6	98 WATT LED/NEW	new LED hibay wg	24	103	2.5	2,980	2,086	OCC. SENSOR ON HI BAY FIXTURE	24	1,877
1539	Bristol Eastern HS	Gym Main	1	4L4' T5 HO/EL	high bay	48	48	234	11.2	98 WATT LED/NEW	new LED hibay wg	48	103	4.9	2,980	2,086	OCC. SENSOR ON HI BAY FIXTURE	48	3,753
1542	Bristol Eastern HS	Hall Near Boys Locker	1	4L2' T8 17w/EL	trof acr	8	8	62	0.5	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	8	35	0.3	3,200	2,240	OCC SENSOR CEILING	1	226
1562	Bristol Eastern HS	Hall Gym-Lib	1	4L2' T8 17w/EL	box acrylic	13	13	62	0.8	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	13	35	0.5	3,200	2,240	OCC SENSOR CEILING	1	368
1563	Bristol Eastern HS	Hall Gym-Lib	1	8L4' T8 32w/EL	box acr 4x4	2	2	224	0.4	8L4' T8 28w/ELEE LO	rlrb LF	2	174	0.3	3,200	2,240	INCLUDED ABOVE		284
1578	Bristol Eastern HS	Library Main	1	2L2' F40 BIAX/EL	indirect/direct	26	26	72	1.9	36 WATT LED/KIT	trof kit LED	26	38	1.0	2,200	1,540	OCC SENSOR CEILING	1	551
1579	Bristol Eastern HS	Library Main	1	28W CF HARDWIRED	decorative	8		30	0.2	NO RETRO	no change -specialized fixture		32	0.2	2,200	1,540	INCLUDED ABOVE		135
1580	Bristol Eastern HS	Library Main	1	4L4' T8 32w/EL-8'	indirect/direct	21	21	112	2.4	4L4' T8 28w/ELEE LO-8'	rlrb LF	21	87	1.8	2,200	1,540	INCLUDED ABOVE		1,027
1581	Bristol Eastern HS	Library Main	1	2x18W CF HARDWIRED/EL	square recessed	40	40	38	1.5	16 WATT LED/NEW	new LED drum	40	17	0.7	2,200	1,540	INCLUDED ABOVE		377
1591	Bristol Eastern HS	Hall Caf To Aud	1	4L2' T8 17w/EL	box acrylic	13	13	62	0.8	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	13	35	0.5	3,200	2,240	OCC SENSOR CEILING	1	368
1592	Bristol Eastern HS	Hall Caf To Aud	1	8L4' T8 32w/EL	box acr 4x4	1	1	224	0.2	8L4' T8 28w/ELEE LO	rlrb LF	1	174	0.2	3,200	2,240	INCLUDED ABOVE		142
1593	Bristol Eastern HS	Hall Caf To Aud	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	3,200	2,240	INCLUDED ABOVE		108
1597	Bristol Eastern HS	Storage 11B	1	4L2' T8 17w/EL	box acrylic	3	3	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	27
1598	Bristol Eastern HS	Storage 11C	1	4L2' T8 17w/EL	box acrylic	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	18
1609	Bristol Eastern HS	Storage Mez	mezz	2L4' T8 32w/EL	wrap wide	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	11
1617	Bristol Eastern HS	Storage Washer	mezz	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	11
1618	Bristol Eastern HS	Office K6	mezz	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	42
1620	Bristol Eastern HS	Hall Stair 2-D&E	mezz	4L2' T8 17w/EL	box acrylic	5	5	62	0.3	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	5	35	0.2	3,200	2,240	OCC SENSOR CEILING	1	141
1621	Bristol Eastern HS	Hall To C1	mezz	4L2' T8 17w/EL	box acrylic	5	5	62	0.3	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	5	35	0.2	3,200	2,240	OCC SENSOR CEILING	1	141
1624	Bristol Eastern HS	Hall C2-3	mezz	4L2' T8 17w/EL	box acrylic	3	3	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	3,200	2,240	OCC SENSOR CEIL DT 1GANG	1	85
1632	Bristol Eastern HS	Hall C5-C7	mezz	4L2' T8 17w/EL	box acrylic	13	13	62	0.8	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	13	35	0.5	3,200	2,240	OCC SENSOR CEILING	1	368

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	Annual Hours	Hours With Controls	*Control Description*	*Control Qty*	Control kWH Saved
1633	Bristol Eastern HS	Classroom 7	mezz	4L4' T8 32w/EL	trof acr	12	12	112	1.3	4L4' T8 28w/ELEE LO	rlrb LF	12	87	1.0	2,800	1,960	OCC SENSOR CEILING	1	747
1634	Bristol Eastern HS	Classroom 7 Small	mezz	4L4' T8 32w/EL	trof acr	6	6	112	0.7	4L4' T8 28w/ELEE LO	rlrb LF	6	87	0.5	2,800	1,960	OCC SENSOR WALLSWITCH 1GANG	1	373
1635	Bristol Eastern HS	Classroom 7 Small	mezz	4L4' T8 32w/EL	trof acr	5	5	112	0.6	4L4' T8 28w/ELEE LO	rlrb LF	5	87	0.4	2,800	1,960	OCC SENSOR WALLSWITCH 1GANG	1	311
1636	Bristol Eastern HS	Office C7	mezz	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	107
1637	Bristol Eastern HS	Storage C7	mezz	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	22
1641	Bristol Eastern HS	Shop 6	mezz	4L4' T8 32w/EL-8'	vapor tight	28	28	112	3.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	28	87	2.4	2,700	1,890	OCC SENSOR CORNER MT. 4GANG	1	1,680
1643	Bristol Eastern HS	Storage 6C	mezz	2L4' T8 32w/EL	strip cage	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	11
1644	Bristol Eastern HS	Storage 6A	mezz	4L4' T8 32w/EL-8'	vapor tight	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	67
1646	Bristol Eastern HS	Lounge 8	mezz	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	2,300	1,610	INCLUDED ABOVE		20
1648	Bristol Eastern HS	Classroom 8	mezz	4L4' T8 32w/EL	trof acr	6	6	112	0.7	4L4' T8 28w/ELEE LO	rlrb LF	6	87	0.5	2,800	1,960	OCC SENSOR CEILING	1	373
1652	Bristol Eastern HS	Office 8	mezz	4L4' T8 32w/EL	trof acr	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	213
1653	Bristol Eastern HS	Classroom 9 Asep2	mezz	4L4' T8 32w/EL-8'	industrial	12	12	112	1.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	12	87	1.0	2,800	1,960	OCC SENSOR CORNER MT.	1	747
1655	Bristol Eastern HS	Classroom 5	mezz	4L2' T8 17w/EL	trof acr	6	6	62	0.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	6	35	0.2	2,800	1,960	OCC SENSOR WALLSWITCH 1GANG	1	148
1735	West Bristol K8 School	Office B230B	2	2L2' T8 17w/EL	troffer indirect	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	2,400	1,680	OCC SENSOR CEILING	1	82
1903	West Bristol K8 School	Mechanical B135	1	4L4' T8 32w/EL-8'	strip reflector	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	500	350	TIMER WALLSWITCH 1GANG	1	118
1912	Northeast MS	Bath Boys	2	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	2,800	1,960	OCC SENSOR WALLSWITCH DT 1GANG	1	59
1913	Northeast MS	Bath Men	2	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	2,800	1,960	OCC SENSOR WALLSWITCH DT 1GANG	1	11
1917	Northeast MS	Bath Girls	2	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	2,800	1,960	OCC SENSOR WALLSWITCH DT 1GANG	1	59
1918	Northeast MS	Bath Woman	2	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	2,800	1,960	OCC SENSOR WALLSWITCH DT 1GANG	1	11
1926	Northeast MS	Hall C201-C207	2	4L2' T8 17w/EL	box acrylic	20	20	62	1.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	20	35	0.7	3,200	2,240	OCC SENSOR CEILING	1	532
1927	Northeast MS	Hall C201-C207	2	1L4' T8 32w/EL	wrap narrow	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	3,200	2,240	INCLUDED ABOVE		35
1937	Northeast MS	Bath Boys	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	2,800	1,960	OCC SENSOR WALLSWITCH DT 1GANG	1	59
1938	Northeast MS	Bath Men	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	2,800	1,960	OCC SENSOR WALLSWITCH DT 1GANG	1	11
1939	Northeast MS	Bath Girls	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	2,800	1,960	OCC SENSOR WALLSWITCH DT 1GANG	1	59
1940	Northeast MS	Bath Woman	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	2,800	1,960	OCC SENSOR WALLSWITCH DT 1GANG	1	11
1941	Northeast MS	Hall C101-C108	1	4L2' T8 17w/EL	box acrylic	23	23	62	1.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	23	35	0.8	3,200	2,240	OCC SENSOR CEILING	1	612
1942	Northeast MS	Hall C101-C108	1	1L4' T8 32w/EL	wrap narrow	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	3,200	2,240	INCLUDED ABOVE		35
1944	Northeast MS	Hall Music Room	1	4L2' T8 17w/EL	box acrylic	3	3	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	3,200	2,240	OCC SENSOR CEILING	1	80
1947	Northeast MS	Hall Near Caf	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	3,200	2,240	OCC SENSOR CEILING	1	135
1948	Northeast MS	Cafeteria Main	1	4L4' T8 32w/EL-8'	trof acr 1' wide	19	19	112	2.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	19	87	1.7	1,900	1,330	OCC SENSOR CEILING	1	755
1956	Northeast MS	Storage Food	1	2L4' T8 32w/EL	wrap wide	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	21
1957	Northeast MS	Foyer K	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,200	2,240	OCC SENSOR WALLSWITCH 1GANG	1	13
1958	Northeast MS	Office Fish	1	3x13W CF HARDWIRED	drum	2	2	45	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	19
1962	Northeast MS	Storage Wood	1	3x13W CF HARDWIRED	drum	4	4	45	0.2	16 WATT LED/NEW	new LED drum	4	17	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	16
1965	Northeast MS	Hall K-S1	1	2L4' T8 32w/EL	trof acr	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	3,200	2,240	OCC SENSOR CEILING	1	271
1966	Northeast MS	Foyer Locker Room	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,200	2,240	OCC SENSOR WALLSWITCH 1GANG	1	13
1967	Northeast MS	Gym Main	1	4L4' T5 HO/EL	high bay	28	28	234	6.6	98 WATT LED/NEW	new LED hibay wg	28	103	2.9	2,980	2,086	OCC. SENSOR ON HI BAY FIXTURE	28	2,061
1969	Northeast MS	Locker Boys	1	2x13W CF HARDWIRED	drum	7	7	30	0.2	16 WATT LED/NEW	new LED drum	7	17	0.1	2,800	1,960	OCC SENSOR CORNER MT. DT 1GANG	1	79
1970	Northeast MS	Locker Boys	1	60W INCANDESCENT	can rec 6"	3	3	60	0.2	8 WATT LED SI	screw in LED par20	3	8	0.0	2,800	1,960	INCLUDED ABOVE		17
1971	Northeast MS	Storage Balls	1	3x13W CF HARDWIRED	drum	2	2	45	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	8
1973	Northeast MS	Foyer Near Girls Locker	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	3,200	2,240	OCC SENSOR CEILING	1	68
1976	Northeast MS	Locker Girls	1	2x13W CF HARDWIRED	drum	4	4	30	0.1	16 WATT LED/NEW	new LED drum	4	17	0.1	2,800	1,960	OCC SENSOR CORNER MT. DT 1GANG	1	45
1977	Northeast MS	Locker Girls	1	60W INCANDESCENT	can rec 6"	9	9	60	0.5	8 WATT LED SI	screw in LED par20	9	8	0.1	2,800	1,960	INCLUDED ABOVE		51
1980	Northeast MS	Bath Main	1	2x60W INCANDESCENTS	square surface mt.	1	1	120	0.1	16 WATT LED/NEW	new LED drum	1	17	0.0	2,800	1,960	OCC SENSOR WALLSWITCH 1GANG	1	11
1983	Northeast MS	Lobby Main	1	2L4' T8 32w/EL	trof acr	9	9	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	9	44	0.4	3,200	2,240	OCC SENSOR CEILING	1	305
1985	Northeast MS	Hall S1-Gym	1	2L4' T8 32w/EL	trof acr	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	3,200	2,240	OCC SENSOR CEILING	1	271
1986	Northeast MS	Bath Woman	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	2,800	1,960	OCC SENSOR WALLSWITCH DT 1GANG	1	59
1987	Northeast MS	Bath Men	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	2,800	1,960	OCC SENSOR WALLSWITCH DT 1GANG	1	59
1993	Northeast MS	Bath Nurse	1	2L4' T8 32w/EL	trof acr 1' wide	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	2,800	1,960	OCC SENSOR WALLSWITCH 1GANG	1	30
2005	Northeast MS	Hall C30-C24	1	2L4' T8 32w/EL	trof acr	9	9	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	9	44	0.4	3,200	2,240	OCC SENSOR CEILING	1	305
2013	Northeast MS	Hall Lib-C21	1	2L4' T8 32w/EL	trof acr	13	13	60	0.8	2L4' T8 28w/ELEE LO	rlrb LF	13	44	0.6	3,200	2,240	OCC SENSOR CEILING	1	440
2014	Northeast MS	Hall C21-Exit	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	3,200	2,240	OCC SENSOR CEILING	1	68
2019	Northeast MS	Foyer Near Lib	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	3,200	2,240	OCC SENSOR WALLSWITCH 1GANG	1	34
2020	Northeast MS	Foyer To New Section	1	4L2' T8 17w/EL	box acrylic	3	3	62	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	3,200	2,240	PHOTO SENSOR FOR DIMMING	1	80
2033	Northeast MS	Storage 5	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	2
2034	Northeast MS	Bath Men (2)	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	2,800	1,960	OCC SENSOR WALLSWITCH DT 1GANG	2	119
2037	Northeast MS	Storage Custodian	1	3x13W CF HARDWIRED	drum	2	2	45	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	4
2038	Northeast MS	Hall C1-C8	1	2L4' T8 32w/EL	trof acr	14	14	60	0.8	2L4' T8 28w/ELEE LO	rlrb LF	14	44	0.6	3,200	2,240	OCC SENSOR CEILING	1	474
2040	Northeast MS	Bath Hc	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	2,800	1,960	OCC SENSOR WALLSWITCH DT 1GANG	1	30
2041	Northeast MS	Storage Textbook	1	3x13W CF HARDWIRED	drum	3	3	45	0.1	16 WATT LED/NEW	new LED drum	3	17	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	6
2048	Northeast MS	Storage Copy	1	4x60W INCANDESCENTS	square surface mt.	1	1	240	0.2	16 WATT LED/NEW	new LED drum	1	17	0.0	500	350	OCC SENSOR CEILING	1	2
2051	Northeast MS	Storage 90	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	11
2052	Northeast MS	Bath Women	1	3x13W CF HARDWIRED	drum	2	2	45	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	2,800	1,960	OCC SENSOR WALLSWITCH DT 1GANG	1	23
2053	Northeast MS	Bath Women	1	15W CF SCREWIN	globe	2	2	17	0.0	8 WATT LED SI	screw in LED Alamp	2	8	0.0	2,800	1,960	INCLUDED ABOVE		11
2200	Mountain View ES	Mechanical Boiler	1	4L4' T8 32w/EL-8'	industrial	7	7	112	0.8	4L4' T8 28w/ELEE LO-8'	rlrb LF	7	87	0.6	500	350	TIMER WALLSWITCH 1GANG	1	92
2206	Mountain View ES	Office Custodian	1	4L2' T8 17w/EL	trof acr	4	4	62	0.2	4L2' T8 15w/ELEE LO	rlrb LF	4	57	0.2	2,000	1,400	OCC SENSOR CEILING	1	136
2221	Ellen P. Hubbell ES	Office Maint	1	2L4' T8 32w/ELEE	wrap	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	2,000	1,400	OCC SENSOR CEILING	1	51
2222	Ellen P. Hubbell ES	Bath Maint	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	8
2223	Ellen P. Hubbell ES	Bath Boys	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	3,000	2,100	OCC SENSOR WALLSWITCH DT 1GANG	1	133
2224	Ellen P. Hubbell ES	Bath Staff	1	2L4' T8 32w/ELEE	trof acr	1	1	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	1	50	0.1	3,000	2,100	OCC SENSOR WALLSWITCH DT 1GANG	1	39
2225	Ellen P. Hubbell ES	Bath Girls	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	3,000	2,100	OCC SENSOR WALLSWITCH DT 1GANG	1	133
2226	Ellen P. Hubbell ES	Bath Staff	1	2L4' T8 32w/ELEE	trof acr	1	1	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	1	50	0.1	3,000	2,100	OCC SENSOR WALLSWITCH DT 1GANG	1	39
2227	Ellen P. Hubbell ES	Office 134	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,000	1,400	OCC SENSOR CEILING	1	400
2228	Ellen P. Hubbell ES	Office 134	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	2,000	1,400	INCLUDED ABOVE		51
2229	Ellen P. Hubbell ES	Classroom 133	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
2230	Ellen P. Hubbell ES	Classroom 133	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	2,200	1,540	INCLUDED ABOVE		57
2231	Ellen P. Hubbell ES	Classroom 132	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
2232	Ellen P. Hubbell ES	Classroom 132	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	2,200	1,540	INCLUDED ABOVE		57
2233	Ellen P. Hubbell ES	Classroom 130	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
2234	Ellen P. Hubbell ES	Classroom 130	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	2,200	1,540	INCLUDED ABOVE		57
2235	Ellen P. Hubbell ES	Classroom 131	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
2236	Ellen P. Hubbell ES	Classroom 131	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	2,200	1,540	INCLUDED ABOVE		57

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	Annual Hours	Hours With Controls	*Control Description*	*Control Qty*	Control kWH Saved
2237	Ellen P. Hubbell ES	Classroom 129	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
2238	Ellen P. Hubbell ES	Classroom 129	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	2,200	1,540	INCLUDED ABOVE		57
2239	Ellen P. Hubbell ES	Classroom 128	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
2240	Ellen P. Hubbell ES	Classroom 128	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	2,200	1,540	INCLUDED ABOVE		57
2241	Ellen P. Hubbell ES	Classroom 126	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
2242	Ellen P. Hubbell ES	Classroom 126	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	2,200	1,540	INCLUDED ABOVE		57
2243	Ellen P. Hubbell ES	Classroom 127	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
2244	Ellen P. Hubbell ES	Classroom 127	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	2,200	1,540	INCLUDED ABOVE		57
2245	Ellen P. Hubbell ES	Storage Janitor	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	11
2246	Ellen P. Hubbell ES	Office 125	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	89
2247	Ellen P. Hubbell ES	Storage 124 Books	1	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	6
2248	Ellen P. Hubbell ES	Office 123 Copy	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	89
2249	Ellen P. Hubbell ES	Office 123 Copy	1	3L4' T8 32w/EL	task strip	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	67
2250	Ellen P. Hubbell ES	Office 122	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	89
2251	Ellen P. Hubbell ES	Bath Men	1	1L4' T8 32w/EL	vanity	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	18
2252	Ellen P. Hubbell ES	Bath Boys	1	2L2' F36 BIAX/EL	trof acr	3	3	74	0.2	36 WATT LED/KIT	trof kit LED	3	38	0.1	3,000	2,100	OCC SENSOR CORNER MT. DT 1GANG	1	87
2253	Ellen P. Hubbell ES	Bath Boys	1	1L4' T8 32w/EL	trof para 1' wide	4	4	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	4	23	0.1	3,000	2,100	INCLUDED ABOVE		71
2254	Ellen P. Hubbell ES	Bath Hc	1	2L2' F36 BIAX/EL	trof acr	1	1	74	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	29
2255	Ellen P. Hubbell ES	Bath Hc	1	1L4' T8 32w/EL	trof para 1' wide	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	3,000	2,100	INCLUDED ABOVE		35
2256	Ellen P. Hubbell ES	Bath Women	1	1L4' T8 32w/EL	vanity	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	18
2257	Ellen P. Hubbell ES	Bath Girls	1	2L2' F36 BIAX/EL	trof acr	3	3	74	0.2	36 WATT LED/KIT	trof kit LED	3	38	0.1	3,000	2,100	OCC SENSOR CORNER MT. DT 1GANG	1	87
2258	Ellen P. Hubbell ES	Bath Girls	1	1L4' T8 32w/EL	trof para 1' wide	4	4	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	4	23	0.1	3,000	2,100	INCLUDED ABOVE		71
2259	Ellen P. Hubbell ES	Classroom 121	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
2260	Ellen P. Hubbell ES	Classroom 121	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	2,200	1,540	INCLUDED ABOVE		57
2261	Ellen P. Hubbell ES	Classroom 120	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
2262	Ellen P. Hubbell ES	Classroom 120	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	2,200	1,540	INCLUDED ABOVE		57
2263	Ellen P. Hubbell ES	Classroom 119	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
2264	Ellen P. Hubbell ES	Classroom 119	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	2,200	1,540	INCLUDED ABOVE		57
2265	Ellen P. Hubbell ES	Classroom 118	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
2266	Ellen P. Hubbell ES	Classroom 118	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	2,200	1,540	INCLUDED ABOVE		57
2267	Ellen P. Hubbell ES	Storage Book Room 6	1	2L4' T8 32w/ELEE	trof acr 1' wide	1	1	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	1	50	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	13
2268	Ellen P. Hubbell ES	Classroom 116	1	4L4' T8 32w/EL-8'	wrap	15	15	112	1.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	15	87	1.3	2,200	1,540	OCC SENSOR CEILING	1	733
2269	Ellen P. Hubbell ES	Classroom 116	1	2L4' T8 32w/ELEE	trof acr	4	4	53	0.2	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	4	50	0.2	2,200	1,540	INCLUDED ABOVE		113
2270	Ellen P. Hubbell ES	Storage Janitor	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	11
2271	Ellen P. Hubbell ES	Classroom 117	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
2272	Ellen P. Hubbell ES	Classroom 117	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	2,200	1,540	INCLUDED ABOVE		57
2273	Ellen P. Hubbell ES	Classroom 115	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
2274	Ellen P. Hubbell ES	Classroom 115	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	2,200	1,540	INCLUDED ABOVE		57
2275	Ellen P. Hubbell ES	Storage Book Room 1	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	22
2276	Ellen P. Hubbell ES	Classroom 114	1	4L4' T8 32w/EL-8'	wrap	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	2,200	1,540	OCC SENSOR CEILING	1	293
2277	Ellen P. Hubbell ES	Classroom 114	1	2L4' T8 32w/ELEE	wrap	3	3	53	0.2	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	3	50	0.2	2,200	1,540	INCLUDED ABOVE		85
2278	Ellen P. Hubbell ES	Classroom 114	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	2,200	1,540	OCC SENSOR CORNER MT.	1	49
2279	Ellen P. Hubbell ES	Classroom 114	1	2L2' F36 BIAX/EL	trof acr	3	3	74	0.2	36 WATT LED/KIT	trof kit LED	3	38	0.1	2,200	1,540	INCLUDED ABOVE		64
2280	Ellen P. Hubbell ES	Classroom 114	1	2x13W CF HARDWIRED	can rec 6"	2	2	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	2,200	1,540	INCLUDED ABOVE		12
2281	Ellen P. Hubbell ES	Storage 114	1	2L2' F36 BIAX/EL	trof acr	1	1	74	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	10
2282	Ellen P. Hubbell ES	Classroom 114	1	2L3' T8 25w/EL-6'	valance	5	5	47	0.2	2L3' T8 21w/ELEE LO-6'	rlrb LF	5	42	0.2	2,200	1,540	OCC SENSOR WALLSWITCH 1GANG	1	118
2283	Ellen P. Hubbell ES	Classroom 114	1	1L3' T8 25w/EL	valance	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	2,200	1,540	INCLUDED ABOVE		25
2284	Ellen P. Hubbell ES	Bath 114	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	8
2285	Ellen P. Hubbell ES	Classroom 113	1	4L4' T8 32w/EL-8'	wrap	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	2,200	1,540	OCC SENSOR CEILING	1	293
2286	Ellen P. Hubbell ES	Classroom 113	1	2L4' T8 32w/ELEE	wrap	3	3	53	0.2	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	3	50	0.2	2,200	1,540	INCLUDED ABOVE		85
2287	Ellen P. Hubbell ES	Classroom 113	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	2,200	1,540	OCC SENSOR CORNER MT.	1	49
2288	Ellen P. Hubbell ES	Classroom 113	1	2L2' F36 BIAX/EL	trof acr	3	3	74	0.2	36 WATT LED/KIT	trof kit LED	3	38	0.1	2,200	1,540	INCLUDED ABOVE		64
2289	Ellen P. Hubbell ES	Classroom 113	1	2x13W CF HARDWIRED	can rec 6"	2	2	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	2,200	1,540	INCLUDED ABOVE		12
2290	Ellen P. Hubbell ES	Classroom 113	1	2L3' T8 25w/EL-6'	valance	5	5	47	0.2	2L3' T8 21w/ELEE LO-6'	rlrb LF	5	42	0.2	2,200	1,540	OCC SENSOR WALLSWITCH 1GANG	1	118
2291	Ellen P. Hubbell ES	Classroom 113	1	1L3' T8 25w/EL	valance	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	2,200	1,540	INCLUDED ABOVE		25
2292	Ellen P. Hubbell ES	Bath 113	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	8
2293	Ellen P. Hubbell ES	Classroom 112	1	4L4' T8 32w/EL	trof acr	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	2,200	1,540	OCC SENSOR CORNER MT.	1	196
2294	Ellen P. Hubbell ES	Storage Bookroom 2	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	44
2295	Ellen P. Hubbell ES	Classroom 111	1	4L4' T8 32w/EL	trof acr	9	9	112	1.0	4L4' T8 28w/ELEE LO	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR WALLSWITCH 1GANG	1	440
2297	Ellen P. Hubbell ES	Storage 111	1	4L4' T8 32w/EL	trof acr	3	3	112	0.3	4L4' T8 28w/ELEE LO	rlrb LF	3	87	0.3	1,000	700	OCC SENSOR CEILING	1	67
2298	Ellen P. Hubbell ES	Bath Near C111	1	1L4' T8 32w/EL	vanity	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	18
2299	Ellen P. Hubbell ES	Storage Janitor	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	11
2300	Ellen P. Hubbell ES	Classroom 110	1	4L4' T8 32w/EL-8'	wrap	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	2,200	1,540	OCC SENSOR CEILING	1	293
2301	Ellen P. Hubbell ES	Classroom 110	1	2L4' T8 32w/ELEE	wrap	3	3	53	0.2	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	3	50	0.2	2,200	1,540	INCLUDED ABOVE		85
2302	Ellen P. Hubbell ES	Classroom 110	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	2,200	1,540	OCC SENSOR CORNER MT.	1	49
2303	Ellen P. Hubbell ES	Classroom 110	1	2L2' F36 BIAX/EL	trof acr	3	3	74	0.2	36 WATT LED/KIT	trof kit LED	3	38	0.1	2,200	1,540	INCLUDED ABOVE		64
2304	Ellen P. Hubbell ES	Classroom 110	1	2x13W CF HARDWIRED	can rec 6"	2	2	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	2,200	1,540	INCLUDED ABOVE		12
2305	Ellen P. Hubbell ES	Storage 110	1	2L2' F36 BIAX/EL	trof acr	1	1	74	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	10
2306	Ellen P. Hubbell ES	Classroom 110	1	2L3' T8 25w/EL-6'	valance	5	5	47	0.2	2L3' T8 21w/ELEE LO-6'	rlrb LF	5	42	0.2	2,200	1,540	OCC SENSOR WALLSWITCH 1GANG	1	118
2307	Ellen P. Hubbell ES	Classroom 110	1	1L3' T8 25w/EL	valance	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	2,200	1,540	INCLUDED ABOVE		25
2308	Ellen P. Hubbell ES	Bath 110	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	8
2309	Ellen P. Hubbell ES	Classroom 109	1	4L4' T8 32w/EL-8'	wrap	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	2,200	1,540	OCC SENSOR CEILING	1	293
2310	Ellen P. Hubbell ES	Classroom 109	1	2L4' T8 32w/ELEE	wrap	3	3	53	0.2	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	3	50	0.2	2,200	1,540	INCLUDED ABOVE		85
2311	Ellen P. Hubbell ES	Classroom 109	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	2,200	1,540	OCC SENSOR CORNER MT.	1	49
2312	Ellen P. Hubbell ES	Classroom 109	1	2L2' F36 BIAX/EL	trof acr	3	3	74	0.2	36 WATT LED/KIT	trof kit LED	3	38	0.1	2,200	1,540	INCLUDED ABOVE		64
2313	Ellen P. Hubbell ES	Classroom 109	1	2x13W CF HARDWIRED	can rec 6"	2	2	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	2,200	1,540	INCLUDED ABOVE		12
2314	Ellen P. Hubbell ES	Classroom 109	1	2L3' T8 25w/EL-6'	valance	5	5	47	0.2	2L3' T8 21w/ELEE LO-6'	rlrb LF	5	42	0.2	2,200	1,540	OCC SENSOR WALLSWITCH 1GANG	1	118
2315	Ellen P. Hubbell ES	Classroom 109	1	1L3' T8 25w/EL	valance	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	2,200	1,540	INCLUDED ABOVE		25
2316	Ellen P. Hubbell ES	Bath 109	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	8
2317	Ellen P. Hubbell ES	Classroom 107	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
2318	Ellen P. Hubbell ES	Classroom 107	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	2,200	1,540	INCLUDED ABOVE		57
2319	Ellen P. Hubbell ES	Bath 107	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	8

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	Annual Hours	Hours With Controls	*Control Description*	*Control Qty*	Control kWH Saved
2320	Ellen P. Hubbell ES	Classroom 108	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
2321	Ellen P. Hubbell ES	Classroom 108	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	2,200	1,540	INCLUDED ABOVE		57
2322	Ellen P. Hubbell ES	Bath 108	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	8
2323	Ellen P. Hubbell ES	Classroom 106	1	4L4' T8 32w/EL-8'	wrap	12	12	112	1.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	12	87	1.0	2,200	1,540	OCC SENSOR CEILING	1	587
2324	Ellen P. Hubbell ES	Classroom 106	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	2,200	1,540	INCLUDED ABOVE		57
2325	Ellen P. Hubbell ES	Bath 106	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	8
2326	Ellen P. Hubbell ES	Classroom 105	1	4L4' T8 32w/EL-8'	wrap	12	12	112	1.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	12	87	1.0	2,200	1,540	OCC SENSOR CEILING	1	587
2327	Ellen P. Hubbell ES	Classroom 105	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	2,200	1,540	INCLUDED ABOVE		57
2328	Ellen P. Hubbell ES	Bath 105	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	8
2329	Ellen P. Hubbell ES	Classroom 104	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
2330	Ellen P. Hubbell ES	Classroom 104	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	2,200	1,540	INCLUDED ABOVE		57
2332	Ellen P. Hubbell ES	Classroom 103	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
2333	Ellen P. Hubbell ES	Classroom 103	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	2,200	1,540	INCLUDED ABOVE		57
2335	Ellen P. Hubbell ES	Classroom 101	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
2336	Ellen P. Hubbell ES	Classroom 101	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	2,200	1,540	INCLUDED ABOVE		57
2338	Ellen P. Hubbell ES	Classroom 102	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
2339	Ellen P. Hubbell ES	Classroom 102	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	2,200	1,540	INCLUDED ABOVE		57
2341	Ellen P. Hubbell ES	Office Health Room	1	2L2' F36 BIAX/EL	trof acr	7	7	74	0.5	36 WATT LED/KIT	trof kit LED	7	38	0.3	2,000	1,400	OCC SENSOR CORNER MT. 2GANG	1	135
2342	Ellen P. Hubbell ES	Bath Health Room	1	1L4' T8 32w/EL	vanity	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	18
2343	Ellen P. Hubbell ES	Bath Staff	1	1L4' T8 32w/EL	vanity	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	18
2344	Ellen P. Hubbell ES	Storage Paper	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	22
2345	Ellen P. Hubbell ES	Mechanical Paper	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	11
2346	Ellen P. Hubbell ES	Library Media Center	1	2L2' F36 BIAX/EL	trof parabolic	9	9	74	0.7	36 WATT LED/KIT	trof kit LED	9	38	0.3	1,800	1,260	OCC SENSOR CEILING	1	156
2347	Ellen P. Hubbell ES	Library Media Center	1	2L2' F36 BIAX/EL	trof parabolic	12	12	74	0.9	36 WATT LED/KIT	trof kit LED	12	38	0.5	1,800	1,260	OCC SENSOR CORNER MT. DT 1GANG	1	208
2348	Ellen P. Hubbell ES	Library Media Center (2)	1	4L4' T8 32w/EL-8'	indirect/direct	4	4	112	0.4	4L4' T8 28w/ELEE LO-8'	rlrb LF	4	87	0.3	1,800	1,260	OCC SENSOR CORNER MT. 2GANG	2	160
2349	Ellen P. Hubbell ES	Library Media Center (2)	1	2L4' T8 32w/ELEE	indirect/direct	4	4	53	0.2	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	4	50	0.2	1,800	1,260	INCLUDED ABOVE		93
2350	Ellen P. Hubbell ES	Library Media Center (2)	1	2L3' T8 25w/EL	indirect/direct	8	8	47	0.4	2L3' T8 21w/ELEE LO	rlrb LF	8	42	0.3	1,800	1,260	INCLUDED ABOVE		154
2351	Ellen P. Hubbell ES	Storage Media Center	1	2L4' T8 32w/ELEE	strip	1	1	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	1	50	0.1	500	350	INCLUDED ABOVE		6
2352	Ellen P. Hubbell ES	Storage Bookroom 5	1	2L4' T8 32w/ELEE	trof acr 1' wide	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	13
2353	Ellen P. Hubbell ES	Office Library	1	2L2' F36 BIAX/EL	trof parabolic	2	2	74	0.1	36 WATT LED/KIT	trof kit LED	2	38	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	39
2354	Ellen P. Hubbell ES	Office 141 Psych	1	4L4' T8 32w/EL	trof acr	3	3	112	0.3	4L4' T8 28w/ELEE LO	rlrb LF	3	87	0.3	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	133
2355	Ellen P. Hubbell ES	Office 142	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	89
2356	Ellen P. Hubbell ES	Office 142	1	1L3' T12 25w EE/EEMAG	task strip	3	3	38	0.1	1L3' T8 21w/ELEE LO	rlrb LF	3	22	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	34
2357	Ellen P. Hubbell ES	Lounge 143 Staff	1	4L4' T8 32w/EL	trof acr	3	3	112	0.3	4L4' T8 28w/ELEE LO	rlrb LF	3	87	0.3	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	120
2358	Ellen P. Hubbell ES	Bath 143 Staff (2)	1	1L4' T8 32w/EL	vanity	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	2	35
2361	Ellen P. Hubbell ES	Storage Main	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	1,000	700	OCC SENSOR CEILING	1	44
2362	Ellen P. Hubbell ES	Locker Kitchen	1	2L2' F36 BIAX/EL	trof acr	1	1	74	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	29
2363	Ellen P. Hubbell ES	Bath Kitchen	1	2L2' F36 BIAX/EL	trof acr	1	1	74	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	29
2364	Ellen P. Hubbell ES	Hall Kitch-Caf	1	2L2' F36 BIAX/EL	trof acr	4	4	74	0.3	36 WATT LED/KIT	trof kit LED	4	38	0.2	3,000	2,100	OCC SENSOR WALLSWITCH 2GANG	1	116
2365	Ellen P. Hubbell ES	Hall Kitch-Caf	1	2L2' F36 BIAX/EL	trof acr	6	6	74	0.4	36 WATT LED/KIT	trof kit LED	6	38	0.2	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	174
2366	Ellen P. Hubbell ES	Cafeteria Main (4)	1	4L4' T8 32w/EL-8'	indirect/direct	8	8	112	0.9	4L4' T8 28w/ELEE LO-8'	rlrb LF	8	87	0.7	1,700	1,190	OCC. SENSOR ON HI BAY FIXTURE	8	302
2376	Ellen P. Hubbell ES	Gym Main	1	4L4' T5 HO/EL	high bay	22	22	234	5.1	98 WATT LED/NEW	new LED hibay wg	22	103	2.3	2,000	1,400	OCC. SENSOR ON HI BAY FIXTURE	22	1,155
2378	Ellen P. Hubbell ES	Office Phys Ed	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	44
2379	Ellen P. Hubbell ES	Storage Gymnasium	1	2L4' T8 32w/ELEE	trof acr 1' wide	2	2	53	0.1	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	2	50	0.1	1,000	700	OCC SENSOR CEILING	1	26
2380	Ellen P. Hubbell ES	Stage Main	1	2L4' T8 32w/ELEE	wrap	9	9	53	0.5	2L4' T8 28w/ELEE/RELAMP ONLY	relamp LF	9	50	0.5	1,600	1,120	OCC SENSOR CORNER MT.	1	185
2381	Ellen P. Hubbell ES	Stage Main	1	2x13W CF HARDWIRED	square recessed	2	2	30	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	1,600	1,120	INCLUDED ABOVE		14
2382	Ellen P. Hubbell ES	Office Open Main Waiting	1	2L2' F36 BIAX/EL	trof parabolic	5	5	74	0.4	36 WATT LED/KIT	trof kit LED	5	38	0.2	2,400	1,680	OCC SENSOR WALLSWITCH 2GANG	1	116
2383	Ellen P. Hubbell ES	Office Open Main Files	1	2L2' F36 BIAX/EL	trof parabolic	6	6	74	0.4	36 WATT LED/KIT	trof kit LED	6	38	0.2	2,400	1,680	OCC SENSOR CORNER MT.	1	139
2384	Ellen P. Hubbell ES	Office Staff	1	2L2' F36 BIAX/EL	trof parabolic	3	3	74	0.2	36 WATT LED/KIT	trof kit LED	3	38	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	58
2385	Ellen P. Hubbell ES	Office Principal	1	2L2' F36 BIAX/EL	trof parabolic	6	6	74	0.4	36 WATT LED/KIT	trof kit LED	6	38	0.2	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	116
2386	Ellen P. Hubbell ES	Lobby Main	1	2L2' F36 BIAX/EL	trof opaque	8	8	74	0.6	36 WATT LED/KIT	trof kit LED	8	38	0.3	3,000	2,100	OCC SENSOR WALLSWITCH 2GANG	1	231
2387	Ellen P. Hubbell ES	Lobby Main (4)	1	1L4' T8 32w/EL	trof acr 6" wide	16	16	30	0.5	1L4' T8 28w/ELEE LO	rlrb LF	16	23	0.4	3,000	2,100	INCLUDED ABOVE		283
2388	Ellen P. Hubbell ES	Hall Near Main Lobby	1	2L2' F36 BIAX/EL	trof opaque	6	6	74	0.4	36 WATT LED/KIT	trof kit LED	6	38	0.2	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	174
2389	Ellen P. Hubbell ES	Hall Near Main Lobby	1	1L4' T8 32w/EL	trof acr 6" wide	4	4	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	4	23	0.1	3,000	2,100	INCLUDED ABOVE		71
2438	Main Library	Storage To Roof	2	1L4' T8 32w/EL	strip	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	3
2462	Main Library	Storage Story Time Room	1	2L2' F40 BIAX/EL	indirect/direct	9	9	72	0.6	36 WATT LED/KIT	trof kit LED	9	38	0.3	1,000	700	OCC SENSOR WALLSWITCH 2GANG	1	102
2463	Main Library	Storage Story Time Room	1	2L2' F40 BIAX/EL	indirect/direct	19	19	72	1.4	36 WATT LED/KIT	trof kit LED	19	38	0.7	1,000	700	OCC SENSOR WALLSWITCH 2GANG	1	215
2545	Manross Library	Mechanical Boiler	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	13
2546	Manross Library	Storage Elect	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	13
2547	Manross Library	Storage Elect	1	26W CF SCREWIN	keyless	1	1	28	0.0	8 WATT LED SI	screw in LED Alamp	1	8	0.0	500	350	INCLUDED ABOVE		1
2548	Manross Library	Hall Near Mech	1	2L4' T8 32w/EL	trof acr 1' wide	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	2,600	1,820	OCC SENSOR CEILING	1	69
2550	Manross Library	Office Near Mech	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	1,800	1,260	OCC SENSOR CEILING	1	94
2551	Manross Library	Kitchen Near Mech	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	1,500	1,050	OCC SENSOR CEILING	1	78
2552	Manross Library	Office Near Librarian	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	94
2553	Manross Library	Office Librarian	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	94
2554	Manross Library	Storage To Stained Glass	1	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	5
2556	Manross Library	Storage To Stained Glass	1	13W CF HARDWIRED	jar	1		15	0.0	NO RETRO	no change		16	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	2
2569	Manross Library	Lobby Entry	1	28W CF HARDWIRED	can rec 6"	7	7	30	0.2	10 WATT LED/KIT	can kit LED Spectrum	7	11	0.1	2,600	1,820	OCC SENSOR WALLSWITCH 2GANG	1	57
2575	Manross Library	Lobby Basement	b	2L2' T8 17w/EL	trof acr	7	7	33	0.2	2L2' T8 15w/ELEE LO	rlrb LF	7	28	0.2	2,600	1,820	OCC SENSOR CEILING	1	155
2576	Manross Library	Lobby Basement	b	26W CF HARDWIRED	can rec 6"	3	3	28	0.1	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	2,600	1,820	INCLUDED ABOVE		25
2577	Manross Library	Lobby Basement	b	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	2,600	1,820	INCLUDED ABOVE		27
2578	Manross Library	Mechanical Basement	b	26W CF SCREWIN	keyless	1	1	28	0.0	8 WATT LED SI	screw in LED Alamp	1	8	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	1
2579	Manross Library	Bath Womans	b	2L4' T8 32w/EL	wrap wide	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	2,500	1,750	OCC SENSOR WALLSWITCH DT 1GANG	1	33
2580	Manross Library	Bath Mens	b	2L4' T8 32w/EL	wrap wide	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	2,500	1,750	OCC SENSOR WALLSWITCH DT 1GANG	1	33
2581	Manross Library	Storage Meeting Room	b	2L4' T8 32w U/EL	trof acr	10	10	60	0.6	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	10	35	0.3	1,000	700	OCC SENSOR CEILING	1	104
2582	Manross Library	Storage Meeting Room	b	2x18W CF HARDWIRED/EL	can eyeball rec	22		38	0.8	NO RETRO	no change		40	0.8	1,000	700	INCLUDED ABOVE		251
2583	Manross Library	Storage Meeting Room	b	2x26W CF HARDWIRED/EL	can rec 8"	4	4	54	0.2	15 WATT LED/KIT	can kit LED Spectrum	4	16	0.1	1,000	700	INCLUDED ABOVE		19
2584	Manross Library	Storage Meeting Room	b	2L4' T8 32w/EL	trof opaque	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	13
2592	Water Main Office & Garage	Storage Garage	1	2L4' T8 32w/EL	industrial	12	12	60	0.7	2L4' T8 28w/ELEE LO	rlrb LF	12	44	0.5	1,000	700	OCC. SENSOR ON HI BAY FIXTURE	12	159
2593	Water Main Office & Garage	Storage Garage	1	2L4' T8 32w/EL	industrial	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	1,000	700	OCC. SENSOR ON HI BAY FIXTURE	3	40
2599	Water Main Office & Garage	Office Joe	1	3 WATT LED	box acrylic	2		3	0.0	NO RETRO	no change		3	0.0	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	4
2602	Water Main Office & Garage	Office Staff	1	4L4' T8 32w/EL	box opaque	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	122

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	Annual Hours	Hours With Controls	*Control Description*	*Control Qty*	Control kWH Saved
2603	Water Main Office & Garage	Hall Lockers-Main Office	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	2,600	1,820	OCC SENSOR WALLSWITCH 1GANG	1	136
2604	Water Main Office & Garage	Hall Lockers-Main Office	1	4L4' T8 32w/EL	box opaque	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	2,600	1,820	OCC SENSOR WALLSWITCH 1GANG	1	68
2605	Water Main Office & Garage	Locker Staff	1	2L8' T12 60w EE/EEMAG	strip	3	3	123	0.4	2L4' T8 28w/ELEE HI/NEW-8'	new LF strip	3	67	0.2	2,600	1,820	OCC SENSOR CEILING	1	157
2606	Water Main Office & Garage	Storage Fittings	1	2L8' T12 60w EE/EEMAG	strip	2	2	123	0.2	2L4' T8 28w/ELEE HI/NEW-8'	new LF strip	2	67	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	40
2607	Water Main Office & Garage	Office Open Meters	1	4L4' T8 32w/EL	trof acr	9	9	112	1.0	4L4' T8 28w/ELEE LO	rlrb LF	9	87	0.8	2,860	2,002	OCC SENSOR CEILING	1	673
2608	Water Main Office & Garage	Bath Meters	1	2L4' T8 32w/EL	wrap	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	2,600	1,820	OCC SENSOR WALLSWITCH DT 1GANG	1	103
2609	Water Main Office & Garage	Office Open Plans	1	4L4' T8 32w/EL	trof acr	8	8	112	0.9	4L4' T8 28w/ELEE LO	rlrb LF	8	87	0.7	2,860	2,002	OCC SENSOR CEIL DT 1GANG	1	598
2610	Water Main Office & Garage	Foyer Plans	1	22W & 32W CIRCLELINE HARDWIRED	box opaque	1	1	58	0.1	16 WATT LED/NEW	new LED drum	1	17	0.0	2,600	1,820	OCC SENSOR WALLSWITCH 1GANG	1	13
2611	Water Main Office & Garage	Bath Women	1	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	2,600	1,820	OCC SENSOR WALLSWITCH 1GANG	1	52
2615	Water Main Office & Garage	Storage Safe	1	4L4' T8 32w/EL	box opaque	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	500	350	OCC SENSOR CEILING	1	26
2616	Water Main Office & Garage	Office Printers	1	4L4' T8 32w/EL	box opaque	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	2,340	1,638	OCC SENSOR CEILING	1	122
2626	Water Pollution Control Park	Office Open Operations	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	2,340	1,638	OCC SENSOR CEILING	1	124
2627	Water Pollution Control Park	Office Manager	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	2,200	1,540	OCC SENSOR WALLSWITCH 2GANG	1	58
2628	Water Pollution Control Park	Office Map	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	2,200	1,540	OCC SENSOR WALLSWITCH 1GANG	1	58
2630	Water Pollution Control Park	Lounge Staff	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	1,900	1,330	OCC SENSOR CEILING	1	101
2631	Water Pollution Control Park	Foyer To Basement	1	75W INCANDESCENT	can rec 6"	1	1	75	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	2,600	1,820	OCC SENSOR WALLSWITCH 1GANG	1	7
2632	Water Pollution Control Park	Bath Men	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	2,600	1,820	OCC SENSOR CEIL DT 1GANG	1	69
2633	Water Pollution Control Park	Locker Men	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	2,600	1,820	OCC SENSOR WALLSWITCH 1GANG	1	69
2635	Water Pollution Control Park	Storage Janitor	1	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	1
2636	Water Pollution Control Park	Bath Woman	1	2L4' T8 32w/EL	wrap	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	2,600	1,820	OCC SENSOR CEIL DT 1GANG	1	103
2637	Water Pollution Control Park	Bath Woman	1	2L4' T8 32w/EL	vapor tight	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	2,600	1,820	INCLUDED ABOVE		34
2638	Water Pollution Control Park	Lab Testing	1	2L4' T8 32w/EL	trof acr	7	7	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	7	44	0.3	2,080	1,456	OCC SENSOR CEILING	1	193
2639	Water Pollution Control Park	Office Testing	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	2,200	1,540	OCC SENSOR WALLSWITCH 1GANG	1	29
2640	Water Pollution Control Park	Storage Testing	1	2L4' T8 32w/EL	vapor tight	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	7
2663	Water Pollution Control Park	Storage Lawn Mowers	1	2L4' T8 32w/EL	vanity	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	13
2664	Water Pollution Control Park	Storage Elect	1	2L4' T8 32w/EL	vapor tight	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	26
2672	Water Pollution Control Park	Office Admin Bldg	1	4L4' T8 32w/EL-8'	trof parabolic	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	2,200	1,540	OCC SENSOR WALLSWITCH 2GANG	1	115
2673	Water Pollution Control Park	Office Brian	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	2,200	1,540	OCC SENSOR WALLSWITCH 2GANG	1	116
2674	Water Pollution Control Park	Bath Men (2)	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	2,600	1,820	OCC SENSOR WALLSWITCH DT 1GANG	2	69
2675	Water Pollution Control Park	Foyer Admin Bldg	1	18W CF HARDWIRED	can rec 6"	4	4	20	0.1	10 WATT LED/KIT	can kit LED Spectrum	4	11	0.0	2,600	1,820	OCC SENSOR WALLSWITCH 1GANG	1	33
2676	Water Pollution Control Park	Conference Admin Bldg	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	2,200	1,540	OCC SENSOR WALLSWITCH 2GANG	1	116
2678	Water Pollution Control Park	Storage Files	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	1,000	700	OCC SENSOR WALLSWITCH 2GANG	1	26
2679	Water Pollution Control Park	Foyer Rear	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	2,600	1,820	OCC SENSOR WALLSWITCH 1GANG	1	34
2689	City Yard	Lobby Main Entry	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	2,600	1,820	OCC SENSOR WALLSWITCH 2GANG	1	48
2690	City Yard	Lobby Main Entry	1	1L4' T8 32w/EL	wrap narrow	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	2,600	1,820	INCLUDED ABOVE		13
2691	City Yard	Office Dispatch	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	2,200	1,540	OCC SENSOR WALLSWITCH 1GANG	1	41
2692	City Yard	Storage Supplies	1	1L4' T8 32w/EL	wrap narrow	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	5
2693	City Yard	Office Dispatch	1	2L4' T8 32w/EL	trof acr 1' wide	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	2,804	1,963	OCC SENSOR WALLSWITCH 1GANG	1	26
2694	City Yard	Bath Executive	1	1L4' T8 32w/EL	wrap narrow	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	2,600	1,820	OCC SENSOR WALLSWITCH 1GANG	1	13
2695	City Yard	Office Solid Waste	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	2,628	1,840	OCC SENSOR WALLSWITCH 1GANG	1	49
2696	City Yard	Office Streets	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	2,200	1,540	OCC SENSOR WALLSWITCH 1GANG	1	41
2697	City Yard	Lounge Staff	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	1,900	1,330	OCC SENSOR WALLSWITCH 1GANG	1	35
2698	City Yard	Lounge Lunch Room	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	1,900	1,330	OCC SENSOR WALLSWITCH 1GANG	1	70
2699	City Yard	Storage Chain Room	1	2L4' T8 32w/EL	industrial	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	500	350	OCC SENSOR WALLSWITCH 1GANG	1	19
2700	City Yard	Storage Main Garage	1	4L4' T5 HO/EL	high bay	18	18	234	4.2	98 WATT LED/NEW	new LED hibay wg	18	103	1.9	1,000	700	OCC. SENSOR ON HI BAY FIXTURE	18	389
2704	City Yard	Locker Main	1	2L4' T8 32w/EL	trof acr 1' wide	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	2,600	1,820	OCC SENSOR WALLSWITCH 1GANG	1	96
2705	City Yard	Bath Men	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	2,600	1,820	OCC SENSOR WALLSWITCH DT 1GANG	1	48
2706	City Yard	Storage Tool Room	1	2L4' T8 32w/EL	industrial	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	1,000	700	OCC SENSOR CEILING	1	28
2707	City Yard	Shop Signs	1	2L4' T8 32w/EL-8'	industrial	6	6	60	0.4	2L4' T8 28w/ELEE LO-8'	rlrb LF	6	44	0.3	2,340	1,638	OCC SENSOR CEILING	1	130
2710	City Yard	Shop Oil Storage	1	2L4' T8 32w/EL-8'	industrial	4	4	60	0.2	2L4' T8 28w/ELEE LO-8'	rlrb LF	4	44	0.2	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	87
2711	City Yard	Hall Mechanics Garage	1	2L4' T8 32w/EL-8'	industrial	1	1	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	1	44	0.0	2,600	1,820	OCC SENSOR WALLSWITCH 1GANG	1	24
2712	City Yard	Office Mechanics Garage	1	2L4' T8 32w/EL-8'	industrial	2	2	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	2	44	0.1	2,200	1,540	OCC SENSOR WALLSWITCH 1GANG	1	41
2713	City Yard	Office Mechanics Garage	1	1L4' T8 32w/EL	industrial	3	3	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	3	23	0.1	2,200	1,540	INCLUDED ABOVE		32
2714	City Yard	Shop Mechanics Garage	1	4L4' T5 HO/EL	high bay	29	29	234	6.8	98 WATT LED/NEW	new LED hibay wg	29	103	3.0	2,340	1,638	OCC. SENSOR ON HI BAY FIXTURE	29	1,466
2715	City Yard	Office Fleet Super	2	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	2,200	1,540	OCC SENSOR WALLSWITCH 1GANG	1	41
2716	City Yard	Storage Parts	2	2L4' T8 32w/EL	industrial	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	1,000	700	OCC SENSOR CEIL DT 1GANG	1	74
2717	City Yard	Storage Parts	2	2L4' T8 32w/EL-8'	industrial	2	2	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	2	44	0.1	1,000	700	INCLUDED ABOVE		19
2718	City Yard	Shop Fab	2	2L4' T8 32w/EL	industrial	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	2,340	1,638	OCC SENSOR CEIL DT 1GANG	1	173
2719	City Yard	Shop Fab	2	2L4' T8 32w/EL-8'	industrial	2	2	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	2	44	0.1	2,340	1,638	INCLUDED ABOVE		43
2720	City Yard	Office Johnny	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	2,200	1,540	OCC SENSOR WALLSWITCH 1GANG	1	81
2721	City Yard	Shop Fab	2	4L4' T8 32w/EL-8'	industrial	5	5	112	0.6	4L4' T8 28w/ELEE LO-8'	rlrb LF	5	87	0.4	2,340	1,638	OCC SENSOR CEILING	1	214
2725	City Yard	Storage Quonsett Hut	1	2L4' T8 32w/EL	industrial	15	15	60	0.9	2L4' T8 28w/ELEE LO	rlrb LF	15	44	0.7	1,000	700	OCC. SENSOR ON HI BAY FIXTURE	15	139
2736	Transfer Stations - Lake Ave	Storage Quonset	1	400W HI PRESSURE SODIUM	lowbay	6	6	460	2.8	107 WATT LED/NEW	new LED canopy	6	112	0.7	1,000	700	OCC. SENSOR ON HI BAY FIXTURE	6	202
2739	Transfer Stations - Lake Ave	Storage Attendant Shack Brown	1	2L4' T12 34w EE/EEMAG	wrap	1	1	70	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	7
2740	Transfer Stations - Lake Ave	Storage Attendant Shack Brown	1	2L4' T12 34w EE/EEMAG	wrap	1	1	70	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	7
2743	Transfer Stations - Lake Ave	Office Trailer	1	4L4' T8 32w/EL	trof acr	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	2,200	1,540	OCC SENSOR WALLSWITCH 1GANG	1	230
2744	Transfer Stations - Lake Ave	Bath Trailer	1	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	2,132	1,492	OCC SENSOR WALLSWITCH 1GANG	1	22
2745	Transfer Stations - Lake Ave	Office Main	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	2,200	1,540	OCC SENSOR WALLSWITCH 1GANG	1	115
2747	Transfer Stations - Lake Ave	Office Scale House	1	4L4' T8 32w/EL	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	2,200	1,540	OCC SENSOR WALLSWITCH 1GANG	1	58
2749	Animal Control	Office Main	1	2L4' T8 32w/EL	wrap	5	5	60	0.3	2L4' T8 28w/ELEE LO	rlrb LF	5	44	0.2	500	350	OCC SENSOR WALLSWITCH 1GANG	1	33
2750	Animal Control	Bath Main	1	2x60W INCANDESCENTS	vanity	1	1	120	0.1	1L2' T8 15w/ELEE LO/NEW	new LF vanity	1	15	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	2
2751	Animal Control	Hall To Kennel	1	2L4' T8 32w/EL	wrap	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	20
2752	Animal Control	Mechanical Furnace	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	250	175	OCC SENSOR WALLSWITCH 1GANG	1	3
2753	Animal Control	Storage Janitor	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	7
2755	Animal Control	Kitchen Quarantine	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	13
2758	Animal Control	Hall By Kennel 2-3	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	7
2774	Fire Head Quarters	Hall By Front Offices	1	4L4' T8 32w/EL	trof acr	3	3	112	0.3	4L4' T8 28w/ELEE LO	rlrb LF	3	87	0.3	2,500	1,750	OCC SENSOR CEILING	1	216
2775	Fire Head Quarters	Bath By Front Offices	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	2,500	1,750	OCC SENSOR WALLSWITCH 1GANG	1	144
2776	Fire Head Quarters	Office Admin	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	3,000	2,100	OCC SENSOR CEILING	1	173
2777	Fire Head Quarters	Office Chief	1	4L4' T8 32w/EL	trof acr	6	6	112	0.7	4L4' T8 28w/ELEE LO	rlrb LF	6	87	0.5	3,000	2,100	OCC SENSOR CEILING	1	518
2778	Fire Head Quarters	Office Fire Marshal	1	4L4' T8 32w/EL	trof acr	8	8	112	0.9	4L4' T8 28w/ELEE LO	rlrb LF	8	87	0.7	3,000	2,100	OCC SENSOR CORNER MT.	1	690
2779	Fire Head Quarters	Storage Files	1	4L4' T8 32w/EL	trof acr	3	3	112	0.3	4L4' T8 28w/ELEE LO	rlrb LF	3	87	0.3	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	86

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	Annual Hours	Hours With Controls	*Control Description*	*Control Qty*	Control kWH Saved
2780	Fire Head Quarters	Office Fire Prevention	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	3,000	2,100	OCC SENSOR CEILING	1	173
2781	Fire Head Quarters	Office Plans	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	86
2782	Fire Head Quarters	Shop Mechanics Bay	1	4L4' T5 HO/EL	lowbay	5	5	234	1.2	98 WATT LED/NEW	new LED hibay wg	5	103	0.5	2,340	1,638	OCC. SENSOR ON HI BAY FIXTURE	5	397
2783	Fire Head Quarters	Office Mechanics Bay	1	4L4' T8 32w/EL-8'	industrial	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	3,000	2,100	OCC SENSOR WALLSWITCH 2GANG	1	173
2784	Fire Head Quarters	Storage Oil	1	300W INCANDESCENT	keyless	1	1	300	0.3	19 WATT LED SI	screw in LED Alamp	1	20	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	3
2785	Fire Head Quarters	Storage Parts	1	300W INCANDESCENT	keyless	1	1	300	0.3	19 WATT LED SI	screw in LED Alamp	1	20	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	3
2787	Fire Head Quarters	Lounge Staff	2	4L4' T8 32w/EL	trof acr	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	1,900	1,330	OCC SENSOR CEILING	1	219
2790	Fire Head Quarters	Kitchen Main	2	4L4' T8 32w/EL	trof acr	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	1,500	1,050	OCC SENSOR CEILING	1	173
2794	Fire Head Quarters	Bath Near Sleeping Quarters	2	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	2,500	1,750	OCC SENSOR WALLSWITCH DT 1GANG	1	72
2795	Fire Head Quarters	Bath Near Sleeping Quarters	2	1L2' T12 20w STD/STD	strip	1	1	32	0.0	1L2' T8 15w/ELEE LO	rlrb LF	1	15	0.0	2,500	1,750	INCLUDED ABOVE		12
2796	Fire Head Quarters	Bedroom Sleeping Quarters Private (3)	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	4L4' T8 28w/ELEE LO	rlrb LF	3	87	0.3	1,300	910	OCC SENSOR WALLSWITCH 1GANG	3	112
2797	Fire Head Quarters	Bedroom Open Quarters	2	4L4' T8 32w/EL	trof acr	10	10	112	1.1	4L4' T8 28w/ELEE LO	rlrb LF	10	87	0.9	1,300	910	OCC SENSOR CEILING	1	374
2798	Fire Head Quarters	Hall Near Kitchen	2	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	2,500	1,750	OCC SENSOR CEILING	1	72
2799	Fire Head Quarters	Locker All	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	4L4' T8 28w/ELEE LO	rlrb LF	3	87	0.3	2,500	1,750	OCC SENSOR CEILING	1	216
2800	Fire Head Quarters	Hall Near Locker	2	4L4' T8 32w/EL	trof acr	1	1	112	0.1	4L4' T8 28w/ELEE LO	rlrb LF	1	87	0.1	2,500	1,750	OCC SENSOR WALLSWITCH 1GANG	1	72
2801	Fire Head Quarters	Bath Near Locker	2	2L4' T8 32w U/EL	trof acr	3	3	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	2,500	1,750	OCC SENSOR CEIL DT 1GANG	1	86
2802	Fire Head Quarters	Bath Near Locker	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	2,500	1,750	INCLUDED ABOVE		144
2803	Fire Head Quarters	Bath Near Locker	2	1L4' T8 32w/EL	vanity	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	2,500	1,750	INCLUDED ABOVE		19
2806	Fire Head Quarters	Mechanical Boiler	1	60W INCANDESCENT	keyless	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	3
2807	Engine 2	Office Main	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	2,804	1,963	OCC SENSOR WALLSWITCH 1GANG	1	78
2808	Engine 2	Lounge Main	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	1,900	1,330	OCC SENSOR WALLSWITCH 1GANG	1	53
2809	Engine 2	Kitchen Main	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	1,500	1,050	OCC SENSOR CEILING	1	42
2812	Engine 2	Bedroom Sleeping Quarters	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	1,300	910	OCC SENSOR CEILING	1	36
2814	Engine 2	Storage Fire Alarm Bureau	1	2L4' T8 32w/EL-8'	industrial	3	3	60	0.2	2L4' T8 28w/ELEE LO-8'	rlrb LF	3	44	0.1	1,000	700	OCC SENSOR CEILING	1	42
2816	Engine 2	Storage Special Ops Truck	1	4L4' T8 32w/EL-8'	industrial	5	5	112	0.6	4L4' T8 28w/ELEE LO-8'	rlrb LF	5	87	0.4	1,000	700	OCC SENSOR CORNER MT.	1	137
2820	Engine 2	Mechanical Boiler	1	60W INCANDESCENT	keyless	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	3
2821	Engine 5	Office Main	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	83
2822	Engine 5	Lounge Staff	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	1,900	1,330	OCC SENSOR CEILING	1	53
2823	Engine 5	Kitchen Main	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	1,500	1,050	OCC SENSOR WALLSWITCH 1GANG	1	42
2824	Engine 5	Storage Janitor	1	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	1
2825	Engine 5	Bath Staff	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	2,500	1,750	OCC SENSOR WALLSWITCH DT 1GANG	1	35
2826	Engine 5	Bath Staff	1	2x13W CF HARDWIRED	vanity	1		30	0.0	NO RETRO	no change		32	0.0	2,500	1,750	INCLUDED ABOVE		24
2827	Engine 5	Bedroom Sleeping Quarters	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	1,300	910	OCC SENSOR WALLSWITCH 2GANG	1	36
2828	Engine 5	Storage Trucks	1	2L4' T8 32w/EL-8'	industrial	16	16	60	1.0	2L4' T8 28w/ELEE LO-8'	rlrb LF	16	44	0.7	1,000	700	OCC. SENSOR ON HI BAY FIXTURE	16	222
2831	Engine 5	Mechanical Boiler	1	60W INCANDESCENT	keyless	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	3
2832	Engine 3	Office Main	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	42
2833	Engine 3	Lounge Staff	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	1,900	1,330	OCC SENSOR WALLSWITCH 1GANG	1	53
2834	Engine 3	Hall Main	1	1L4' T8 32w/EL	vanity	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	2,500	1,750	OCC SENSOR WALLSWITCH 1GANG	1	36
2835	Engine 3	Kitchen Main	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	1,500	1,050	OCC SENSOR WALLSWITCH 1GANG	1	42
2838	Engine 3	Bath Main	1	1L2' 24W T5HO/EL	vanity	1		29	0.0	NO RETRO	no change -specialized fixture		30	0.0	2,500	1,750	OCC SENSOR WALLSWITCH DT 1GANG	1	23
2839	Engine 3	Bedroom Sleeping Quarters	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	1,300	910	OCC SENSOR CEILING	1	36
2841	Engine 3	Storage Janitor	1	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	1
2845	Engine 3	Mechanical Boiler	1	60W INCANDESCENT	keyless	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	3
2846	Youth Services Building	Lobby Main	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	2,600	1,820	OCC SENSOR WALLSWITCH 1GANG	1	43
2847	Youth Services Building	Hall Main	1	2L4' T8 32w U/EL	trof acr	6	6	60	0.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	6	35	0.2	2,600	1,820	OCC SENSOR CEILING	1	130
2848	Youth Services Building	Office Reception	1	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	15
2849	Youth Services Building	Bath Near Recept	1	13W CF HARDWIRED	square surface mt.	1		15	0.0	NO RETRO	no change		16	0.0	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	8
2850	Youth Services Building	Office Cindy'S	1	2L4' T8 32w U/EL	trof acr	4	4	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	60
2851	Youth Services Building	Conference Staff	1	2L4' T8 32w U/EL	trof acr	10	10	60	0.6	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	10	35	0.3	1,800	1,260	OCC SENSOR WALLSWITCH 2GANG	1	150
2852	Youth Services Building	Office Director	1	2L4' T8 32w U/EL	trof acr	4	4	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	60
2853	Youth Services Building	Office Alison	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	30
2854	Youth Services Building	Office Front	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	30
2855	Youth Services Building	Hall Victorian Side	1	2L4' T8 32w U/EL	trof acr	15	15	60	0.9	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	15	35	0.5	2,600	1,820	OCC SENSOR CEILING	1	324
2856	Youth Services Building	Lounge Front	1	2L4' T8 32w U/EL	trof acr	8	8	60	0.5	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	8	35	0.3	1,900	1,330	OCC SENSOR WALLSWITCH 2GANG	1	126
2857	Youth Services Building	Storage Tv Cart	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	8
2858	Youth Services Building	Storage Files	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	8
2859	Youth Services Building	Lounge Rear	1	2L4' T8 32w U/EL	trof acr	4	4	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	1,900	1,330	OCC SENSOR WALLSWITCH 1GANG	1	63
2860	Youth Services Building	Storage Day Care	1	2L4' T8 32w U/EL	trof acr	9	9	60	0.5	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	9	35	0.3	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	75
2861	Youth Services Building	Storage Janitor	1	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	4
2862	Youth Services Building	Bath Staff (2)	1	13W CF HARDWIRED	square surface mt.	2		15	0.0	NO RETRO	no change		16	0.0	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	2	17
2863	Youth Services Building	Bath Mf	1	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	19
2864	Youth Services Building	Storage Paper	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	8
2865	Youth Services Building	Office Near Kitchen	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	30
2866	Youth Services Building	Kitchen Near Kitchen	1	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	1,500	1,050	OCC SENSOR WALLSWITCH 1GANG	1	12
2869	Youth Services Building	Office Open Main	1	2L4' T8 32w U/EL	trof parabolic	3	3	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	58
2870	Youth Services Building	Office Open Waiting	1	2L4' T8 32w U/EL	trof parabolic	4	4	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	78
2871	Youth Services Building	Office Dr.	1	2L4' T8 32w U/EL	trof parabolic	4	4	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	60
2872	Youth Services Building	Storage Files	1	2L4' T8 32w U/EL	trof parabolic	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	8
2873	Youth Services Building	Bath Hc	1	2L4' T8 32w U/EL	trof parabolic	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	19
2874	Youth Services Building	Bath Hc	1	2L4' T12 34w U EE/EEMAG	trof parabolic	1	1	70	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	2,340	1,638	INCLUDED ABOVE		19
2875	Youth Services Building	Storage Janitor	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	1
2876	Youth Services Building	Storage Files	1	2L4' T8 32w U/EL	trof parabolic	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	8
2877	Youth Services Building	Office Exam Room	1	2L4' T8 32w U/EL	trof parabolic	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	30
2878	Youth Services Building	Office Exam Room	1	2L4' T8 32w U/EL	trof parabolic	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 2GANG	1	30
2879	Youth Services Building	Hall Exam Rooms-Oo-Stair	1	2L4' T8 32w U/EL	trof parabolic	4	4	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	2,600	1,820	OCC SENSOR CEILING	1	86
2881	Youth Services Building	Stair Front Building Entry	stair	2L4' T8 32w U/EL	trof acr	3	3	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	2,600	1,820	OCC SENSOR CORNER MT.	1	65
2882	Youth Services Building	Lounge Sitting	2	2L4' T8 32w U/EL	trof acr	4	4	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	1,900	1,330	OCC SENSOR WALLSWITCH 1GANG	1	63
2883	Youth Services Building	Kitchen Sitting	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	1,500	1,050	OCC SENSOR WALLSWITCH 1GANG	1	25
2884	Youth Services Building	Office Caitlin	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	30
2885	Youth Services Building	Conference Quilt	2	2L4' T8 32w U/EL	trof acr	6	6	60	0.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	6	35	0.2	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	90
2886	Youth Services Building	Office Liz	2	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	15
2887	Youth Services Building	Conference Rear	2	2L4' T8 32w U/EL	trof acr	6	6	60	0.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	6	35	0.2	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	90

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	Annual Hours	Hours With Controls	*Control Description*	*Control Qty*	Control kWH Saved
2888	Youth Services Building	Hall 2Nd Fl	2	2L4' T8 32w U/EL	trof acr	6	6	60	0.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	6	35	0.2	2,600	1,820	OCC SENSOR CORNER MT.	1	130
2889	Youth Services Building	Hall Back	2	2L4' T8 32w U/EL	trof acr	5	5	60	0.3	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	5	35	0.2	2,600	1,820	OCC SENSOR CORNER MT.	1	108
2890	Youth Services Building	Bath Back	2	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	5
2891	Youth Services Building	Office Back	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	30
2892	Youth Services Building	Conference Back	2	2L4' T8 32w U/EL	trof acr	6	6	60	0.4	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	6	35	0.2	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	90
2903	Beals Senior Center	Office Main Office Boe	1 boe	4L4' T8 32w/EL	trof acr	4	4	112	0.4	4L4' T8 28w/ELEE LO	rlrb LF	4	87	0.3	1,800	1,260	OCC SENSOR CEILING	1	188
2904	Beals Senior Center	Storage Server	1 boe	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	10
2905	Beals Senior Center	Bath Staff	1 boe	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	31
2906	Beals Senior Center	Bath Staff (2)	1 boe	3L4' T8 32w/EL	trof parabolic	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	2,340	1,638	OCC SENSOR CEIL DT 1GANG	2	186
2907	Beals Senior Center	Bath Staff (2)	1 boe	2L2' T8 17w/EL	trof parabolic	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	2,340	1,638	INCLUDED ABOVE		40
2909	Beals Senior Center	Bath 13	1 boe	2x13W CF HARDWIRED	drum	1	1	30	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	12
2920	Beals Senior Center	Bath 16B	1 boe	2x13W CF HARDWIRED	old drum	1	1	30	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	12
2926	Beals Senior Center	Hall Main	1 boe	4L4' T8 32w/EL	trof acr	14	14	112	1.6	4L4' T8 28w/ELEE LO	rlrb LF	14	87	1.2	2,860	2,002	OCC SENSOR CORNER MT.	1	1,047
2928	Beals Senior Center	Storage Chairs	1 senior center	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	5
2931	Beals Senior Center	Office Med Specialist	1 senior center	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	71
2932	Beals Senior Center	Bath Staff	1 senior center	2L2' T8 17w/EL	trof parabolic	1	1	33	0.0	2L2' T8 15w/ELEE LO	rlrb LF	1	28	0.0	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	20
2933	Beals Senior Center	Storage Elect	1 senior center	2L4' T8 32w/EL	trof parabolic	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	500	350	OCC SENSOR CEILING	1	7
2934	Beals Senior Center	Lounge Staff	1 senior center	3L4' T8 32w/EL	trof parabolic	3	3	88	0.3	3L4' T8 28w/ELEE LO	rlrb LF	3	66	0.2	1,900	1,330	OCC SENSOR WALLSWITCH 1GANG	1	113
2936	Beals Senior Center	Bath Women	1 senior center	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	46
2937	Beals Senior Center	Bath Men	1 senior center	2L4' T8 32w U/EL	trof parabolic	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	24
2939	Beals Senior Center	Storage Ping Pong	1 senior center	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	10
2947	Beals Senior Center	Office Dir Nursing	1 senior center	2L4' T8 32w/EL	trof parabolic	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	1,800	1,260	OCC SENSOR CEILING	1	48
2951	Beals Senior Center	Bath Women	1 senior center	2L4' T8 32w/EL	trof parabolic	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	2,340	1,638	OCC SENSOR CEIL DT 1GANG	1	93
2952	Beals Senior Center	Bath Men	1 senior center	2L4' T8 32w/EL	trof parabolic	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	2,340	1,638	OCC SENSOR CEIL DT 1GANG	1	93
2953	Beals Senior Center	Storage Maint	1 senior center	2L4' T8 32w/EL	trof parabolic	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	7
2954	Beals Senior Center	Hall Health	1 senior center	4L4' T8 32w/EL-8'	trof parabolic	23	23	112	2.6	4L4' T8 28w/ELEE LO-8'	rlrb LF	23	87	2.0	2,860	2,002	OCC SENSOR CEILING	1	1,720
2955	Beals Senior Center	Hall Health	1 senior center	4L3' T8 25w/EL-6'	trof parabolic	2	2	88	0.2	4L3' T8 21w/ELEE LO-6'	rlrb LF	2	84	0.2	2,860	2,002	INCLUDED ABOVE		144
2956	Beals Senior Center	Hall Health	1 senior center	2L3' T8 25w/EL	trof parabolic	2	2	47	0.1	2L3' T8 21w/ELEE LO	rlrb LF	2	42	0.1	2,860	2,002	INCLUDED ABOVE		72
2962	Beals Senior Center	Stage Main	1 senior center	2L4' T8 32w/EL	trof parabolic	12	12	60	0.7	2L4' T8 28w/ELEE LO	rlrb LF	12	44	0.5	2,340	1,638	OCC SENSOR CEILING	1	371
2963	Beals Senior Center	Stage Main	1 senior center	75W INCANDESCENT	track can	5	5	75	0.4	8 WATT LED SI	screw in LED par20	5	8	0.0	2,340	1,638	INCLUDED ABOVE		29
2964	Beals Senior Center	Office Nutrition	1 senior center	2L4' T8 32w/EL	trof parabolic	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	48
2965	Beals Senior Center	Office Maint6	1 senior center	2L4' T8 32w/EL	trof parabolic	6	6	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	6	44	0.3	1,800	1,260	OCC SENSOR CEILING	1	143
2967	Beals Senior Center	Kitchen Ice	1 senior center	2L4' T8 32w/EL	trof parabolic	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	31
2968	Beals Senior Center	Storage Plates	1 senior center	2L4' T8 32w/EL	trof parabolic	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	13
2971	Beals Senior Center	Hall To Billiards	1 senior center	4L4' T8 32w/EL-8'	valance	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	2,860	2,002	OCC SENSOR CEILING	1	224
2972	Beals Senior Center	Hall To Billiards	1 senior center	2L3' T8 25w/EL	valance	1	1	47	0.0	2L3' T8 21w/ELEE LO	rlrb LF	1	42	0.0	2,860	2,002	INCLUDED ABOVE		36
2973	Beals Senior Center	Hall To Billiards	1 senior center	2L4' T8 32w/EL	valance	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	2,860	2,002	INCLUDED ABOVE		76
2976	Beals Senior Center	Gym Main	1 senior center	4L4' T5 HO/EL	high bay	24	24	234	5.6	98 WATT LED/NEW	new LED hibay wg	24	103	2.5	1,820	1,274	OCC. SENSOR ON HI BAY FIXTURE	24	1,348
2979	Beals Senior Center	Bath Men (2)	1 senior center	2L4' T8 32w/EL	trof parabolic	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	2	62
2980	Beals Senior Center	Storage Shower	1 senior center	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	5
2983	Beals Senior Center	Bath Men	1 senior center	2L4' T8 32w/EL	trof parabolic	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	2,340	1,638	OCC SENSOR CEIL DT 1GANG	1	93
2984	Beals Senior Center	Bath Ladies	1 senior center	2L4' T8 32w/EL	trof parabolic	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	2,340	1,638	OCC SENSOR CEIL DT 1GANG	1	93
2986	Beals Senior Center	Storage Janitor	1 senior center	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	5
2989	Beals Senior Center	Lobby Wood Shop	1 senior center	2L4' T8 32w U/EL	trof parabolic	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	30
2990	Beals Senior Center	Storage Drill Press	1 senior center	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	13
2993	Beals Senior Center	Classroom 104	1 senior center	2L4' T8 32w/EL	trof parabolic	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	2,340	1,638	OCC SENSOR CEILING	1	248
2997	Beals Senior Center	Cafeteria Coffee	1 senior center	2L4' T8 32w/EL	trof parabolic	9	9	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	9	44	0.4	2,340	1,638	OCC SENSOR CEILING	1	279
2998	Beals Senior Center	Retail Tag Sale	1 senior center	3L4' T8 32w/EL	trof parabolic	3	3	88	0.3	3L4' T8 28w/ELEE LO	rlrb LF	3	66	0.2	2,340	1,638	OCC SENSOR CEILING	1	139
3003	Beals Senior Center	Office Open Clinic	1 senior center	3L4' T8 32w/EL	trof parabolic	3	3	88	0.3	3L4' T8 28w/ELEE LO	rlrb LF	3	66	0.2	2,340	1,638	OCC SENSOR CEILING	1	139
3004	Beals Senior Center	Bath Clinic	1 senior center	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	31
3005	Beals Senior Center	Storage Compressor	1 senior center	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	7
3006	Beals Senior Center	Storage Supplies	1 senior center	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	20
3007	Beals Senior Center	Office Dental	1 senior center	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	36
3008	Beals Senior Center	Office Exam A	1 senior center	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	36
3009	Beals Senior Center	Office Aprn	1 senior center	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	36
3010	Beals Senior Center	Office Exam B	1 senior center	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	1,800	1,260	OCC SENSOR CEILING	1	36
3011	Beals Senior Center	Kitchen Near Exam Rooms	1 senior center	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	46
3013	Beals Senior Center	Hall Clinic - Conf 101	1 senior center	4L4' T8 32w/EL-8'	valance	15	15	112	1.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	15	87	1.3	2,860	2,002	OCC SENSOR CEILING	1	1,122
3015	Beals Senior Center	Hall Adjacent To Maint Office	1 senior center	4L4' T8 32w/EL-8'	valance	5	5	112	0.6	4L4' T8 28w/ELEE LO-8'	rlrb LF	5	87	0.4	2,860	2,002	OCC SENSOR CEILING	1	374
3016	Beals Senior Center	Hall Adjacent To Maint Office	1 senior center	2L3' T8 25w/EL	valance	1	1	47	0.0	2L3' T8 21w/ELEE LO	rlrb LF	1	42	0.0	2,860	2,002	INCLUDED ABOVE		36
3017	Beals Senior Center	Hall Conf 101 - K	1 senior center	4L4' T8 32w/EL-8'	valance	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	2,860	2,002	OCC SENSOR CEILING	1	150
3018	Beals Senior Center	Hall Conf 101 - K	1 senior center	2L4' T8 32w/EL	valance	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	2,860	2,002	INCLUDED ABOVE		38
3019	Beals Senior Center	Hall Adj To Art	1 senior center	4L4' T8 32w/EL-8'	valance	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	2,860	2,002	OCC SENSOR CEILING	1	224
3020	Beals Senior Center	Hall Adj To Art	1 senior center	2L4' T8 32w/EL	valance	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	2,860	2,002	INCLUDED ABOVE		38
3021	Beals Senior Center	Hall K - Billiards	1 senior center	4L4' T8 32w/EL-8'	valance	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,860	2,002	OCC SENSOR CEILING	1	673
3022	Beals Senior Center	Hall K - Billiards	1 senior center	2L4' T8 32w/EL	valance	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	2,860	2,002	INCLUDED ABOVE		38
3023	Beals Senior Center	Hall K - Billiards	1 senior center	2L3' T8 25w/EL	valance	1	1	47	0.0	2L3' T8 21w/ELEE LO	rlrb LF	1	42	0.0	2,860	2,002	INCLUDED ABOVE		36
3025	Beals Senior Center	Hall K - Main Entry	1 senior center	4L4' T8 32w/EL-8'	valance	10	10	112	1.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	10	87	0.9	2,860	2,002	OCC SENSOR CEILING	1	748
3026	Beals Senior Center	Hall K - Main Entry	1 senior center	4L3' T8 25w/EL-6'	valance	1	1	88	0.1	4L3' T8 21w/ELEE LO-6'	rlrb LF	1	84	0.1	2,860	2,002	INCLUDED ABOVE		72
3027	Beals Senior Center	Hall K - Main Entry	1 senior center	2L2' T8 17w/EL	trof parabolic	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	2,860	2,002	INCLUDED ABOVE		49
3041	Dennis Malone Aquatic Center	Locker Mens Vestibule	1	13W CF HARDWIRED	can rec 6"	1		15	0.0	NO RETRO	no change		16	0.0	5,278	3,695	OCC SENSOR WALLSWITCH 1GANG	1	23
3042	Dennis Malone Aquatic Center	Storage Fire Alarm	1	60W INCANDESCENT	drum	1	1	60	0.1	16 WATT LED/NEW	new LED drum	1	17	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	2
3046	Dennis Malone Aquatic Center	Locker Men	1	13W CF HARDWIRED	can rec 6"	1		15	0.0	NO RETRO	no change		16	0.0	5,278	3,695	OCC SENSOR CEIL DT 1GANG	1	23
3049	Dennis Malone Aquatic Center	Locker Womans	1	13W CF HARDWIRED	can rec 6"	5		15	0.1	NO RETRO	no change		16	0.1	5,278	3,695	OCC SENSOR CEIL DT 1GANG	1	113
3051	Dennis Malone Aquatic Center	Locker Staff	1	2L4' T8 32w/EL	wrap	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	5,278	3,695	OCC SENSOR CEILING	1	199
3052	Dennis Malone Aquatic Center	Bath Staff	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	5,278	3,695	OCC SENSOR WALLSWITCH 1GANG	1	66
3053	Dennis Malone Aquatic Center	Bath Shower	1	18W CF HARDWIRED	box acrylic	2	2	20	0.0	16 WATT LED/NEW	new LED drum	2	17	0.0	5,278	3,695	OCC SENSOR WALLSWITCH 1GANG	1	51
3056	Dennis Malone Aquatic Center	Locker Changing	1	4L4' T8 32w/EL-8'	vanity	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	5,278	3,695	OCC SENSOR WALLSWITCH DT 1GANG	1	131
3057	Dennis Malone Aquatic Center	Storage Air Handler	1	4L4' T8 32w/EL-8'	industrial	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	50
3060	Dennis Malone Aquatic Center	Storage Janitor	1	1L4' T8 32w/EL	industrial	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	3
3061	Dennis Malone Aquatic Center	Storage Chairs	1	1L4' T8 32w/EL	industrial	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	1,000	700	OCC SENSOR CORNER MT.	1	13
3062	Dennis Malone Aquatic Center	Office Front	1	65W INCANDESCENT	can rec 6"	6	6	65	0.4	8 WATT LED SI	screw in LED Alamp	6	8	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	26

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	Annual Hours	Hours With Controls	*Control Description*	*Control Qty*	Control kWH Saved
3066	Water Filtration Plant & High Service Pump Station	Storage Back Garage	1	4L4' T8 32w/EL-8'	industrial	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	500	350	OCC SENSOR CEIL DT 1GANG	1	118
3067	Water Filtration Plant & High Service Pump Station	Hall Back Garage	1	2L4' T8 32w/EL	vapor tight	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	2,500	1,750	OCC SENSOR WALLSWITCH 1GANG	1	99
3068	Water Filtration Plant & High Service Pump Station	Storage Raw Water Pump Station	1	60W INCANDESCENT	keyless	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	3
3069	Water Filtration Plant & High Service Pump Station	Storage High Service Station	1	150W INCANDESCENT	keyless	4	4	150	0.6	11 WATT LED SI	screw in LED Alamp	4	12	0.0	500	350	OCC SENSOR WALLSWITCH DT 1GANG	1	7
3070	Water Filtration Plant & High Service Pump Station	Foyer Main	1	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	2,500	1,750	OCC SENSOR CEILING	1	43
3071	Water Filtration Plant & High Service Pump Station	Office 202	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	95
3072	Water Filtration Plant & High Service Pump Station	Office 203	1	2L4' T8 32w/EL	trof acr	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	71
3073	Water Filtration Plant & High Service Pump Station	Office 204	1	2L4' T8 32w/EL	trof acr	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	71
3074	Water Filtration Plant & High Service Pump Station	Office 207 Control Room	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	1,800	1,260	OCC SENSOR WALLSWITCH 2GANG	1	95
3075	Water Filtration Plant & High Service Pump Station	Storage 214 Elect	1	2L4' T8 32w/EL	trof acr	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	40
3076	Water Filtration Plant & High Service Pump Station	Storage 212	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	26
3077	Water Filtration Plant & High Service Pump Station	Office 216	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	95
3078	Water Filtration Plant & High Service Pump Station	Lab 217	1	2L4' T8 32w/EL	trof acr	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	8,760	6,132	OCC SENSOR CEILING	1	927
3079	Water Filtration Plant & High Service Pump Station	Lab 217	1	2L2' T8 17w/EL	trof acr	1	1	33	0.0	2L2' T8 15w/ELEE LO	rlrb LF	1	28	0.0	8,760	6,132	OCC SENSOR WALLSWITCH 1GANG	1	75
3080	Water Filtration Plant & High Service Pump Station	Storage 217	1	2L4' T8 32w/EL	trof acr	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	500	350	OCC SENSOR CEILING	1	20
3081	Water Filtration Plant & High Service Pump Station	Storage 217	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	7
3082	Water Filtration Plant & High Service Pump Station	Bath 226	1	1L4' T8 32w/EL	trof acr 1' wide	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	2,500	1,750	OCC SENSOR WALLSWITCH DT 1GANG	1	35
3083	Water Filtration Plant & High Service Pump Station	Bath 226	1	60W INCANDESCENT	can rec 6"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	2,500	1,750	INCLUDED ABOVE		13
3084	Water Filtration Plant & High Service Pump Station	Locker 226	1	1L4' T8 32w/EL	trof acr 1' wide	3	3	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	3	23	0.1	2,500	1,750	OCC SENSOR CORNER MT.	1	52
3086	Water Filtration Plant & High Service Pump Station	Storage 225	1	2L2' T8 17w/EL	trof parabolic	1	1	33	0.0	2L2' T8 15w/ELEE LO	rlrb LF	1	28	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	4
3087	Water Filtration Plant & High Service Pump Station	Bath 224	1	1L4' T8 32w/EL	trof acr 1' wide	3	3	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	3	23	0.1	2,500	1,750	OCC SENSOR WALLSWITCH DT 1GANG	1	52
3088	Water Filtration Plant & High Service Pump Station	Bath 224	1	15W CF SCREWIN	can rec 6"	2	2	17	0.0	8 WATT LED SI	screw in LED Alamp	2	8	0.0	2,500	1,750	INCLUDED ABOVE		13
3089	Water Filtration Plant & High Service Pump Station	Locker 224	1	1L4' T8 32w/EL	trof acr 1' wide	6	6	30	0.2	1L4' T8 28w/ELEE LO	rlrb LF	6	23	0.1	2,500	1,750	OCC SENSOR WALLSWITCH DT 1GANG	1	104
3092	Water Filtration Plant & High Service Pump Station	Kitchen Near Lockers	1	2L4' T8 32w/EL	trof acr	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	1,500	1,050	OCC SENSOR WALLSWITCH 1GANG	1	60
3093	Water Filtration Plant & High Service Pump Station	Lounge Near Lockers	1	2L4' T8 32w/EL	trof acr	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	1,900	1,330	OCC SENSOR WALLSWITCH 1GANG	1	201
3094	Water Filtration Plant & High Service Pump Station	Conference 209	1	4L4' T8 32w/EL-8'	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	94
3095	Water Filtration Plant & High Service Pump Station	Hall Main	1	2L2' T8 17w/EL	trof acr	14	14	33	0.5	2L2' T8 15w/ELEE LO	rlrb LF	14	28	0.4	2,500	1,750	OCC SENSOR CEILING	1	298
3096	Water Filtration Plant & High Service Pump Station	Hall Control-Lockers	1	2L2' T8 17w/EL	trof acr	13	13	33	0.4	2L2' T8 15w/ELEE LO	rlrb LF	13	28	0.4	2,500	1,750	OCC SENSOR CEILING	1	276
3097	Water Filtration Plant & High Service Pump Station	Hall 228	1	2L4' T8 32w/EL	trof acr	25	25	60	1.5	2L4' T8 28w/ELEE LO	rlrb LF	25	44	1.1	2,500	1,750	OCC SENSOR CORNER MT.	1	827
3098	Water Filtration Plant & High Service Pump Station	Storage Tank Gallery	1	2L4' T8 32w/EL	vapor tight	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	500	350	OCC SENSOR CEILING	1	53
3099	Water Filtration Plant & High Service Pump Station	Storage Tank Gallery	1	150W INCANDESCENT	flood	4	4	150	0.6	21 WATT LED/NEW	new LED flood	4	22	0.1	500	350	INCLUDED ABOVE		13
3100	Water Filtration Plant & High Service Pump Station	Storage Tank Gallery	1	2L4' T8 32w/EL	vapor tight	6	6	60	0.4	2L4' T8 28w/ELEE LO	rlrb LF	6	44	0.3	500	350	INCLUDED ABOVE		40
3101	Water Filtration Plant & High Service Pump Station	Storage 231	1	2L4' T8 32w/EL	vapor tight	15	15	60	0.9	2L4' T8 28w/ELEE LO	rlrb LF	15	44	0.7	1,000	700	OCC SENSOR CEILING	1	198
3102	Water Filtration Plant & High Service Pump Station	Storage 231	1	2L4' T8 32w/EL	vapor tight	12	12	60	0.7	2L4' T8 28w/ELEE LO	rlrb LF	12	44	0.5	1,000	700	OCC SENSOR CEILING	1	159
3103	Water Filtration Plant & High Service Pump Station	Storage 231	1	2L4' T8 32w/EL	vapor tight	15	15	60	0.9	2L4' T8 28w/ELEE LO	rlrb LF	15	44	0.7	1,000	700	OCC SENSOR CEILING	1	198
3104	Water Filtration Plant & High Service Pump Station	Storage 230	1	2L4' T8 32w/EL	industrial	5	5	60	0.3	2L4' T8 28w/ELEE LO	rlrb LF	5	44	0.2	500	350	OCC SENSOR CEILING	1	33
3105	Water Filtration Plant & High Service Pump Station	Stair Off 231	stair	2L4' T8 32w/EL	vanity	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	2,500	1,750	OCC SENSOR WALLSWITCH 1GANG	1	99
3107	Water Filtration Plant & High Service Pump Station	Storage Chem Lines (2)	lower	100W INCANDESCENT	explosion	2	2	100	0.2	15 WATT LED SI	screw in LED Alamp	2	16	0.0	500	350	OCC SENSOR CEILING	2	5
3108	Water Filtration Plant & High Service Pump Station	Storage Wash Water Drains	lower	2L4' T8 32w/EL	vapor tight	12	12	60	0.7	2L4' T8 28w/ELEE LO	rlrb LF	12	44	0.5	1,000	700	OCC. SENSOR ON HI BAY FIXTURE	12	159
3109	Water Filtration Plant & High Service Pump Station	Lobby Generator	lower	2L4' T8 32w/EL	industrial	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	2,500	1,750	OCC SENSOR WALLSWITCH 1GANG	1	132
3110	Water Filtration Plant & High Service Pump Station	Storage Generator	lower	2L4' T8 32w/EL	industrial	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	500	350	OCC SENSOR WALLSWITCH 1GANG	1	26
3111	Water Filtration Plant & High Service Pump Station	Stair Near Generator	stair	2L4' T8 32w/EL	vanity	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	2,500	1,750	OCC. SENSOR ON HI BAY FIXTURE	2	66
3114	Water Filtration Plant & High Service Pump Station	Stair Near Main Lobby	stair	2L4' T8 32w/EL	vanity	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	2,500	1,750	OCC. SENSOR ON HI BAY FIXTURE	2	66
3116	Water Filtration Plant & High Service Pump Station	Storage Chem Treatment	lower	2L4' T8 32w/EL	vapor tight	49	49	60	2.9	2L4' T8 28w/ELEE LO	rlrb LF	49	44	2.2	1,000	700	OCC SENSOR CEILING	1	648
3117	Water Filtration Plant & High Service Pump Station	Storage 113	lower	2L4' T8 32w/EL	vapor tight	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	500	350	OCC SENSOR CEILING	1	26
3118	Water Filtration Plant & High Service Pump Station	Hall Time Clock	lower	2L4' T8 32w/EL	industrial	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	2,500	1,750	OCC SENSOR WALLSWITCH 1GANG	1	99
3119	Water Filtration Plant & High Service Pump Station	Storage Garage	lower	4L4' T5 HO/EL	high bay	6	6	234	1.4	98 WATT LED/NEW	new LED hibay wg	6	103	0.6	1,000	700	OCC. SENSOR ON HI BAY FIXTURE	6	185
3122	Water Filtration Plant & High Service Pump Station	Storage Chain Saws	lower	2L4' T8 32w/EL	industrial	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	7
3123	Water Filtration Plant & High Service Pump Station	Storage 103	lower	2L4' T8 32w/EL	industrial	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	13
3124	Water Filtration Plant & High Service Pump Station	Storage 104	lower	2L4' T8 32w/EL	industrial	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	500	350	OCC SENSOR CEILING	1	13
3125	Water Filtration Plant & High Service Pump Station	Storage 105	lower	2L4' T8 32w/EL	industrial	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	500	350	OCC SENSOR CEILING	1	13
3126	Water Filtration Plant & High Service Pump Station	Storage 106	lower	2L4' T8 32w/EL	industrial	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	7
3127	Water Filtration Plant & High Service Pump Station	Bath 107	lower	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	2,500	1,750	OCC SENSOR WALLSWITCH 1GANG	1	33
3128	Water Filtration Plant & High Service Pump Station	Storage Garage Mez	lower	2L4' T8 32w/EL	industrial	5	5	60	0.3	2L4' T8 28w/ELEE LO	rlrb LF	5	44	0.2	500	350	OCC SENSOR CEILING	1	33
3130	Water Filtration Plant & High Service Pump Station	Stair Near Lockers	stair	2L4' T8 32w/EL	vanity	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	2,500	1,750	OCC. SENSOR ON HI BAY FIXTURE	2	66
3131	Water Filtration Plant & High Service Pump Station	Storage 110	lower	2L4' T8 32w/EL	vapor tight	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	500	350	OCC SENSOR WALLSWITCH 1GANG	1	26
3132	Water Filtration Plant & High Service Pump Station	Storage 111	lower	2L4' T8 32w/EL	vapor tight	5	5	60	0.3	2L4' T8 28w/ELEE LO	rlrb LF	5	44	0.2	500	350	OCC SENSOR CORNER MT.	1	33
3165	Rockwell Park & Pavilion	Bath Men (2)	1	2x13W CF HARDWIRED	square surface mt.	2	2	30	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	2	5
3166	Rockwell Park & Pavilion	Storage Christmas Supplies	1	13W CF HARDWIRED	keyless	1		15	0.0	NO RETRO	no change		16	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	2
3167	Rockwell Park & Pavilion	Mechanical Boiler	1	60W INCANDESCENT	keyless	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	3
3169	Rockwell Park & Pavilion	Kitchen Main	1	2x60W INCANDESCENTS	square surface mt.	1	1	120	0.1	16 WATT LED/NEW	new LED drum	1	17	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	3
3170	Rockwell Park & Pavilion	Storage K	1	2x60W INCANDESCENTS	square surface mt.	1	1	120	0.1	16 WATT LED/NEW	new LED drum	1	17	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	3
3200	Ski Lodge	Bath Men	1	26W CF HARDWIRED	square surface mt.	1	1	28	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	500	350	OCC SENSOR WALLSWITCH DT 1GANG	1	3
3201	Ski Lodge	Exercise Rec	1	2L4' T12 34w EE/EEMAG	wrap wide	5	5	70	0.4	2L4' T8 28w/ELEE LO	rlrb LF	5	44	0.2	500	350	OCC SENSOR WALLSWITCH 1GANG	1	33
3202	Ski Lodge	Storage Tennis	1	2L4' T12 34w EE/EEMAG	wrap	1	1	70	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	7
3203	Ski Lodge	Bath Women	1	2x60W INCANDESCENTS	square surface mt.	1	1	120	0.1	16 WATT LED/NEW	new LED drum	1	17	0.0	500	350	OCC SENSOR WALLSWITCH DT 1GANG	1	3
3206	Page Park Pavilion	Exercise Mats	1	4L4' T8 32w/EL-8'	wrap	4	4	112	0.4	4L4' T8 28w/ELEE LO-8'	rlrb LF	4	87	0.3	1,200	840	OCC. SENSOR ON HI BAY FIXTURE	4	125
3207	Page Park Pavilion	Exercise Mats	1	60W INCANDESCENT	rectangular	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	1,200	840	OCC SENSOR WALLSWITCH 1GANG	1	6
3208	Page Park Pavilion	Exercise Mats	1	2L4' T12 34w EE/EEMAG	wrap	2	2	70	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	1,200	840	OCC SENSOR WALLSWITCH 1GANG	1	32
3209	Page Park Pavilion	Exercise Mats	1	4L4' T8 32w/EL-8'	wrap	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	1,200	840	OCC SENSOR WALLSWITCH 1GANG	1	63
3210	Page Park Pavilion	Storage Boiler	1	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	1
3211	Page Park Pavilion	Bath Men (2)	1	22W & 32W CIRCLELINE HARDWIRED	drum	2	2	58	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	1,200	840	OCC SENSOR WALLSWITCH DT 1GANG	2	12
3212	Page Park Pavilion	Bath Men (2)	1	2L2' T8 17w/EL	vanity	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	1,200	840	INCLUDED ABOVE		20
3214	Page Park Pavilion	Walkway All	ext	175W METAL HALIDE	decorative	1	1	205	0.2	40 WATT LED/KIT	area kit LED	1	42	0.0	8,760	4,380	PHOTO SENSOR FIXTURE MOUNTED	1	184
3219	Pool	Lounge Main	1	4L4' T12 34w EE/EEMAG-8'	wrap wide	1	1	140	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	13
3221	Pool	Storage Sink	1	60W INCANDESCENT	square recessed	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	3
3234	Recreation Building	Locker Equip	1	2L4' T12 34w EE/EEMAG	old industrial	11		70	0.8	NO RETRO	no change per customer		74	0.8	20	14	OCC SENSOR WALLSWITCH 2GANG	1	5
3235	Recreation Building	Bath Equip	1	60W INCANDESCENT	keyless	1		60	0.1	NO RETRO	no change per customer		63	0.1	20	14	OCC SENSOR WALLSWITCH 1GANG	1	0
3288	Administration Building & Warehouse	Office Paint	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	47
3306	Administration Building & Warehouse	Office Open 34	3	4L4' T8 32w/EL	trof acr	5	5	112	0.6	4L4' T8 28w/ELEE LO	rlrb LF	5	87	0.4	2,716	1,901	OCC SENSOR CEILING	1	355
3307	Administration Building & Warehouse	Storage 34	3	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	500	350	OCC SENSOR WALLSWITCH 1GANG	1	26
3308	Administration Building & Warehouse	Office Open 32	3	4L4' T8 32w/EL	trof acr	5	5	112	0.6	4L4' T8 28w/ELEE LO	rlrb LF	5	87	0.4	2,340	1,638	OCC SENSOR CEILING	1	306

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	Annual Hours	Hours With Controls	*Control Description*	*Control Qty*	Control kWH Saved
3309	Administration Building & Warehouse	Office 32	3	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	94
3310	Administration Building & Warehouse	Conference 32	3	4L4' T8 32w/EL	trof acr	3	3	112	0.3	4L4' T8 28w/ELEE LO	rlrb LF	3	87	0.3	1,800	1,260	OCC SENSOR CEILING	1	141
3314	Administration Building & Warehouse	Conference Main	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	4L4' T8 28w/ELEE LO	rlrb LF	3	87	0.3	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	141
3320	Administration Building & Warehouse	Bath Men	2	2L2' T8 17w/EL	box acrylic	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	2,340	1,638	OCC SENSOR WALLSWITCH DT 1GANG	1	40
3321	Administration Building & Warehouse	Bath Men	2	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	2,340	1,638	INCLUDED ABOVE		31
3322	Administration Building & Warehouse	Office Open 25	2	4L4' T8 32w/EL	trof acr	18	18	112	2.0	4L4' T8 28w/ELEE LO	rlrb LF	18	87	1.6	2,340	1,638	OCC SENSOR CEIL DT 1GANG	1	1,101
3323	Administration Building & Warehouse	Office 25	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	94
3324	Administration Building & Warehouse	Conference 25	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	94
3326	Administration Building & Warehouse	Office Open 26	2	4L4' T8 32w/EL	trof acr	6	6	112	0.7	4L4' T8 28w/ELEE LO	rlrb LF	6	87	0.5	2,891	2,024	OCC SENSOR CEILING	1	454
3327	Administration Building & Warehouse	Office Open 26	2	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	2,340	1,638	INCLUDED ABOVE		40
3329	Administration Building & Warehouse	Office 26	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	94
3330	Administration Building & Warehouse	Office 26	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	94
3331	Administration Building & Warehouse	Conference 26	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	94
3332	Administration Building & Warehouse	Office Open 24	2	4L4' T8 32w/EL	trof acr	5	5	112	0.6	4L4' T8 28w/ELEE LO	rlrb LF	5	87	0.4	2,340	1,638	OCC SENSOR CEILING	1	306
3333	Administration Building & Warehouse	Office Open 24	2	4L4' T8 32w/EL-8'	strip	2	2	112	0.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	2	87	0.2	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	122
3334	Administration Building & Warehouse	Office Open 24	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	122
3335	Administration Building & Warehouse	Office Open 24	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	122
3336	Administration Building & Warehouse	Lounge 22	2	2L2' T8 17w/EL	trof acr	6	6	33	0.2	2L2' T8 15w/ELEE LO	rlrb LF	6	28	0.2	1,900	1,330	OCC SENSOR CEILING	1	97
3337	Administration Building & Warehouse	Bath Women	2	2L2' T8 17w/EL	box acrylic	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	2,340	1,638	OCC SENSOR WALLSWITCH DT 1GANG	1	40
3338	Administration Building & Warehouse	Bath Women	2	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	2,340	1,638	INCLUDED ABOVE		31
3340	Administration Building & Warehouse	Office Open 11	1	4L4' T8 32w/EL	trof acr	12	12	112	1.3	4L4' T8 28w/ELEE LO	rlrb LF	12	87	1.0	2,340	1,638	OCC SENSOR CEILING	1	734
3341	Administration Building & Warehouse	Office 11	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	94
3342	Administration Building & Warehouse	Office 11	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	94
3343	Administration Building & Warehouse	Office 11	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	4L4' T8 28w/ELEE LO	rlrb LF	2	87	0.2	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	94
3361	Administration Building & Warehouse	Classroom 17	1	3L4' T8 32w/EL	wrap wide	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	2,600	1,820	OCC SENSOR CEILING	1	206
3362	Administration Building & Warehouse	Office Open 14	1	3L4' T8 32w/EL	wrap wide	6	6	88	0.5	3L4' T8 28w/ELEE LO	rlrb LF	6	66	0.4	2,278	1,595	OCC SENSOR CEILING	1	271
3369	Administration Building & Warehouse	Bath Women	1	2L2' T8 17w/EL	box acrylic	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	2,340	1,638	OCC SENSOR WALLSWITCH DT 1GANG	1	40
3372	Stafford ES	Office Principal	1	65W INCANDESCENT	can rec	7	7	65	0.5	8 WATT LED SI	screw in LED Alamp	7	8	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 2GANG	1	35
3373	Stafford ES	Office Literacy	1	65W INCANDESCENT	can rec	2	2	65	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	2,000	1,400	OCC SENSOR WALLSWITCH 2GANG	1	10
3374	Stafford ES	Office Literacy	1	2L4' T8 32w U/EL	box acrylic	1	1	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	1	35	0.0	2,000	1,400	INCLUDED ABOVE		21
3375	Stafford ES	Office Literacy	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	26
3383	Stafford ES	Bath Boys	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	3,000	2,100	OCC SENSOR WALLSWITCH DT 1GANG	1	79
3384	Stafford ES	Bath Girls	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	3,000	2,100	OCC SENSOR WALLSWITCH DT 1GANG	1	79
3387	Stafford ES	Library Main	1	4L4' T8 32w/EL-8'	box acr 6" wide	8	8	112	0.9	4L4' T8 28w/ELEE LO-8'	rlrb LF	8	87	0.7	1,800	1,260	OCC SENSOR CEILING	1	376
3388	Stafford ES	Library Main	1	2L4' T8 32w/EL	box acr 6" wide	4	4	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	4	44	0.2	1,800	1,260	INCLUDED ABOVE		95
3392	Stafford ES	Office Lib	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	53
3394	Stafford ES	Storage Lib	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	26
3443	Stafford ES	Office 36	B	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	26
3446	Stafford ES	Storage Pantry	B	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	26
3449	Stafford ES	Classroom 35	B	2L4' T8 32w U/EL	trof acr	4	4	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	4	35	0.1	2,200	1,540	OCC SENSOR WALLSWITCH DT 1GANG	1	91
3490	Stafford ES	Bath Girls	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	3,000	2,100	OCC SENSOR WALLSWITCH DT 1GANG	1	79
3491	Stafford ES	Bath Boys	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	3,000	2,100	OCC SENSOR WALLSWITCH DT 1GANG	1	79
3507	Stafford ES	Gym Main	1	4L4' T5 HO/EL	high bay	24	24	234	5.6	98 WATT LED/NEW	new LED hibay wg	24	103	2.5	2,000	1,400	OCC. SENSOR ON HI BAY FIXTURE	24	1,482
3511	Stafford ES	Conference Main	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	53
3512	Stafford ES	Lounge Staff	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	48
3553	Edgewood ES	Classroom K-B	1	4L4' T8 32w/EL-8'	box acr 1' wide	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
3554	Edgewood ES	Classroom K-B	1	2L4' T8 32w/EL-8'	cove	3	3	60	0.2	2L4' T8 28w/ELEE LO-8'	rlrb LF	3	44	0.1	2,200	1,540	INCLUDED ABOVE		74
3555	Edgewood ES	Classroom K-B	1	60W INCANDESCENT	square surface mt.	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	2,200	1,540	INCLUDED ABOVE		9
3558	Edgewood ES	Classroom K-A	1	4L4' T8 32w/EL-8'	box acr 1' wide	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
3559	Edgewood ES	Classroom K-A	1	2L4' T8 32w/EL-8'	cove	3	3	60	0.2	2L4' T8 28w/ELEE LO-8'	rlrb LF	3	44	0.1	2,200	1,540	INCLUDED ABOVE		74
3560	Edgewood ES	Classroom K-A	1	60W INCANDESCENT	square surface mt.	3	3	60	0.2	8 WATT LED SI	screw in LED Alamp	3	8	0.0	2,200	1,540	INCLUDED ABOVE		14
3563	Edgewood ES	Classroom Art	1	4L4' T8 32w/EL-8'	wrap	11	11	112	1.2	4L4' T8 28w/ELEE LO-8'	rlrb LF	11	87	1.0	2,200	1,540	OCC SENSOR CEILING	1	538
3565	Edgewood ES	Classroom 19	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
3568	Edgewood ES	Classroom 18	1	4L4' T8 32w/EL-8'	box acr 1' wide	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
3569	Edgewood ES	Classroom 17	1	4L4' T8 32w/EL-8'	box acr 1' wide	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
3570	Edgewood ES	Classroom 16	1	4L4' T8 32w/EL-8'	box acr 1' wide	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
3571	Edgewood ES	Bath Boys	1	4L4' T8 32w/EL-8'	vanity	3	3	112	0.3	4L4' T8 28w/ELEE LO-8'	rlrb LF	3	87	0.3	3,000	2,100	OCC SENSOR CEILING	1	200
3572	Edgewood ES	Bath Boys	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	3,000	2,100	INCLUDED ABOVE		34
3573	Edgewood ES	Bath Boys	1	2L3' T8 25w/EL	vanity	1	1	47	0.0	2L3' T8 21w/ELEE LO	rlrb LF	1	42	0.0	3,000	2,100	INCLUDED ABOVE		32
3585	Edgewood ES	Storage Pantry	1	2L4' T8 32w U/EL	trof acr	3	3	60	0.2	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	3	35	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	27
3586	Edgewood ES	Classroom 15	1	4L4' T8 32w/EL-8'	box acr 1' wide	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
3588	Edgewood ES	Office 153	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	2,000	1,400	OCC SENSOR WALLSWITCH 2GANG	1	9
3589	Edgewood ES	Office 153	1	1L4' T8 32w/EL	cove	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	2,000	1,400	INCLUDED ABOVE		12
3590	Edgewood ES	Office 153	1	1L3' T8 25w/EL	cove	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	2,000	1,400	INCLUDED ABOVE		22
3591	Edgewood ES	Office 153	1	1L4' T8 32w/EL	task strip	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	2,000	1,400	INCLUDED ABOVE		12
3592	Edgewood ES	Office 153	1	1L3' T8 25w/EL	task strip	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	2,000	1,400	INCLUDED ABOVE		22
3593	Edgewood ES	Office 152	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	2,000	1,400	OCC SENSOR WALLSWITCH 2GANG	1	9
3594	Edgewood ES	Office 152	1	1L4' T8 32w/EL	cove	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	2,000	1,400	INCLUDED ABOVE		12
3595	Edgewood ES	Office 152	1	1L3' T8 25w/EL	cove	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	2,000	1,400	INCLUDED ABOVE		22
3596	Edgewood ES	Office 152	1	1L4' T8 32w/EL	task strip	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	2,000	1,400	INCLUDED ABOVE		12
3597	Edgewood ES	Office 152	1	1L3' T8 25w/EL	task strip	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	2,000	1,400	INCLUDED ABOVE		22
3598	Edgewood ES	Office 149	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	2,000	1,400	OCC SENSOR WALLSWITCH 2GANG	1	9
3599	Edgewood ES	Office 149	1	1L4' T8 32w/EL	cove	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	2,000	1,400	INCLUDED ABOVE		12
3600	Edgewood ES	Office 149	1	1L3' T8 25w/EL	cove	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	2,000	1,400	INCLUDED ABOVE		22
3601	Edgewood ES	Office 149	1	1L4' T8 32w/EL	task strip	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	2,000	1,400	INCLUDED ABOVE		12
3602	Edgewood ES	Office 149	1	1L3' T8 25w/EL	task strip	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	2,000	1,400	INCLUDED ABOVE		22
3603	Edgewood ES	Office 148	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	2,000	1,400	OCC SENSOR WALLSWITCH 2GANG	1	9
3604	Edgewood ES	Office 148	1	1L4' T8 32w/EL	cove	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	2,000	1,400	INCLUDED ABOVE		12
3605	Edgewood ES	Office 148	1	1L3' T8 25w/EL	cove	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	2,000	1,400	INCLUDED ABOVE		22
3606	Edgewood ES	Office 148	1	1L4' T8 32w/EL	task strip	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	2,000	1,400	INCLUDED ABOVE		12
3607	Edgewood ES	Office 148	1	1L3' T8 25w/EL	task strip	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	2,000	1,400	INCLUDED ABOVE		22
3608	Edgewood ES	Office 146	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	2,000	1,400	OCC SENSOR WALLSWITCH 2GANG	1	9

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	Annual Hours	Hours With Controls	*Control Description*	*Control Qty*	Control kWH Saved
3609	Edgewood ES	Office 146	1	1L4' T8 32w/EL	cove	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	2,000	1,400	INCLUDED ABOVE		12
3610	Edgewood ES	Office 146	1	1L3' T8 25w/EL	cove	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	2,000	1,400	INCLUDED ABOVE		22
3611	Edgewood ES	Office 146	1	1L4' T8 32w/EL	task strip	1	1	30	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	2,000	1,400	INCLUDED ABOVE		12
3612	Edgewood ES	Office 146	1	1L3' T8 25w/EL	task strip	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	2,000	1,400	INCLUDED ABOVE		22
3613	Edgewood ES	Office 154	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	2,000	1,400	OCC SENSOR WALLSWITCH 2GANG	1	9
3614	Edgewood ES	Office 154	1	1L4' T8 32w/EL	cove	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	2,000	1,400	INCLUDED ABOVE		24
3615	Edgewood ES	Office 154	1	1L4' T8 32w/EL	task strip	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	2,000	1,400	INCLUDED ABOVE		24
3616	Edgewood ES	Office 151	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	2,000	1,400	OCC SENSOR WALLSWITCH 2GANG	1	9
3617	Edgewood ES	Office 151	1	1L4' T8 32w/EL	cove	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	2,000	1,400	INCLUDED ABOVE		24
3618	Edgewood ES	Office 151	1	1L4' T8 32w/EL	task strip	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	2,000	1,400	INCLUDED ABOVE		24
3619	Edgewood ES	Office 147	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	2,000	1,400	OCC SENSOR WALLSWITCH 2GANG	1	9
3620	Edgewood ES	Office 147	1	2L4' T8 32w/EL-8'	cove	2	2	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	2	44	0.1	2,000	1,400	INCLUDED ABOVE		45
3621	Edgewood ES	Office 147	1	1L3' T8 25w/EL	cove	2	2	24	0.0	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	2,000	1,400	INCLUDED ABOVE		22
3622	Edgewood ES	Office 147	1	2L4' T8 32w/EL-8'	task strip	2	2	60	0.1	2L4' T8 28w/ELEE LO-8'	rlrb LF	2	44	0.1	2,000	1,400	INCLUDED ABOVE		45
3623	Edgewood ES	Library Main	1	4L4' T8 32w/EL	trof acr	14	14	112	1.6	4L4' T8 28w/ELEE LO	rlrb LF	14	87	1.2	1,800	1,260	OCC SENSOR CEILING	1	560
3624	Edgewood ES	Library Main	1	2L2' T8 17w/EL	trof acr	1	1	33	0.0	2L2' T8 15w/ELEE LO	rlrb LF	1	28	0.0	1,800	1,260	INCLUDED ABOVE		13
3625	Edgewood ES	Library Main	1	4L4' T8 32w/EL	trof acr	12	12	112	1.3	4L4' T8 28w/ELEE LO	rlrb LF	12	87	1.0	1,800	1,260	OCC SENSOR CEILING	1	480
3629	Edgewood ES	Office Lib	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	44
3630	Edgewood ES	Office Lib	1	1L4' T12 34w EE/EEMAG	cove	6	6	40	0.2	2L4' T8 28w/ELEE LO/TW-8'	rlrb LF tw	3	44	0.1	2,000	1,400	INCLUDED ABOVE		67
3631	Edgewood ES	Office Lib	1	1L4' T12 34w EE/EEMAG	cove	2	2	40	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	2,000	1,400	INCLUDED ABOVE		24
3632	Edgewood ES	Office Lib	1	1L3' T12 25w EE/EEMAG	cove	3	3	38	0.1	1L3' T8 21w/ELEE LO	rlrb LF	3	22	0.1	2,000	1,400	INCLUDED ABOVE		34
3634	Edgewood ES	Office Lib	1	1L4' T12 34w EE/EEMAG	cove	4	4	40	0.2	1L4' T8 28w/ELEE LO	rlrb LF	4	23	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 2GANG	1	47
3635	Edgewood ES	Office Lib	1	1L3' T12 25w EE/EEMAG	cove	2	2	38	0.1	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	2,000	1,400	INCLUDED ABOVE		22
3636	Edgewood ES	Office Lib	1	1L4' T8 32w/EL	task strip	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	2,000	1,400	INCLUDED ABOVE		24
3637	Edgewood ES	Office Lib	1	1L3' T8 25w/EL	task strip	3	3	24	0.1	1L3' T8 21w/ELEE LO	rlrb LF	3	22	0.1	2,000	1,400	INCLUDED ABOVE		34
3640	Edgewood ES	Office Coach	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	45
3641	Edgewood ES	Office Open Main	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	81
3642	Edgewood ES	Office Open Main	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	2,400	1,680	OCC SENSOR CEILING	1	81
3643	Edgewood ES	Office Open Main	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	2,400	1,680	INCLUDED ABOVE		10
3645	Edgewood ES	Office Principal	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 2GANG	1	67
3646	Edgewood ES	Office Principal	1	1L4' T8 32w/EL	cove	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	2,000	1,400	INCLUDED ABOVE		24
3647	Edgewood ES	Conference Principal	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 2GANG	1	67
3648	Edgewood ES	Conference Principal	1	1L4' T8 32w/EL	cove	2	2	30	0.1	1L4' T8 28w/ELEE LO	rlrb LF	2	23	0.0	2,000	1,400	INCLUDED ABOVE		24
3649	Edgewood ES	Office Small Copier	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 2GANG	1	44
3650	Edgewood ES	Office Small Copier	1	1L4' T12 34w EE/EEMAG	task strip	1	1	40	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	2,000	1,400	INCLUDED ABOVE		12
3651	Edgewood ES	Office Small Copier	1	1L3' T12 25w EE/EEMAG	task strip	3	3	38	0.1	1L3' T8 21w/ELEE LO	rlrb LF	3	22	0.1	2,000	1,400	INCLUDED ABOVE		34
3652	Edgewood ES	Office Copier	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 2GANG	1	44
3653	Edgewood ES	Office Copier	1	1L4' T12 34w EE/EEMAG	task strip	6	6	40	0.2	1L4' T8 28w/ELEE LO	rlrb LF	6	23	0.1	2,000	1,400	INCLUDED ABOVE		71
3654	Edgewood ES	Office Copier	1	1L3' T12 25w EE/EEMAG	task strip	2	2	38	0.1	1L3' T8 21w/ELEE LO	rlrb LF	2	22	0.0	2,000	1,400	INCLUDED ABOVE		22
3655	Edgewood ES	Office Copier	1	1L4' T12 34w EE/EEMAG	cove	6	6	40	0.2	2L4' T8 28w/ELEE LO/TW-8'	rlrb LF tw	3	44	0.1	2,000	1,400	INCLUDED ABOVE		67
3656	Edgewood ES	Office Copier	1	1L4' T12 34w EE/EEMAG	cove	3	3	40	0.1	1L4' T8 28w/ELEE LO	rlrb LF	3	23	0.1	2,000	1,400	INCLUDED ABOVE		35
3657	Edgewood ES	Lounge Staff	1	60W INCANDESCENT	can rec 8"	8	8	60	0.5	8 WATT LED SI	screw in LED par20	8	8	0.1	1,800	1,260	OCC SENSOR CEILING	1	31
3658	Edgewood ES	Lounge Staff	1	1L3' T12 25w EE/EEMAG	task strip	5	5	38	0.2	1L3' T8 21w/ELEE LO	rlrb LF	5	22	0.1	1,800	1,260	INCLUDED ABOVE		51
3659	Edgewood ES	Lounge Staff	1	1L4' T12 34w EE/EEMAG	cove	6	6	40	0.2	2L4' T8 28w/ELEE LO/TW-8'	rlrb LF tw	3	44	0.1	1,800	1,260	INCLUDED ABOVE		61
3660	Edgewood ES	Lounge Staff	1	1L4' T12 34w EE/EEMAG	cove	1	1	40	0.0	1L4' T8 28w/ELEE LO	rlrb LF	1	23	0.0	1,800	1,260	INCLUDED ABOVE		11
3663	Edgewood ES	Bath Staff	1	60W INCANDESCENT	can rec 8"	9	9	60	0.5	8 WATT LED SI	screw in LED par20	9	8	0.1	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	58
3664	Edgewood ES	Bath Staff	1	60W INCANDESCENT	can rec 8"	4	4	60	0.2	8 WATT LED SI	screw in LED par20	4	8	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	26
3674	Edgewood ES	Bath Boys	1	4L4' T8 32w/EL-8'	vanity	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	3,000	2,100	OCC SENSOR CEILING	1	67
3675	Edgewood ES	Bath Boys	1	2L4' T8 32w/EL	vanity	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	3,000	2,100	INCLUDED ABOVE		101
3676	Edgewood ES	Bath Boys	1	2L3' T8 25w/EL	vanity	1	1	47	0.0	2L3' T8 21w/ELEE LO	rlrb LF	1	42	0.0	3,000	2,100	INCLUDED ABOVE		32
3677	Edgewood ES	Bath Girls	1	4L4' T8 32w/EL-8'	vanity	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	3,000	2,100	OCC SENSOR CEILING	1	67
3678	Edgewood ES	Bath Girls	1	2L4' T8 32w/EL	vanity	3	3	60	0.2	2L4' T8 28w/ELEE LO	rlrb LF	3	44	0.1	3,000	2,100	INCLUDED ABOVE		101
3679	Edgewood ES	Bath Girls	1	2L3' T8 25w/EL	vanity	1	1	47	0.0	2L3' T8 21w/ELEE LO	rlrb LF	1	42	0.0	3,000	2,100	INCLUDED ABOVE		32
3680	Edgewood ES	Classroom 1	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
3682	Edgewood ES	Classroom 2	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
3684	Edgewood ES	Classroom 3	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
3686	Edgewood ES	Classroom 4	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
3688	Edgewood ES	Classroom 5	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
3690	Edgewood ES	Classroom 6	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
3692	Edgewood ES	Classroom 7	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
3694	Edgewood ES	Classroom 8	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
3696	Edgewood ES	Classroom 9	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
3698	Edgewood ES	Classroom 10	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
3700	Edgewood ES	Classroom 11	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
3702	Edgewood ES	Classroom 12	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' T8 28w/ELEE LO-8'	rlrb LF	9	87	0.8	2,200	1,540	OCC SENSOR CEILING	1	440
3706	Ivy Drive ES	Mechanical Boiler	1	4L4' T8 32w/EL-8'	industrial	6	6	112	0.7	4L4' T8 28w/ELEE LO-8'	rlrb LF	6	87	0.5	500	350	TIMER WALLSWITCH 1GANG	1	78
3710	Ivy Drive ES	Storage Dry Good	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	26
3712	Ivy Drive ES	Hall Slop Sink	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	4L2' T8 15w/ELEE LO	rlrb LF	2	57	0.1	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	102
3713	Ivy Drive ES	Office Custodian	1	4L4' T8 32w/EL-8'	wrap	4	4	112	0.4	4L4' T8 28w/ELEE LO-8'	rlrb LF	4	87	0.3	2,000	1,400	OCC SENSOR CEIL DT 1GANG	1	209
3714	Ivy Drive ES	Office Custodian	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	2,000	1,400	INCLUDED ABOVE		26
3792	Ivy Drive ES	Storage A	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	13
3862	Ivy Drive ES	Office Pe	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	79
3867	City Hall & Annex	Mechanical Pent	P	100W INCANDESCENT	keyless	11	11	100	1.1	15 WATT LED SI	screw in LED Alamp	11	16	0.2	500	350	TIMER WALLSWITCH 1GANG	1	26
3898	City Hall & Annex	Office Open Probate	3	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	2,860	2,002	OCC SENSOR CEILING	1	49
3899	City Hall & Annex	Office Open Probate	3	4L4' T8 32w/EL	trof acr	8	8	112	0.9	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	8	67	0.5	2,860	2,002	INCLUDED ABOVE		461
3904	City Hall & Annex	Office Probate	3	2L2' T8 17w/EL	trof acr	8	8	33	0.3	2L2' T8 15w/ELEE LO	rlrb LF	8	28	0.2	2,860	2,002	OCC SENSOR CEILING	1	195
3905	City Hall & Annex	Office Probate	3	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	2,860	2,002	INCLUDED ABOVE		115
3906	City Hall & Annex	Conference Probate	3	2L2' T8 17w/EL	trof acr	3	3	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	3	28	0.1	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	73
3909	City Hall & Annex	Office Comptroller	3	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	6	67	0.4	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	346
3910	City Hall & Annex	Office Comptroller	3	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	97
3913	City Hall & Annex	Office Cousel	3	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	115
3914	City Hall & Annex	Office Cousel	3	2L2' T8 17w/EL	trof acr	1	1	33	0.0	2L2' T8 15w/ELEE LO	rlrb LF	1	28	0.0	2,860	2,002	INCLUDED ABOVE		24

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	Annual Hours	Hours With Controls	*Control Description*	*Control Qty*	Control kWH Saved
3922	City Hall & Annex	Office Open Treasurer	3	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	4	67	0.3	2,860	2,002	OCC SENSOR CEILING	1	231
3923	City Hall & Annex	Office Open Treasurer	3	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	2,860	2,002	INCLUDED ABOVE		49
3926	City Hall & Annex	Office Open Mayor	3	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	4	67	0.3	2,860	2,002	OCC SENSOR CEILING	1	231
3927	City Hall & Annex	Office Open Mayor	3	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	2,860	2,002	INCLUDED ABOVE		49
3934	City Hall & Annex	Office Mayor	3	2L2' T8 17w/EL	trof acr	8	8	33	0.3	2L2' T8 15w/ELEE LO	rlrb LF	8	28	0.2	2,860	2,002	OCC SENSOR CEILING	1	195
3935	City Hall & Annex	Office Mayor	3	13W CF SCREWIN	can rec	10		15	0.2	NO RETRO	no change		16	0.2	2,860	2,002	INCLUDED ABOVE		129
3941	City Hall & Annex	Office Open Development	2	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	6	67	0.4	2,860	2,002	OCC SENSOR CEILING	1	346
3942	City Hall & Annex	Office Open Development	2	2L2' T8 17w/EL	trof acr	5	5	33	0.2	2L2' T8 15w/ELEE LO	rlrb LF	5	28	0.1	2,860	2,002	INCLUDED ABOVE		122
3962	City Hall & Annex	Office Open Parks	2	4L4' T8 32w/EL	trof acr	9	9	112	1.0	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	9	67	0.6	2,860	2,002	OCC SENSOR CEILING	1	519
3963	City Hall & Annex	Office Open Parks	2	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	2,860	2,002	INCLUDED ABOVE		97
3966	City Hall & Annex	Office Parks	2	4L4' T8 32w/EL	trof acr	5	5	112	0.6	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	5	67	0.3	2,860	2,002	OCC SENSOR CEILING	1	288
3967	City Hall & Annex	Office Parks	2	2L2' T8 17w/EL	trof acr	1	1	33	0.0	2L2' T8 15w/ELEE LO	rlrb LF	1	28	0.0	2,860	2,002	INCLUDED ABOVE		24
3968	City Hall & Annex	Office Open Renaissance	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	227
3976	City Hall & Annex	Conference Purchasing	2	2L2' T8 17w/EL	trof acr	6	6	33	0.2	2L2' T8 15w/ELEE LO	rlrb LF	6	28	0.2	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	146
3987	City Hall & Annex	Bath Building	2	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' T8 28w/ELEE LO	rlrb LF	1	66	0.1	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	57
3993	City Hall & Annex	Office Open Personnel	2	4L4' T8 32w/EL	trof acr	11	11	112	1.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	11	67	0.7	2,860	2,002	OCC SENSOR CEILING	2	634
3994	City Hall & Annex	Office Open Personnel	2	2L2' T8 17w/EL	trof acr	6	6	33	0.2	2L2' T8 15w/ELEE LO	rlrb LF	6	28	0.2	2,860	2,002	INCLUDED ABOVE		146
4005	City Hall & Annex	Office Open Clerk	1	3L4' T8 32w/EL	trof acr	13	13	88	1.1	3L4' T8 28w/ELEE LO	rlrb LF	13	66	0.9	2,860	2,002	OCC SENSOR CEILING	2	738
4006	City Hall & Annex	Office Open Clerk	1	2L2' T8 17w/EL	trof acr	5	5	33	0.2	2L2' T8 15w/ELEE LO	rlrb LF	5	28	0.1	2,860	2,002	INCLUDED ABOVE		122
4012	City Hall & Annex	Office Clerk	1	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	97
4013	City Hall & Annex	Office Clerk	1	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	97
4014	City Hall & Annex	Office Open Tax	1	4L4' T8 32w/EL	trof acr	16	16	112	1.8	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	16	67	1.1	2,860	2,002	OCC SENSOR CEILING	2	923
4015	City Hall & Annex	Office Open Tax	1	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	2	28	0.1	2,860	2,002	INCLUDED ABOVE		49
4017	City Hall & Annex	Office Tax	1	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' T8 15w/ELEE LO	rlrb LF	4	28	0.1	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	97
4020	City Hall & Annex	Office Open Assessor	1	4L4' T8 32w/EL	trof acr	15	15	112	1.7	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	15	67	1.0	2,860	2,002	OCC SENSOR CEILING	2	865
4021	City Hall & Annex	Office Open Assessor	1	2L2' T8 17w/EL	trof acr	5	5	33	0.2	2L2' T8 15w/ELEE LO	rlrb LF	5	28	0.1	2,860	2,002	INCLUDED ABOVE		122
4026	City Hall & Annex	Conference Assessor	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	115
4028	City Hall & Annex	Bath Men	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	2,860	2,002	OCC SENSOR CEIL DT 1GANG	1	75
4029	City Hall & Annex	Bath Men	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	2,860	2,002	INCLUDED ABOVE		38
4030	City Hall & Annex	Bath Men	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	2,860	2,002	INCLUDED ABOVE		38
4033	City Hall & Annex	Bath Women	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	2,860	2,002	OCC SENSOR CEIL DT 1GANG	1	75
4034	City Hall & Annex	Bath Women	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	2,860	2,002	INCLUDED ABOVE		38
4035	City Hall & Annex	Bath Women	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	1	44	0.0	2,860	2,002	INCLUDED ABOVE		38
4037	City Hall & Annex	Office Open Registrar	1	4L4' T8 32w/EL	trof acr	10	10	112	1.1	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	10	67	0.7	2,860	2,002	OCC SENSOR CEILING	1	577
4048	City Hall & Annex	Office Army	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	2	67	0.1	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	115
4049	City Hall & Annex	Office Army	1	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	4	67	0.3	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	231
4051	City Hall & Annex	Hall Executive	1	2x13W CF HARDWIRED	can rec	4		30	0.1	NO RETRO	no change		32	0.1	3,900	2,730	OCC SENSOR WALLSWITCH 1GANG	1	140
4052	City Hall & Annex	Conference Mtg Rm	1	4L4' T8 32w/EL	trof acr	9	9	112	1.0	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	9	67	0.6	2,860	2,002	OCC SENSOR CEILING	1	519
4053	City Hall & Annex	Conference Mtg Rm	1	2x13W CF HARDWIRED	can rec	2		30	0.1	NO RETRO	no change		32	0.1	2,860	2,002	INCLUDED ABOVE		51
4074	City Hall & Annex	Office Open Landuse	G	4L4' T8 32w/EL	trof acr	8	8	112	0.9	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	8	67	0.5	2,860	2,002	OCC SENSOR CEILING	1	461
4093	City Hall & Annex	Storage Custodian	G	2L4' T8 32w/EL	industrial	8	8	60	0.5	2L4' T8 28w/ELEE LO	rlrb LF	8	44	0.4	2,860	2,002	TIMER WALLSWITCH 1GANG	1	303
4120	Police Court & Parking Garage	Office Open Court3	2	4L4' T8 32w/EL	trof acr	12	12	112	1.3	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	12	67	0.8	2,860	2,002	OCC SENSOR CEILING	1	692
4140	Police Court & Parking Garage	Office Judge	2	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	6	67	0.4	2,860	2,002	OCC SENSOR CEILING	1	346
4166	Police Court & Parking Garage	Office Open 204	2	4L4' T8 32w/EL	trof acr	9	9	112	1.0	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	9	67	0.6	2,860	2,002	OCC SENSOR CEILING	1	519
4180	Police Court & Parking Garage	Office Open Jury	2	4L4' T8 32w/EL	trof acr	15	15	112	1.7	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	15	67	1.0	2,860	2,002	OCC SENSOR CEILING	1	865
4181	Police Court & Parking Garage	Office Open Jury	2	2L4' T8 32w/EL	trof acr 1' wide	2	2	60	0.1	2L4' T8 28w/ELEE LO	rlrb LF	2	44	0.1	2,860	2,002	INCLUDED ABOVE		76
4186	Police Court & Parking Garage	Storage Files	2	4L4' T8 32w/EL	trof acr	14	14	112	1.6	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	14	67	0.9	500	350	TIMER WALLSWITCH 1GANG	1	141
4190	Police Court & Parking Garage	Classroom Training	2	4L4' T8 32w/EL	trof acr	28	28	112	3.1	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	28	67	1.9	2,860	2,002	OCC SENSOR CEILING	2	1,614
4195	Police Court & Parking Garage	Office Narc	2	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	6	67	0.4	2,860	2,002	OCC SENSOR CEILING	1	346
4211	Police Court & Parking Garage	Office Open State Atty	2	4L4' T8 32w/EL	trof acr	12	12	112	1.3	2L4' T8 28w/ELEE HI/RFL	rlrb LF trof rfl kit	12	67	0.8	2,860	2,002	OCC SENSOR CEILING	2	692
4220	Police Court & Parking Garage	Bath Police Lobby	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	2,860	2,002	OCC SENSOR CEIL DT 1GANG	1	114
4221	Police Court & Parking Garage	Bath Police Lobby	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	2,860	2,002	OCC SENSOR CEIL DT 1GANG	1	114
4223	Police Court & Parking Garage	Office Reception	1	3L4' T8 32w/EL	trof para dbl switch	2	2	88	0.2	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	2	67	0.1	2,860	2,002	OCC SENSOR WALLSWITCH 2GANG	1	115
4227	Police Court & Parking Garage	Office Open Detective	1	3L4' T8 32w/EL	trof para dbl switch	16	16	88	1.4	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	16	67	1.1	2,860	2,002	OCC SENSOR CEILING	1	923
4229	Police Court & Parking Garage	Office Open Detective	1	3L4' T8 32w/EL	trof para dbl switch	2	2	88	0.2	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	2	67	0.1	2,860	2,002	OCC SENSOR CEILING	1	115
4230	Police Court & Parking Garage	Lounge Detective	1	2L2' F40 BIAX/EL	trof parabolic	2	2	72	0.1	36 WATT LED/KIT	trof kit LED	2	38	0.1	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	65
4232	Police Court & Parking Garage	Office Detective	1	3L4' T8 32w/EL	trof para dbl switch	3	3	88	0.3	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	3	67	0.2	2,860	2,002	OCC SENSOR CEILING	1	173
4238	Police Court & Parking Garage	Office Poly	1	3L4' T8 32w/EL	trof parabolic	3	3	88	0.3	3L4' T8 28w/ELEE LO	rlrb LF	3	66	0.2	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	170
4239	Police Court & Parking Garage	Office Open Evidence	1	3L4' T8 32w/EL	trof parabolic	6	6	88	0.5	3L4' T8 28w/ELEE LO	rlrb LF	6	66	0.4	2,860	2,002	OCC SENSOR CEILING	1	341
4244	Police Court & Parking Garage	Office Open Squad	1	3L4' T8 32w/EL	trof parabolic	6	6	88	0.5	3L4' T8 28w/ELEE LO	rlrb LF	6	66	0.4	2,860	2,002	OCC SENSOR CEILING	1	341
4245	Police Court & Parking Garage	Office Sergeant	1	3L4' T8 32w/EL	trof parabolic	4	4	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	4	66	0.3	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	227
4247	Police Court & Parking Garage	Lounge Staff	1	3L4' T8 32w/EL	trof para dbl switch	6	6	88	0.5	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	6	67	0.4	2,860	2,002	OCC SENSOR CEILING	1	346
4250	Police Court & Parking Garage	Office Ert	1	3L4' T8 32w/EL	trof para dbl switch	6	6	88	0.5	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	6	67	0.4	2,860	2,002	OCC SENSOR CEILING	1	346
4252	Police Court & Parking Garage	Locker Women	1	3L4' T8 32w/EL	trof parabolic	7	7	88	0.6	3L4' T8 28w/ELEE LO	rlrb LF	7	66	0.5	2,860	2,002	OCC SENSOR CEIL DT 1GANG	1	397
4253	Police Court & Parking Garage	Locker Women	1	4L4' T8 32w/EL-8'	wrap narrow	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	2,860	2,002	OCC SENSOR CEIL DT 1GANG	1	75
4270	Police Court & Parking Garage	Locker Mens	1	3L4' T8 32w/EL	trof parabolic	22	22	88	1.9	3L4' T8 28w/ELEE LO	rlrb LF	22	66	1.5	2,860	2,002	OCC SENSOR CEIL DT 1GANG	3	1,249
4271	Police Court & Parking Garage	Locker Mens	1	4L4' T8 32w/EL-8'	wrap narrow	1	1	112	0.1	4L4' T8 28w/ELEE LO-8'	rlrb LF	1	87	0.1	2,860	2,002	OCC SENSOR CEIL DT 1GANG	1	75
4278	Police Court & Parking Garage	Office Comm	1	3L4' T8 32w/EL	trof para dbl switch	4	4	88	0.4	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	4	67	0.3	2,860	2,002	OCC SENSOR CEILING	1	231
4283	Police Court & Parking Garage	Office Id Lab	1	3L4' T8 32w/EL	trof parabolic	5	5	88	0.4	3L4' T8 28w/ELEE LO	rlrb LF	5	66	0.3	2,860	2,002	OCC SENSOR CEILING	1	284
4284	Police Court & Parking Garage	Office Id Lab	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L2' T8 15w/ELEE HI/RFL	rlrb LF trof rfl kit	2	35	0.1	2,860	2,002	INCLUDED ABOVE		59
4290	Police Court & Parking Garage	Office Open Traffic	1	3L4' T8 32w/EL	trof parabolic	6	6	88	0.5	3L4' T8 28w/ELEE LO	rlrb LF	6	66	0.4	2,860	2,002	OCC SENSOR CEILING	1	341
4291	Police Court & Parking Garage	Office Traffic	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	114
4293	Police Court & Parking Garage	Office Open Admin	1	2L2' F40 BIAX/EL	trof parabolic	10	10	72	0.7	36 WATT LED/KIT	trof kit LED	10	38	0.4	2,860	2,002	OCC SENSOR CEILING	1	324
4297	Police Court & Parking Garage	Office Admin Cmdr	1	3L4' T8 32w/EL	trof para dbl switch	3	3	88	0.3	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	3	67	0.2	2,860	2,002	OCC SENSOR CEILING	1	173
4298	Police Court & Parking Garage	Conference Z	1	3L4' T8 32w/EL	trof para dbl switch	4	4	88	0.4	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	4	67	0.3	2,860	2,002	OCC SENSOR CEILING	1	231
4301	Police Court & Parking Garage	Office Chief	1	3L4' T8 32w/EL	trof para dbl switch	6	6	88	0.5	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	6	67	0.4	2,860	2,002	OCC SENSOR CEILING	1	346
4304	Police Court & Parking Garage	Office Community	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' T8 28w/ELEE LO	rlrb LF	2	66	0.1	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	114
4306	Police Court & Parking Garage	Office Open Records	1	3L4' T8 32w/EL	trof para dbl switch	16	16	88	1.4	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	16	67	1.1	2,860	2,002	OCC SENSOR CEILING	2	923
4308	Police Court & Parking Garage	Storage G	1	3L4' T8 32w/EL	trof para dbl switch	6	6	88	0.5	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	6	67	0.4	2,860	2,002	OCC SENSOR CEILING	1	346
4310	Police Court & Parking Garage	Office Records Lt	1	3L4' T8 32w/EL	trof para dbl switch	2	2	88	0.2	3L4' T8 28w/ELEE LO (1L&2L BAL)	rlrb LF dbl switched	2	67	0.1	2,860	2,002	OCC SENSOR WALLSWITCH 2GANG	1	115
Totals						**5,303**	**5,227**					**5,218**						**1,399**	**185,805**

City of Bristol, CT	
Energy and Demand Savings Summary	
Measure ID:	**3A**
Measure Name:	**Lighting Controls - LED**
Measure Location:	
Engineers:	

Site Name:		**Central_High**	**Eastern_High**	**Chippens**	**NE_Middle**	**W_Bristol**
Item	Units	Savings	Savings	Savings	Savings	Savings
Electricity						
Energy On-Peak	kWh	9,291	20,298	28,915	6,613	138
Energy Off-Peak	kWh	0	0	0	0	0
Energy Total	kWh	9,291	20,298	28,915	6,613	138
Demand On-Peak, Monthly	kW					
Demand On-Peak, Annual	kW					
Demand Off-Peak, Monthly	kW					
Demand Off-Peak, Annual	kW					
Fossil Fuel						
Natural Gas (NG)	CCF	0	-460	-654	0	0
Liquid Propane Gas (LPG)	Gallons	0	0	0	0	0
Steam	Mlbs	0	0	0	0	0
Fuel Oil, #2	Gallons	-152	0	0	-114	0
Fuel Oil, #4	Gallons	0	0	0	0	0
Fuel Oil, #6	Gallons	0	0	0	0	0
Max Daily Demand (Natural Gas)	CCF (Demand)	0	0	0	0	0
Water						
Water Savings	CF					
Sewer						
Sewer Savings	CF					

Green-Hills	Hubbell	Stafford	Ivy_Drive	Edgewood	Mt_View	South_Side	Admin	City_Hall
Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings
191	17,931	2,513	425	10,075	151	6,470	3,772	3,811
0	0	0	0	0	0	0	0	5,484
191	17,931	2,513	425	10,075	151	6,470	3,772	9,295
0	0	0	-9	0	-3	-153	-77	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	-309	-46	0	-161	0	0	0	-142
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

Water_Main	Filtration	Police	Rockwell_Park	Ski	Page_Park	Rec_Bldg	Aquatic	Fire_HQ
Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings
1,631	1,409	3,919	16	17	213	5	616	2,908
0	3,812	8,236	0	0	184	0	0	0
1,631	5,222	12,155	16	17	397	5	616	2,908
0	0	0	0	0	0	0	-15	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
-27	-89	-190	0	0	-7	0	0	-48
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

Engine_2	Engine_3	Engine_5	Senior	Main_Library	Manross_Library	Youth	Animal	City_Yard
Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings	Savings
325	199	418	6,672	146	1,011	2,666	71	3,171
0	0	0	3,095	195	0	0	0	0
325	199	418	9,767	342	1,011	2,666	71	3,171
0	-5	0	-197	-7	-23	0	-2	-72
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
-5	0	-7	0	0	0	-44	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

Transfer_Lake_Ave	Water_Pollution	Pool	Summary
Savings	Savings	Savings	
169	275	13	136,463
0	869	0	21,876
169	1,144	13	158,339
			0.0
			0.0
			0.0
			0.0
			0
0	-27	0	-1,703
0	0	0	0
0	0	0	0
0	0	0	-1,341
0	0	0	0
0	0	0	0
0	0	0	0
			0
			0
			0
			0

City of Bristol, CT
Interactive Lighting Savings Calculation

AMERESCO

	Lighting Savings		Heating Penalty				Cooling Benefit			
A	B	C	D	E	F	G	H	I	J	K
Facility	Annual kW	Annual kWh	Heat Gain to Space	Heating Months	Heating System Efficiency	Heating Penalty MMBtu	Total Space Cooled	Cooling Months	Cooling System COP	Cooling Benefit MMBtu
Bristol Central High School	0.0	9,016	80.0%	8.0	78.0%	(21.0)	75.0%	2.0	3.28	0.9
Bristol Eastern High School	0.0	19,692	80.0%	8.0	76.0%	(47.2)	75.0%	2.0	3.25	2.1
Chippens Hill Middle Schoo	0.0	28,719	80.0%	8.0	78.0%	(67.0)	15.0%	2.0	2.93	0.7
Northeast Middle School	0.0	6,583	80.0%	8.0	76.0%	(15.8)	10.0%	2.0	2.93	0.1
West Bristol K8 School	0.0	151	80.0%	8.0	400.0%	(0.1)	100.0%	2.0	2.93	0.0
Green-Hills K8 Schoo	0.0	209	80.0%	8.0	400.0%	(0.1)	100.0%	2.0	2.93	0.0
Ellen P. Hubbell Elementary Schoo	0.0	17,890	80.0%	8.0	76.0%	(42.8)	5.0%	2.0	2.93	0.1
Stafford Elementary School	0.0	2,502	80.0%	8.0	72.0%	(6.3)	10.0%	2.0	2.93	0.0
Ivy Drive Elementary Schoo	0.0	406	80.0%	8.0	78.0%	(0.9)	100.0%	2.0	2.93	0.1
Edgewood Elementary Schoo	0.0	10,057	80.0%	8.0	82.0%	(22.3)	4.0%	2.0	2.93	0.1
Mountain View Elementary Schoo	0.0	146	80.0%	8.0	84.0%	(0.3)	95.0%	2.0	3.22	0.0
South Side Elementary Schoo	0.0	6,216	80.0%	8.0	72.0%	(15.7)	90.0%	2.0	2.93	0.9
Board of Education Administration Building & Warehous	0.0	3,551	80.0%	8.0	82.0%	(7.9)	65.0%	4.0	2.78	0.8
City Hall & Annex	0.0	8,437	80.0%	8.0	78.0%	(19.7)	95.0%	4.0	2.49	2.9
Water Main Office & Garage	0.0	1,553	80.0%	8.0	76.0%	(3.7)	50.0%	4.0	2.64	0.3
Water Filtration Plant & High Service Pump Station	0.0	5,016	80.0%	8.0	74.0%	(12.3)	45.0%	4.0	2.93	0.7
Police Court & Parking Garage	0.0	11,282	80.0%	8.0	78.0%	(26.3)	85.0%	4.0	2.93	3.0
Rockwell Park & Pavilion	0.0	15	80.0%	8.0	76.0%	(0.0)	60.0%	4.0	2.34	0.0
Ski Lodge	0.0	37	80.0%	8.0	100.0%	(0.1)	0.0%	4.0	2.93	0.0
Page Park Pavilion	0.0	397	80.0%	8.0	76.0%	(1.0)	0.0%	4.0	2.93	0.0
Recreation Building	0.0	5	80.0%	8.0	76.0%	(0.0)	0.0%	4.0	2.93	0.0
Dennis Malone Aquatic Center	0.0	612	80.0%	8.0	74.0%	(1.5)	5.0%	4.0	2.34	0.0
Fire Head Quarters	0.0	2,795	80.0%	8.0	76.0%	(6.7)	40.0%	4.0	2.64	0.4
Engine 2	0.0	318	80.0%	8.0	76.0%	(0.8)	25.0%	4.0	2.93	0.0
Engine 3	0.0	194	80.0%	8.0	76.0%	(0.5)	25.0%	4.0	2.93	0.0
Engine 5	0.0	409	80.0%	8.0	78.0%	(1.0)	25.0%	4.0	2.93	0.0
Beals Senior Center	0.0	9,104	80.0%	8.0	82.0%	(20.2)	80.0%	4.0	2.93	2.3
Main Library	0.0	320	80.0%	8.0	82.0%	(0.7)	85.0%	4.0	3.37	0.1
Manross Library	0.0	967	80.0%	8.0	76.0%	(2.3)	50.0%	4.0	2.93	0.2
Youth Services Building	0.0	2,568	80.0%	8.0	76.0%	(6.2)	50.0%	4.0	3.52	0.3
Animal Control	0.0	69	80.0%	8.0	78.0%	(0.2)	25.0%	4.0	2.93	0.0
City Yard	0.0	3,156	80.0%	8.0	78.0%	(7.4)	5.0%	4.0	2.93	0.0
Transfer Stations - Lake Ave	0.0	492	80.0%	8.0	76.0%	(1.2)	50.0%	4.0	2.93	0.1
Water Pollution Control Park	0.0	1,144	80.0%	8.0	76.0%	(2.7)	0.0%	4.0	2.93	0.0
Pool	0.0	13	80.0%	8.0	76.0%	(0.0)	0.0%	4.0	2.93	0.0
Totals	**0.0**	**154,041**				**(361.9)**				**16.1**

Notes:	
A	Applicable building included in comprehensive energy audit
B	Lighting demand savings {kW} associated with lighting retrofit measures
C	Lighting energy savings {kWh} associated with lighting retrofit measures
D	Estimated percentage of lighting energy transmitted to conditioned space
E	Estimated length of heating season
F	Estimated heating system efficiency, interacted with other measures
G	Resulting heating penalty due to lighting upgrades = [col C] x [col D] x 3,413 x ([col E] / 12) / [col F] / 1,000,000
H	Estimated percentage of space cooled
I	Estimated Length of cooling season
J	Estimated cooling system efficiency, interacted with other measures
K	Resulting cooling benefit due to lighting upgrades = [col C] x [col D] x 3,413 x ([col I] / 12) / [col J] / 1,000,000

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	Annual Hours	Hours With Controls	*Control Description*	*Control Qty*	Control kWH Saved
84.1	Bristol Central HS	Storage Near Wrestling	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	9
95.1	Bristol Central HS	Gym Main	1	4L4' T5 HO/EL	high bay	63	63	234	14.7	98 WATT LED/NEW	new LED hibay wg	63	103	6.5	2,980	2,086	OCC. SENSOR ON HI BAY FIXTURE	63	4,926
144	Bristol Central HS	Office Open 131	1	2x26W CF HARDWIRED/EL	can rec 8"	4	4	54	0.2	15 WATT LED/KIT	can kit LED Spectrum	4	16	0.1	2,750	1,925	OCC SENSOR WALLSWITCH 1GANG	1	44
145	Bristol Central HS	Office Open 131	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	2,750	1,925	OCC SENSOR WALLSWITCH 1GANG	1	41
146	Bristol Central HS	Hall 131	1	2x26W CF HARDWIRED/EL	can rec 8"	13	13	54	0.7	15 WATT LED/KIT	can kit LED Spectrum	13	16	0.2	3,200	2,240	OCC SENSOR CEILING	1	130
147	Bristol Central HS	Lounge 131	1	2x26W CF HARDWIRED/EL	can rec 8"	6	6	54	0.3	15 WATT LED/KIT	can kit LED Spectrum	6	16	0.1	2,300	1,610	OCC SENSOR WALLSWITCH 1GANG	1	55
181	Bristol Central HS	Storage Near Stair 1	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	5
213	Bristol Central HS	Office 119	1	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	36
214	Bristol Central HS	Storage 119	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	4
256	Bristol Central HS	Storage 26	b	4L4' T8 32w/EL-8'	strip cage	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	500	350	OCC SENSOR CORNER MT.	1	36
257	Bristol Central HS	Storage 26	b	4L4' T8 32w/EL-8'	strip cage	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	500	350	INCLUDED ABOVE		9
285	Bristol Central HS	Lab 18	b	4L4' T8 32w/EL-8'	vapor tight	20	20	112	2.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	20	71	1.4	2,700	1,890	OCC SENSOR CORNER MT. DT 1GANG	1	983
288	Bristol Central HS	Office 18	b	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	72
291	Bristol Central HS	Storage 17B	b	4L2' T8 17w/EL	box acrylic	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	4
292	Bristol Central HS	Storage 17C	b	4L2' T8 17w/EL	box acrylic	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	7
293	Bristol Central HS	Storage Clamps	b	4L2' T8 17w/EL	trof acr	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	1,000	700	OCC SENSOR CEILING	1	30
295	Bristol Central HS	Classroom 16	b	4L2' T8 17w/EL	trof acr	3	3	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	3	29	0.1	2,800	1,960	OCC SENSOR WALLSWITCH 1GANG	1	63
297	Bristol Central HS	Storage 16	b	4L4' T8 32w/EL-8'	vapor tight	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	9
318	Bristol Central HS	Office 6A	b	4L2' T8 17w/EL	trof parabolic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	36
337	Bristol Central HS	Cafeteria Senior	b	4L2' T8 17w/EL	trof acr	25	25	62	1.6	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	25	29	0.7	2,000	1,400	OCC SENSOR CEILING	1	375
341	Bristol Central HS	Kitchen 42	b	4L2' T8 17w/EL	trof acr	21	21	62	1.3	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	21	29	0.6	2,400	1,680	OCC SENSOR CEILING	1	378
342	Bristol Central HS	Kitchen 42	b	4L2' T8 17w/EL	trof acr	36	36	62	2.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	36	29	1.1	2,400	1,680	OCC SENSOR CEILING	1	648
349	Bristol Central HS	Hall 42	b	4L2' T8 17w/EL	box acrylic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	3,200	2,240	OCC SENSOR WALLSWITCH 1GANG	1	37
355	Bristol Central HS	Storage Supplies	b	4L4' T8 32w/EL-8'	strip cage	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	1,000	700	OCC SENSOR CORNER MT.	1	73
359	Bristol Central HS	Hall Custodian	b	4L4' T8 32w/EL-8'	strip cage	13	13	112	1.5	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	13	71	0.9	3,200	2,240	OCC SENSOR CORNER MT. 2GANG	1	757
368	Bristol Central HS	Office 1	b	4L2' T8 17w/EL	trof acr	3	3	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	3	29	0.1	2,400	1,680	OCC SENSOR CEILING	1	54
369	Bristol Central HS	Office 1	b	1L4' T5 HO/EL	task strip	2		59	0.1	NO RETRO	no change -specialized fixture		62	0.1	2,400	1,680	INCLUDED ABOVE		72
371	Bristol Central HS	Storage Elevator	b	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	5
372	Bristol Central HS	Storage 38	b	4L2' T8 17w/EL	trof acr	5	5	62	0.3	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	5	29	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	37
379	Bristol Central HS	Bath 37A	b	2L4' T8 32w/EL	vapor tight	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	3,200	2,240	OCC SENSOR WALLSWITCH 2GANG	1	29
380	Bristol Central HS	Bath 37A	b	2x26W CF HARDWIRED/EL	square recessed	1	1	54	0.1	16 WATT LED/NEW	new LED drum	1	17	0.0	3,200	2,240	INCLUDED ABOVE		14
392	Bristol Central HS	Storage 32	b	2L4' T8 32w/EL	strip cage	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	36
415	South Side ES	Office Library	2	4L4' T8 32w/EL-8'	box acrylic	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	2,000	1,400	OCC SENSOR CEILING	1	73
416	South Side ES	Office Library	2	2L4' T8 32w/EL	box acrylic	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	36
418	South Side ES	Storage A	2	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	9
419	South Side ES	Lobby Elevator	2	2L4' T8 32w U/EL	box acrylic	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	29
420	South Side ES	Office Conf ljk	2	2L4' T8 32w/EL	box acrylic	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	36
425	South Side ES	Hall Lib-Conf K	2	2L4' T8 32w U/EL	box acrylic	12	12	60	0.7	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	12	38	0.5	3,000	2,100	OCC SENSOR CEILING	1	347
426	South Side ES	Hall 24-20	2	2L4' T8 U 32w/ELEE	box acrylic	12	12	53	0.6	2L4' LED/EL/RELAMP ONLY	relamp LEDho Ubent	12	40	0.5	3,000	2,100	OCC SENSOR CEILING	1	366
432	South Side ES	Hall 25-30	2	2L4' T8 32w U/EL	box acrylic	18	18	60	1.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	18	38	0.7	3,000	2,100	OCC SENSOR CEILING	1	521
433	South Side ES	Conference Room H	2	4L4' T8 32w/EL-8'	box acrylic	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	2,000	1,400	OCC SENSOR CEILING	1	73
438	South Side ES	Bath Boys	2	2L4' T8 32w/EL-8'	wrap narrow	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	3,000	2,100	OCC SENSOR CORNER MT. DT 1GANG	1	55
439	South Side ES	Bath Boys	2	1L4' T8 32w/EL	wrap narrow	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	3,000	2,100	INCLUDED ABOVE		14
440	South Side ES	Bath Girls	2	2L4' T8 32w/EL-8'	wrap narrow	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	3,000	2,100	OCC SENSOR CORNER MT. DT 1GANG	1	55
441	South Side ES	Bath Girls	2	1L4' T8 32w/EL	wrap narrow	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	3,000	2,100	INCLUDED ABOVE		14
456	South Side ES	Hall 8-14	1	2L4' T8 32w U/EL	box acrylic	18	18	60	1.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	18	38	0.7	3,000	2,100	OCC SENSOR CEILING	1	521
457	South Side ES	Hall 5-Conf D	1	2L4' T8 32w U/EL	box acrylic	19	19	60	1.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	19	38	0.7	3,000	2,100	OCC SENSOR CEILING	1	549
460	South Side ES	Lobby Main	1	2L4' T8 32w U/EL	box acrylic	4	4	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	4	38	0.2	3,000	2,100	OCC SENSOR CEILING	1	116
461	South Side ES	Lobby Main	1	4L4' T8 32w/EL	trof opaque 4x4	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	3,000	2,100	INCLUDED ABOVE		109
462	South Side ES	Hall Caf-Gym	1	2L4' T8 32w U/EL	box acrylic	17	17	60	1.0	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	17	38	0.6	3,000	2,100	OCC SENSOR CEILING	1	492
464	South Side ES	Office K	1	4L4' T8 32w/EL-8'	wrap	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	2,000	1,400	OCC SENSOR CEILING	1	73
466	South Side ES	Bath Kitchen	1	1L4' T8 32w/EL	wrap narrow	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	14
467	South Side ES	Bath Kitchen	1	60W INCANDESCENT	jar	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	3,000	2,100	INCLUDED ABOVE		6
468	South Side ES	Bath Kitchen	1	2L2' T8 17w/EL	wrap	1	1	33	0.0	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	19	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	14
469	South Side ES	Office Kitchen	1	4L4' T8 32w/EL-8'	strip	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	2,000	1,400	OCC SENSOR CEILING	1	36
470	South Side ES	Office Kitchen	1	2L4' T8 32w/EL	strip	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,000	1,400	INCLUDED ABOVE		18
471	South Side ES	Storage Cups	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	5
472	South Side ES	Cafeteria Main	1	4L4' T8 32w/EL	trof opaque 4x4	13	13	112	1.5	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	13	71	0.9	1,700	1,190	OCC SENSOR CEILING	1	402
474	South Side ES	Stage Cafeteria	1	3x13W CF HARDWIRED	drum	2	2	45	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	1,600	1,120	OCC SENSOR CEILING	1	14
475	South Side ES	Stage Cafeteria	1	4L4' T8 32w/EL-8'	wrap	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	1,600	1,120	INCLUDED ABOVE		175
476	South Side ES	Office Music	1	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	18
477	South Side ES	Gym Main	1	4L4' T5 HO/EL	high bay	18	18	234	4.2	98 WATT LED/NEW	new LED hibay wg	18	103	1.9	2,000	1,400	OCC. SENSOR ON HI BAY FIXTURE	18	945
479	South Side ES	Office Phys Ed	1	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	18
480	South Side ES	Bath Phys Ed	1	3x13W CF HARDWIRED	drum	2	2	45	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	26
485	South Side ES	Storage Book Room	1	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	5
491	South Side ES	Office Nurse	1	4L4' T8 32w/EL	box acrylic	7	7	112	0.8	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	7	53	0.4	2,000	1,400	OCC SENSOR CEILING	1	187
492	South Side ES	Office Nurse	1	4L4' T8 32w/EL	box acrylic dbl switch	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	1	71	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	36
494	South Side ES	Conference Main Office	1	2L4' T8 32w/EL	box acrylic	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	36
495	South Side ES	Bath Main Office	1	32W CIRCLELINE HARDWIRED	drum	1	1	34	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	13
496	South Side ES	Office Principal	1	4L4' T8 32w/EL	box acrylic	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	2,000	1,400	OCC SENSOR WALLSWITCH 2GANG	1	107
497	South Side ES	Bath Main Office	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	13
498	South Side ES	Storage Main Office	1	4L4' T8 32w/EL	box acrylic	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	1,000	700	OCC SENSOR WALLSWITCH 2GANG	1	27
499	South Side ES	Conference Room C	1	2L4' T8 32w/EL	box acrylic	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	18
500	South Side ES	Conference Room B	1	2L4' T8 32w/EL	box acrylic	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	18
501	South Side ES	Conference Room D	1	4L4' T8 32w/EL-8'	box acrylic	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	73
503	South Side ES	Bath Women	1	2L4' T8 32w/EL-8'	wrap narrow	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	3,000	2,100	OCC SENSOR WALLSWITCH DT 1GANG	1	27
504	South Side ES	Bath Women	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	3,000	2,100	INCLUDED ABOVE		27
505	South Side ES	Storage Women	1	100W INCANDESCENT	old drum	2	2	100	0.2	16 WATT LED/NEW	new LED drum	2	17	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	9
506	South Side ES	Bath Men	1	2L4' T8 32w/EL-8'	wrap narrow	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	3,000	2,100	OCC SENSOR WALLSWITCH DT 1GANG	1	27
507	South Side ES	Bath Men	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	3,000	2,100	INCLUDED ABOVE		27
508	South Side ES	Lobby Elevator	1	2L4' T8 32w U/EL	box acrylic	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	29
514	South Side ES	Bath 1	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	13

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	Annual Hours	Hours With Controls	*Control Description*	*Control Qty*	Control kWH Saved
517	South Side ES	Bath 2	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	13
520	South Side ES	Storage 5	1	1L4' T12 34w EE/EEMAG	strip	1	1	40	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	5
524	South Side ES	Bath 6	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	13
525	South Side ES	Storage 6	1	1L4' T8 32w/EL	strip	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	2
528	South Side ES	Bath 3	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	13
529	South Side ES	Storage 3	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	5
530	South Side ES	Office Therapy	1	2L4' T8 32w/EL	box acrylic	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	36
531	South Side ES	Storage Therapy	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	9
532	South Side ES	Storage Therapy	1	2L4' T8 32w U/EL	box acrylic	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	10
535	South Side ES	Bath 4	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	13
536	South Side ES	Storage 4	1	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	5
539	South Side ES	Bath 7	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	13
540	South Side ES	Storage 7	1	1L4' T8 32w/EL	strip	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	2
541	South Side ES	Storage Workroom	1	4L4' T8 32w/EL-8'	box acrylic	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	36
542	South Side ES	Office Custodian	1	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,000	1,400	OCC SENSOR CEILING	1	18
543	South Side ES	Storage Custodian	1	1L4' T8 32w/EL	strip	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	5
547	South Side ES	Bath 8	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	13
550	South Side ES	Bath 9	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	13
553	South Side ES	Bath 10	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	13
556	South Side ES	Bath 16	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	13
559	South Side ES	Bath 11	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	13
562	South Side ES	Bath 15	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	13
565	South Side ES	Bath 12	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	13
568	South Side ES	Bath 14	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	13
573	South Side ES	Storage Electric	b	2L4' T8 32w/EL-8'	strip	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	5
574	South Side ES	Storage Chairs Desks	b	2L4' T8 32w/EL-8'	strip	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	500	350	OCC SENSOR CEILING	1	18
575	South Side ES	Storage Chairs Desks	b	4L4' T8 32w/EL-8'	strip	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	500	350	INCLUDED ABOVE		18
576	South Side ES	Storage Chairs Desks	b	2L4' T8 32w/EL	strip	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	500	350	INCLUDED ABOVE		5
586	Green-Hills K8 School	Mechanical 140	1	2L4' T8 32w/EL	trof acr 1' wide	12	12	60	0.7	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	36	0.4	500	350	TIMER WALLSWITCH 1GANG	1	64
587	Green-Hills K8 School	Mechanical 140B	1	2L4' T8 32w/EL	trof acr 1' wide	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	21
588	Green-Hills K8 School	Mechanical 140A	1	2L4' T8 32w/EL	trof acr 1' wide	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	16
589	Green-Hills K8 School	Storage 142	1	2L4' T8 32w/EL	trof acr 1' wide	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	1,000	700	OCC SENSOR CORNER MT.	1	11
822	Green-Hills K8 School	Mechanical 238B	2	2L4' T8 32w/EL	trof acr 1' wide	12	12	60	0.7	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	36	0.4	500	350	TIMER WALLSWITCH 1GANG	1	64
857	Green-Hills K8 School	Mechanical 207A	2	2L4' T8 32w/EL	trof acr 1' wide	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	500	350	TIMER WALLSWITCH 1GANG	1	32
947	Chippens Hill MS	Classroom Resource	3	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	2,700	1,890	OCC SENSOR WALLSWITCH 1GANG	1	153
948	Chippens Hill MS	Storage Science	3	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	14
949	Chippens Hill MS	Storage Electric	3	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	7
950	Chippens Hill MS	Office Faculty Workroom	3	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	139
953	Chippens Hill MS	Hall 311-315	3	2L4' T8 32w/EL	trof para 1' wide	15	15	60	0.9	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	15	36	0.5	3,200	2,240	OCC SENSOR CEILING	1	463
954	Chippens Hill MS	Hall 311-315	3	2x13W CF HARDWIRED	can rec 8"	9	9	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	9	11	0.1	3,200	2,240	INCLUDED ABOVE		82
958	Chippens Hill MS	Bath Boys (2)	3	3L4' T8 32w/EL	industrial	24	24	88	2.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	24	54	1.3	2,800	1,960	OCC SENSOR CORNER MT. DT 1GANG	2	972
961	Chippens Hill MS	Office Faculty Workroom	3	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	136
962	Chippens Hill MS	Office Multi Purpose Room	3	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	139
967	Chippens Hill MS	Storage Custodian	3	3L4' T8 32w/EL	industrial cage	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	7
968	Chippens Hill MS	Storage Science	3	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	14
969	Chippens Hill MS	Storage Janitor Supplies	3	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	7
970	Chippens Hill MS	Bath Men (2)	3	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	2,800	1,960	OCC SENSOR CORNER MT. DT 1GANG	2	162
971	Chippens Hill MS	Hall 320-325	3	2L4' T8 32w/EL	trof parabolic	18	18	60	1.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	18	36	0.6	3,200	2,240	OCC SENSOR CEILING	1	555
975	Chippens Hill MS	Bath Boys (2)	3	3L4' T8 32w/EL	industrial	24	24	88	2.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	24	54	1.3	2,800	1,960	OCC SENSOR CORNER MT. DT 1GANG	2	972
981	Chippens Hill MS	Office Resource Room	3	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	139
982	Chippens Hill MS	Storage Electric	3	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	7
983	Chippens Hill MS	Storage Science	3	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	14
984	Chippens Hill MS	Office Faculty Work Room	3	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	136
985	Chippens Hill MS	Hall 331-335	3	2L4' T8 32w/EL	trof parabolic	15	15	60	0.9	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	15	36	0.5	3,200	2,240	OCC SENSOR CEILING	1	463
986	Chippens Hill MS	Hall 331-335	3	2x13W CF HARDWIRED	can rec 8"	9	9	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	9	11	0.1	3,200	2,240	INCLUDED ABOVE		82
995	Chippens Hill MS	Office Resource Room	2	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	136
996	Chippens Hill MS	Storage Science	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	14
997	Chippens Hill MS	Storage Ladder	2	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	7
998	Chippens Hill MS	Office Faculty Workroom	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	139
999	Chippens Hill MS	Bath Boys (2)	2	3L4' T8 32w/EL	industrial	24	24	88	2.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	24	54	1.3	2,800	1,960	OCC SENSOR CORNER MT. DT 1GANG	2	972
1000	Chippens Hill MS	Hall 211-215	2	2L4' T8 32w/EL	trof parabolic	15	15	60	0.9	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	15	36	0.5	3,200	2,240	OCC SENSOR CEILING	1	463
1002	Chippens Hill MS	Hall To Stair 4	2	2L4' T8 32w/EL	trof parabolic	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	3,200	2,240	OCC SENSOR CEILING	1	123
1003	Chippens Hill MS	Hall To Stair 4	2	2x13W CF HARDWIRED	can rec 8"	10	10	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	10	11	0.1	3,200	2,240	INCLUDED ABOVE		91
1004	Chippens Hill MS	Hall Elevator Lobby	2	2x13W CF HARDWIRED	can rec 8"	6	6	30	0.2	10 WATT LED/KIT	can kit LED Spectrum	6	11	0.1	3,200	2,240	OCC SENSOR CEILING	1	54
1012	Chippens Hill MS	Office Faculty Work Room	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	139
1013	Chippens Hill MS	Office Multi Purpose	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	139
1014	Chippens Hill MS	Storage Custodian	2	3L4' T8 32w/EL	industrial cage	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	7
1015	Chippens Hill MS	Storage Science	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	14
1016	Chippens Hill MS	Office Resource	2	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	136
1017	Chippens Hill MS	Storage File	2	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	7
1018	Chippens Hill MS	Hall 220-225	2	2L4' T8 32w/EL	trof para 1' wide	18	18	60	1.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	18	36	0.6	3,200	2,240	OCC SENSOR CEILING	1	555
1019	Chippens Hill MS	Hall 220-225	2	2x13W CF HARDWIRED	can rec 6"	14	14	30	0.4	10 WATT LED/KIT	can kit LED Spectrum	14	11	0.1	3,200	2,240	INCLUDED ABOVE		127
1022	Chippens Hill MS	Bath Boys (2)	2	3L4' T8 32w/EL	industrial	24	24	88	2.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	24	54	1.3	2,800	1,960	OCC SENSOR CORNER MT. DT 1GANG	2	972
1028	Chippens Hill MS	Storage Science	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	14
1029	Chippens Hill MS	Office Faculty Room	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	102
1030	Chippens Hill MS	Hall 231-235	2	2L4' T8 32w/EL	trof para 1' wide	15	15	60	0.9	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	15	36	0.5	3,200	2,240	OCC SENSOR CEILING	1	463
1031	Chippens Hill MS	Hall 231-235	2	2x13W CF HARDWIRED	can rec 6"	10	10	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	10	11	0.1	3,200	2,240	INCLUDED ABOVE		91
1035	Chippens Hill MS	Storage Stage	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	14
1036	Chippens Hill MS	Lobby Aud	2	100W MERCURY VAPOR	can rec 8"	19	19	120	2.3	25 WATT LED/KIT	can kit LED Spectrum	19	26	0.5	3,200	2,240	PHOTO SENSOR FOR DIMMING	1	431
1037	Chippens Hill MS	Lobby Aud	2	2x13W CF HARDWIRED	can rec 8"	8	8	30	0.2	10 WATT LED/KIT	can kit LED Spectrum	8	11	0.1	3,200	2,240	PHOTO SENSOR FOR DIMMING	1	73
1038	Chippens Hill MS	Storage Mechanical Room	2	3L4' T8 32w/EL	industrial cage	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	7
1045	Chippens Hill MS	Office Open Guidance	2	3L4' T8 32w/EL	trof acr	6	6	88	0.5	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	54	0.3	2,750	1,925	OCC SENSOR CEILING	1	239

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	Annual Hours	Hours With Controls	*Control Description*	*Control Qty*	Control kWH Saved
1047	Chippens Hill MS	Office Kids In The Middle	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	69
1048	Chippens Hill MS	Office A	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	69
1049	Chippens Hill MS	Office B	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	69
1050	Chippens Hill MS	Office C	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	69
1051	Chippens Hill MS	Office Social Worker	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	69
1052	Chippens Hill MS	Office Psych	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	69
1053	Chippens Hill MS	Office File	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	69
1054	Chippens Hill MS	Conference Guidance	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	139
1056	Chippens Hill MS	Office Open Main	2	3L4' T8 32w/EL	trof acr	9	9	88	0.8	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	54	0.5	2,453	1,717	OCC SENSOR CEILING	1	319
1057	Chippens Hill MS	Hall Main Office	2	2x26W CF HARDWIRED/EL	can rec 6"	12	12	54	0.6	15 WATT LED/KIT	can kit LED Spectrum	12	16	0.2	3,200	2,240	OCC SENSOR CEILING	1	163
1058	Chippens Hill MS	Office Asst Principal (2)	2	3L4' T8 32w/EL	trof acr	8	8	88	0.7	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	54	0.4	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	2	278
1059	Chippens Hill MS	Office Principal	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	2,400	1,680	OCC SENSOR CEILING	1	139
1060	Chippens Hill MS	Office Open Workroom	2	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	6	53	0.3	2,750	1,925	OCC SENSOR CEILING	1	234
1067	Chippens Hill MS	Storage Music	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	14
1068	Chippens Hill MS	Office Music	2	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	35
1069	Chippens Hill MS	Storage Percussion	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	1,000	700	OCC SENSOR CEILING	1	29
1070	Chippens Hill MS	Storage Practice A	2	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	7
1072	Chippens Hill MS	Hall Music	2	2x13W CF HARDWIRED	can rec 8"	3	3	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	3,200	2,240	OCC SENSOR CORNER MT.	1	27
1073	Chippens Hill MS	Office Open Nurse	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	2,750	1,925	OCC SENSOR CORNER MT.	1	159
1075	Chippens Hill MS	Office Nurse	2	3L4' T8 32w/EL	trof acr	3	3	88	0.3	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	54	0.2	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	104
1076	Chippens Hill MS	Bath Nurse	2	2L4' T8 32w/EL	trof para 1' wide	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,800	1,960	OCC SENSOR WALLSWITCH 1GANG	1	27
1082	Chippens Hill MS	Storage Art C	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	1,000	700	OCC SENSOR CEILING	1	29
1083	Chippens Hill MS	Storage Kiln	2	3L4' T8 32w/EL	trof minicube	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	500	350	OCC SENSOR CEILING	1	7
1085	Chippens Hill MS	Classroom Art B	2	2L4' T8 32w/EL	indirect/direct	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,700	1,890	INCLUDED ABOVE		26
1086	Chippens Hill MS	Classroom Art B	2	2L4' T8 32w/EL	indirect/direct	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,700	1,890	INCLUDED ABOVE		26
1087	Chippens Hill MS	Storage Art B	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	29
1088	Chippens Hill MS	Storage Kiln	2	3L4' T8 32w/EL	trof minicube	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	7
1090	Chippens Hill MS	Classroom Art A	2	2L4' T8 32w/EL	indirect/direct	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,700	1,890	INCLUDED ABOVE		26
1091	Chippens Hill MS	Classroom Art A	2	2L4' T8 32w/EL	indirect/direct	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,700	1,890	INCLUDED ABOVE		26
1092	Chippens Hill MS	Storage Art A	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	29
1093	Chippens Hill MS	Storage Near Art A	2	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	14
1096	Chippens Hill MS	Storage Computer	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	28
1097	Chippens Hill MS	Storage Drama	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	14
1107	Chippens Hill MS	Storage Capitani	2	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	29
1108	Chippens Hill MS	Storage Av	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	28
1109	Chippens Hill MS	Storage Av	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	58
1110	Chippens Hill MS	Office Home Ec	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	139
1115	Chippens Hill MS	Stair 1	stair	3L4' T8 32w/EL	indirect/direct	12	12	88	1.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	54	0.6	3,200	2,240	PHOTO SENSOR FOR DIMMING	1	555
1124	Chippens Hill MS	Storage Garage	1	3L4' T8 32w/EL	industrial cage	6	6	88	0.5	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	54	0.3	1,000	700	OCC SENSOR CEILING	1	87
1126	Chippens Hill MS	Storage Electric	1	3L4' T8 32w/EL	industrial cage	10	10	88	0.9	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	10	54	0.5	1,000	700	OCC SENSOR CORNER MT.	1	145
1127	Chippens Hill MS	Office Bldg Super	1	4L4' T8 32w/EL	industrial cage	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	46
1128	Chippens Hill MS	Locker Men/Women (2)	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	2,800	1,960	OCC SENSOR WALLSWITCH 1GANG	2	81
1129	Chippens Hill MS	Locker Men/Women (2)	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	2,800	1,960	OCC SENSOR WALLSWITCH 2GANG	2	81
1130	Chippens Hill MS	Locker Men/Women (2)	1	22W & 32W CIRCLELINE HARDWIRED	drum	4	4	58	0.2	16 WATT LED/NEW	new LED drum	4	17	0.1	2,800	1,960	INCLUDED ABOVE		51
1131	Chippens Hill MS	Hall Locker Room	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	3,200	2,240	OCC SENSOR WALLSWITCH 1GANG	1	93
1132	Chippens Hill MS	Kitchen Disposal	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	1,700	1,190	OCC SENSOR CEILING	1	49
1133	Chippens Hill MS	Kitchen Main	1	3L4' T8 32w/EL	trof acr	26	26	88	2.3	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	26	54	1.4	1,700	1,190	OCC SENSOR CEILING	1	639
1134	Chippens Hill MS	Kitchen Main	1	2x26W CF HARDWIRED/EL	can rec 8"	19	19	54	1.0	15 WATT LED/KIT	can kit LED Spectrum	19	16	0.3	1,700	1,190	INCLUDED ABOVE		137
1136	Chippens Hill MS	Office Main Kitchen	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	69
1137	Chippens Hill MS	Storage Main Kitchen	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	29
1138	Chippens Hill MS	Storage Cans	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	29
1139	Chippens Hill MS	Storage Garage	1	3L4' T8 32w/EL	industrial cage	6	6	88	0.5	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	54	0.3	1,000	700	OCC SENSOR CEILING	1	87
1140	Chippens Hill MS	Storage Can Wash	1	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	14
1144	Chippens Hill MS	Bath Men (2)	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	2,800	1,960	OCC SENSOR WALLSWITCH DT 1GANG	2	162
1146	Chippens Hill MS	Hall Gym-Caf	1	2L4' T8 32w/EL	trof para 1' wide	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	3,200	2,240	OCC SENSOR CEILING	1	247
1147	Chippens Hill MS	Gym Main	1	4L4' T5 HO/EL	high bay	74	74	234	17.3	98 WATT LED/NEW	new LED hibay wg	74	103	7.6	2,980	2,086	OCC. SENSOR ON HI BAY FIXTURE	74	6,127
1148	Chippens Hill MS	Storage Janitor	1	3L4' T8 32w/EL	industrial cage	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	7
1149	Chippens Hill MS	Storage Balls	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	14
1150	Chippens Hill MS	Storage Elevator	1	3L4' T8 32w/EL	industrial cage	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	7
1151	Chippens Hill MS	Hall Gym-Stair 5	1	2L4' T8 32w/EL	trof para 1' wide	19	19	60	1.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	19	36	0.7	3,200	2,240	OCC SENSOR CEILING	1	586
1152	Chippens Hill MS	Hall Gym-Stair 5	1	2x13W CF HARDWIRED	can rec 8"	10	10	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	10	11	0.1	3,200	2,240	INCLUDED ABOVE		91
1154	Chippens Hill MS	Storage Tech A	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	1,000	700	OCC SENSOR CEILING	1	58
1155	Chippens Hill MS	Storage Tech A	1	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	500	350	OCC SENSOR CEILING	1	7
1156	Chippens Hill MS	Storage Custodian	1	3L4' T8 32w/EL	industrial cage	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	7
1158	Chippens Hill MS	Storage Tech B	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	1,000	700	OCC SENSOR CEILING	1	58
1159	Chippens Hill MS	Storage Tech B	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	500	350	OCC SENSOR CEILING	1	14
1163	Chippens Hill MS	Hall Boys Locker-Girls Locker	1	2x13W CF HARDWIRED	can rec 8"	6	6	30	0.2	10 WATT LED/KIT	can kit LED Spectrum	6	11	0.1	3,200	2,240	OCC SENSOR CEILING	1	54
1164	Chippens Hill MS	Locker Boys (2)	1	3L4' T8 32w/EL	trof acr	36	36	88	3.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	36	54	1.9	2,800	1,960	OCC SENSOR CEIL DT 1GANG	2	1,457
1165	Chippens Hill MS	Locker Boys (2)	1	22W & 32W CIRCLELINE HARDWIRED	drum	14	14	58	0.8	16 WATT LED/NEW	new LED drum	14	17	0.2	2,800	1,960	INCLUDED ABOVE		178
1167	Chippens Hill MS	Locker Boys (2)	1	2x13W CF HARDWIRED	square recessed	2	2	30	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	2,800	1,960	INCLUDED ABOVE		25
1168	Chippens Hill MS	Locker Boys (2)	1	2x13W CF HARDWIRED	can rec 8"	10	10	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	10	11	0.1	2,800	1,960	INCLUDED ABOVE		79
1169	Chippens Hill MS	Storage Locker (2)	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	1,000	700	OCC SENSOR WALLSWITCH 1GANG	2	58
1170	Chippens Hill MS	Office Trainer (2)	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	2	139
1171	Chippens Hill MS	Bath Trainer (2)	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	2,800	1,960	OCC SENSOR WALLSWITCH DT 1GANG	2	81
1172	Chippens Hill MS	Bath Trainer (2)	1	22W & 32W CIRCLELINE HARDWIRED	drum	2	2	58	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	2,800	1,960	INCLUDED ABOVE		25
1173	Chippens Hill MS	Office Pe (2)	1	3L4' T8 32w/EL	trof acr	6	6	88	0.5	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	54	0.3	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	2	208
1179	Chippens Hill MS	Office Faculty Work Room	1	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	102
1180	Chippens Hill MS	Storage Science	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	14
1181	Chippens Hill MS	Storage Band	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	7
1182	Chippens Hill MS	Office Resource	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	139
1183	Chippens Hill MS	Hall 135-131	1	2L4' T8 32w/EL	trof para 1' wide	15	15	60	0.9	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	15	36	0.5	3,200	2,240	OCC SENSOR CEILING	1	463
1184	Chippens Hill MS	Hall 135-131	1	2x13W CF HARDWIRED	can rec 8"	9	9	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	9	11	0.1	3,200	2,240	INCLUDED ABOVE		82

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	Annual Hours	Hours With Controls	*Control Description*	*Control Qty*	Control kWH Saved
1185	Chippens Hill MS	Hall Stair 6-B	1	2L4' T8 32w/EL	trof para 1' wide	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	3,200	2,240	OCC SENSOR CEILING	1	93
1186	Chippens Hill MS	Hall Stair 6-B	1	2x13W CF HARDWIRED	can rec 8"	10	10	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	10	11	0.1	3,200	2,240	INCLUDED ABOVE		91
1189	Chippens Hill MS	Stair 6 (2)	stair	6L4' T8 32w/EL-12'	indirect/direct	4	4	180	0.7	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	107	0.4	3,200	2,240	PHOTO SENSOR FOR DIMMING	2	370
1190	Chippens Hill MS	Stair 6 (2)	stair	4L4' T8 32w/EL-8'	indirect/direct	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	3,200	2,240	INCLUDED ABOVE		247
1191	Chippens Hill MS	Stair 6	stair	4L4' T8 32w/EL-8'	strip cage	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	3,200	2,240	INCLUDED ABOVE		123
1198	Chippens Hill MS	Hall 125-120	1	2L4' T8 32w/EL	trof para 1' wide	18	18	60	1.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	18	36	0.6	3,200	2,240	OCC SENSOR CEILING	1	555
1199	Chippens Hill MS	Storage Janitor	1	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	7
1200	Chippens Hill MS	Storage Science	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	14
1201	Chippens Hill MS	Storage Custodian	1	3L4' T8 32w/EL	industrial cage	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	7
1202	Chippens Hill MS	Office Multipurpose	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	139
1203	Chippens Hill MS	Office Faculty Workroom	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	139
1205	Chippens Hill MS	Hall Stair 4-B	1	2L4' T8 32w/EL	trof para 1' wide	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	3,200	2,240	OCC SENSOR CEILING	1	93
1206	Chippens Hill MS	Hall Stair 4-B	1	2x13W CF HARDWIRED	can rec 8"	10	10	30	0.3	10 WATT LED/KIT	can kit LED Spectrum	10	11	0.1	3,200	2,240	INCLUDED ABOVE		91
1209	Chippens Hill MS	Stair 4	stair	6L4' T8 32w/EL-12'	indirect/direct	2	2	180	0.4	6L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	107	0.2	3,200	2,240	PHOTO SENSOR FOR DIMMING	1	185
1210	Chippens Hill MS	Stair 4	stair	4L4' T8 32w/EL-8'	indirect/direct	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	3,200	2,240	INCLUDED ABOVE		123
1211	Chippens Hill MS	Stair 4	stair	4L4' T8 32w/EL-8'	strip cage	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	3,200	2,240	INCLUDED ABOVE		123
1217	Chippens Hill MS	Office Faculty Workroom	1	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	139
1218	Chippens Hill MS	Storage Cleaning Supplies	1	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	7
1219	Chippens Hill MS	Storage Science	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	14
1220	Chippens Hill MS	Office Resources	1	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	136
1221	Chippens Hill MS	Stair 3	stair	70W METAL HALIDE	can rec 8"	10	10	95	1.0	15 WATT LED/KIT	can kit LED Spectrum	10	16	0.2	3,200	2,240	PHOTO SENSOR FOR DIMMING	1	136
1222	Chippens Hill MS	Stair 3	stair	2x13W CF HARDWIRED	can rec 8"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	3,200	2,240	INCLUDED ABOVE		9
1226	Chippens Hill MS	Storage Paper	1	3L4' T8 32w/EL	industrial cage	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	29
1227	Chippens Hill MS	Storage Wood Shop	1	3L4' T8 32w/EL	industrial cage	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	1,000	700	OCC SENSOR CEILING	1	58
1228	Chippens Hill MS	Storage Garage	1	3L4' T8 32w/EL	industrial cage	16	16	88	1.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	16	54	0.9	1,000	700	OCC SENSOR CEILING	1	231
1241	Bristol Eastern HS	Storage 200B	1	4L2' T8 17w/EL	trof acr	3	3	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	3	29	0.1	500	350	OCC SENSOR CEILING	1	11
1247	Bristol Eastern HS	Storage 224B	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	4
1288	Bristol Eastern HS	Storage Electric	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	5
1292	Bristol Eastern HS	Office Kalfayan	1	4L4' T8 32w/EL-8'	indirect/direct	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	2,400	1,680	OCC SENSOR CEILING	1	87
1293	Bristol Eastern HS	Office Kalfayan	1	2x26W CF HARDWIRED/EL	can rec 8"	6	6	54	0.3	15 WATT LED/KIT	can kit LED Spectrum	6	16	0.1	2,400	1,680	INCLUDED ABOVE		58
1296	Bristol Eastern HS	Office Lefrancois	1	4L2' T8 17w/EL	trof parabolic	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	2,400	1,680	OCC SENSOR CEILING	1	72
1333	Bristol Eastern HS	Storage 246A	1	2L4' T8 32w/EL	strip	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	500	350	TIMER WALLSWITCH 1GANG	1	9
1369	Bristol Eastern HS	Hall Stair2-Stair 1	1	4L2' T8 17w/EL	box acrylic	12	12	62	0.7	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	12	29	0.4	3,200	2,240	OCC SENSOR CEILING	1	288
1375	Bristol Eastern HS	Hall Stair 1-C200	1	4L2' T8 17w/EL	box acrylic	18	18	62	1.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	18	29	0.5	3,200	2,240	OCC SENSOR CEILING	1	432
1376	Bristol Eastern HS	Hall Stair 1-C200	1	2x26W CF HARDWIRED/EL	can rec 8"	2	2	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	2	16	0.0	3,200	2,240	INCLUDED ABOVE		26
1378	Bristol Eastern HS	Hall 200-Stair 5	1	4L2' T8 17w/EL	box acrylic	14	14	62	0.9	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	14	29	0.4	3,200	2,240	OCC SENSOR CEILING	1	336
1379	Bristol Eastern HS	Hall 200-Stair 5	1	4L4' T8 32w/EL	box acr 4x4	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	3,200	2,240	INCLUDED ABOVE		117
1382	Bristol Eastern HS	Hall Stair 5-C241	1	4L2' T8 17w/EL	box acrylic	12	12	62	0.7	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	12	29	0.4	3,200	2,240	OCC SENSOR CEILING	1	288
1391	Bristol Eastern HS	Hall C220-C225	1	4L2' T8 17w/EL	box acrylic	11	11	62	0.7	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	11	29	0.3	3,200	2,240	OCC SENSOR CEILING	1	264
1394	Bristol Eastern HS	Storage 140	1	2L4' T8 32w/EL	strip	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	5
1408	Bristol Eastern HS	Hall 133-141	1	4L2' T8 17w/EL	box acrylic	11	11	62	0.7	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	11	29	0.3	3,200	2,240	OCC SENSOR CEILING	1	264
1409	Bristol Eastern HS	Hall 133-141	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	3,200	2,240	INCLUDED ABOVE		24
1412	Bristol Eastern HS	Storage 131A	1	4L2' T8 17w/EL	box acrylic	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	4
1413	Bristol Eastern HS	Storage 131A	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	5
1424	Bristol Eastern HS	Hall C124-C131	1	4L2' T8 17w/EL	box acrylic	11	11	62	0.7	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	11	29	0.3	3,200	2,240	OCC SENSOR CEILING	1	264
1425	Bristol Eastern HS	Hall C124-C131	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	3,200	2,240	INCLUDED ABOVE		24
1426	Bristol Eastern HS	Hall C124-C131	1	4L4' T8 32w/EL	box acr 4x4	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	3,200	2,240	INCLUDED ABOVE		117
1438	Bristol Eastern HS	Hall C109-C113	1	4L2' T8 17w/EL	box acrylic	15	15	62	0.9	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	15	29	0.4	3,200	2,240	OCC SENSOR CEILING	1	360
1439	Bristol Eastern HS	Hall C109-C113	1	4L4' T8 32w/EL	box acr 4x4	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	3,200	2,240	INCLUDED ABOVE		233
1461	Bristol Eastern HS	Hall C105-C102	1	4L2' T8 17w/EL	box acrylic	15	15	62	0.9	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	15	29	0.4	3,200	2,240	OCC SENSOR CEILING	1	360
1462	Bristol Eastern HS	Hall C105-C102	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	3,200	2,240	INCLUDED ABOVE		48
1463	Bristol Eastern HS	Hall C105-C102	1	4L4' T8 32w/EL	box acr 4x4	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	3,200	2,240	INCLUDED ABOVE		233
1470	Bristol Eastern HS	Lounge 100C	1	4L2' T8 17w/EL	trof parabolic	11	11	62	0.7	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	11	29	0.3	2,300	1,610	OCC SENSOR CEILING	1	190
1471	Bristol Eastern HS	Cafeteria Main	1	3L4' T8 32w/EL	trof parabolic	48	48	88	4.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	48	54	2.6	2,000	1,400	OCC SENSOR CEILING	1	1,311
1494	Bristol Eastern HS	Storage Conf	1	4L2' T8 17w/EL	trof acr	1	1	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	4
1495	Bristol Eastern HS	Hall Caf-Gym	1	4L2' T8 17w/EL	box acrylic	13	13	62	0.8	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	13	29	0.4	3,200	2,240	OCC SENSOR CEILING	1	312
1496	Bristol Eastern HS	Hall Caf-Gym	1	4L4' T8 32w/EL	box acr 4x4	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	3,200	2,240	INCLUDED ABOVE		350
1497	Bristol Eastern HS	Hall Caf-Gym	1	2x26W CF HARDWIRED/EL	can rec 8"	1	1	54	0.1	15 WATT LED/KIT	can kit LED Spectrum	1	16	0.0	3,200	2,240	INCLUDED ABOVE		13
1526	Bristol Eastern HS	Hall C119-C141	1	4L2' T8 17w/EL	box acrylic	15	15	62	0.9	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	15	29	0.4	3,200	2,240	OCC SENSOR CEILING	1	360
1527	Bristol Eastern HS	Hall Gymnasium	1	4L2' T8 17w/EL	box acrylic	9	9	62	0.6	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	9	29	0.3	3,200	2,240	OCC SENSOR CEILING	1	216
1528	Bristol Eastern HS	Storage Trainer	1	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	7
1536	Bristol Eastern HS	Gym 2	1	4L4' T5 HO/EL	high bay	24	24	234	5.6	98 WATT LED/NEW	new LED hibay wg	24	103	2.5	2,980	2,086	OCC. SENSOR ON HI BAY FIXTURE	24	1,877
1539	Bristol Eastern HS	Gym Main	1	4L4' T5 HO/EL	high bay	48	48	234	11.2	98 WATT LED/NEW	new LED hibay wg	48	103	4.9	2,980	2,086	OCC. SENSOR ON HI BAY FIXTURE	48	3,753
1542	Bristol Eastern HS	Hall Near Boys Locker	1	4L2' T8 17w/EL	trof acr	8	8	62	0.5	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	8	29	0.2	3,200	2,240	OCC SENSOR CEILING	1	192
1562	Bristol Eastern HS	Hall Gym-Lib	1	4L2' T8 17w/EL	box acrylic	13	13	62	0.8	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	13	29	0.4	3,200	2,240	OCC SENSOR CEILING	1	312
1563	Bristol Eastern HS	Hall Gym-Lib	1	4L4' T8 32w/EL	box acr 4x4	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	3,200	2,240	INCLUDED ABOVE		233
1578	Bristol Eastern HS	Library Main	1	2L2' F40 BIAX/EL	indirect/direct	26	26	72	1.9	36 WATT LED/KIT	trof kit LED	26	38	1.0	2,200	1,540	OCC. SENSOR ON HI BAY FIXTURE	1	551
1579	Bristol Eastern HS	Library Main	1	28W CF HARDWIRED	decorative	8		30	0.2	NO RETRO	no change -specialized fixture		32	0.2	2,200	1,540	INCLUDED ABOVE		135
1580	Bristol Eastern HS	Library Main	1	4L4' T8 32w/EL-8'	indirect/direct	21	21	112	2.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	21	71	1.5	2,200	1,540	INCLUDED ABOVE		841
1581	Bristol Eastern HS	Library Main	1	2x18W CF HARDWIRED/EL	square recessed	40	40	38	1.5	16 WATT LED/NEW	new LED drum	40	17	0.7	2,200	1,540	INCLUDED ABOVE		377
1591	Bristol Eastern HS	Hall Caf To Aud	1	4L2' T8 17w/EL	box acrylic	13	13	62	0.8	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	13	29	0.4	3,200	2,240	OCC SENSOR CEILING	1	312
1592	Bristol Eastern HS	Hall Caf To Aud	1	4L4' T8 32w/EL	box acr 4x4	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	3,200	2,240	INCLUDED ABOVE		117
1593	Bristol Eastern HS	Hall Caf To Aud	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	3,200	2,240	INCLUDED ABOVE		87
1597	Bristol Eastern HS	Storage 11B	1	4L2' T8 17w/EL	box acrylic	3	3	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	3	29	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	22
1598	Bristol Eastern HS	Storage 11C	1	4L2' T8 17w/EL	box acrylic	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	15
1609	Bristol Eastern HS	Storage Mez	mezz	2L4' T8 32w/EL	wrap wide	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	9
1617	Bristol Eastern HS	Storage Washer	mezz	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	9
1618	Bristol Eastern HS	Office K6	mezz	4L2' T8 17w/EL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	36
1620	Bristol Eastern HS	Hall Stair 2-D&E	mezz	4L2' T8 17w/EL	box acrylic	5	5	62	0.3	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	5	29	0.1	3,200	2,240	OCC SENSOR CEILING	1	120
1621	Bristol Eastern HS	Hall To C1	mezz	4L2' T8 17w/EL	box acrylic	5	5	62	0.3	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	5	29	0.1	3,200	2,240	OCC SENSOR CEILING	1	120
1624	Bristol Eastern HS	Hall C2-3	mezz	4L2' T8 17w/EL	box acrylic	3	3	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	3	29	0.1	3,200	2,240	OCC SENSOR CEIL DT 1GANG	1	72
1632	Bristol Eastern HS	Hall C5-C7	mezz	4L2' T8 17w/EL	box acrylic	13	13	62	0.8	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	13	29	0.4	3,200	2,240	OCC SENSOR CEILING	1	312

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	Annual Hours	Hours With Controls	*Control Description*	*Control Qty*	Control kWH Saved
1633	Bristol Eastern HS	Classroom 7	mezz	4L4' T8 32w/EL	trof acr	12	12	112	1.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	12	53	0.6	2,800	1,960	OCC SENSOR CEILING	1	450
1634	Bristol Eastern HS	Classroom 7 Small	mezz	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	6	53	0.3	2,800	1,960	OCC SENSOR WALLSWITCH 1GANG	1	225
1635	Bristol Eastern HS	Classroom 7 Small	mezz	4L4' T8 32w/EL	trof acr	5	5	112	0.6	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	5	53	0.3	2,800	1,960	OCC SENSOR WALLSWITCH 1GANG	1	187
1636	Bristol Eastern HS	Office C7	mezz	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	64
1637	Bristol Eastern HS	Storage C7	mezz	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	13
1641	Bristol Eastern HS	Shop 6	mezz	4L4' T8 32wEL-8'	vapor tight	28	28	112	3.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	28	71	2.0	2,700	1,890	OCC SENSOR CORNER MT. 4GANG	1	1,376
1643	Bristol Eastern HS	Storage 6C	mezz	2L4' T8 32w/EL	strip cage	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	9
1644	Bristol Eastern HS	Storage 6A	mezz	4L4' T8 32wEL-8'	vapor tight	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	55
1646	Bristol Eastern HS	Lounge 8	mezz	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	2,300	1,610	INCLUDED ABOVE		22
1648	Bristol Eastern HS	Classroom 8	mezz	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	6	53	0.3	2,800	1,960	OCC SENSOR CEILING	1	225
1652	Bristol Eastern HS	Office 8	mezz	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	129
1653	Bristol Eastern HS	Classroom 9 Asep2	mezz	4L4' T8 32wEL-8'	industrial	12	12	112	1.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	71	0.9	2,800	1,960	OCC SENSOR CORNER MT.	1	612
1655	Bristol Eastern HS	Classroom 5	mezz	4L2' T8 17wEL	trof acr	6	6	62	0.4	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	6	29	0.2	2,800	1,960	OCC SENSOR WALLSWITCH 1GANG	1	126
1735	West Bristol K8 School	Office B230B	2	2L2' T8 17wEL	troffer indirect	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	2,400	1,680	OCC SENSOR CEILING	1	54
1903	West Bristol K8 School	Mechanical B135	1	4L4' T8 32wEL-8'	strip reflector	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	500	350	TIMER WALLSWITCH 1GANG	1	96
1912	Northeast MS	Bath Boys	2	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,800	1,960	OCC SENSOR WALLSWITCH DT 1GANG	1	48
1913	Northeast MS	Bath Men	2	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	2,800	1,960	OCC SENSOR WALLSWITCH DT 1GANG	1	11
1917	Northeast MS	Bath Girls	2	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,800	1,960	OCC SENSOR WALLSWITCH DT 1GANG	1	48
1918	Northeast MS	Bath Woman	2	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	2,800	1,960	OCC SENSOR WALLSWITCH DT 1GANG	1	11
1926	Northeast MS	Hall C201-C207	2	4L2' T8 17wEL	box acrylic	20	20	62	1.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	20	29	0.6	3,200	2,240	OCC SENSOR CEILING	1	452
1927	Northeast MS	Hall C201-C207	2	1L4' T8 32w/EL	wrap narrow	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	3,200	2,240	INCLUDED ABOVE		27
1937	Northeast MS	Bath Boys	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,800	1,960	OCC SENSOR WALLSWITCH DT 1GANG	1	48
1938	Northeast MS	Bath Men	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	2,800	1,960	OCC SENSOR WALLSWITCH DT 1GANG	1	11
1939	Northeast MS	Bath Girls	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,800	1,960	OCC SENSOR WALLSWITCH DT 1GANG	1	48
1940	Northeast MS	Bath Woman	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	2,800	1,960	OCC SENSOR WALLSWITCH DT 1GANG	1	11
1941	Northeast MS	Hall C101-C108	1	4L2' T8 17wEL	box acrylic	23	23	62	1.4	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	23	29	0.7	3,200	2,240	OCC SENSOR CEILING	1	519
1942	Northeast MS	Hall C101-C108	1	1L4' T8 32w/EL	wrap narrow	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	3,200	2,240	INCLUDED ABOVE		27
1944	Northeast MS	Hall Music Room	1	4L2' T8 17wEL	box acrylic	3	3	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	3	29	0.1	3,200	2,240	OCC SENSOR CEILING	1	68
1947	Northeast MS	Hall Near Caf	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	3,200	2,240	OCC SENSOR CEILING	1	110
1948	Northeast MS	Cafeteria Main	1	4L4' T8 32wEL-8'	trof acr 1' wide	19	19	112	2.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	19	71	1.4	1,900	1,330	OCC SENSOR CEILING	1	619
1956	Northeast MS	Storage Food	1	2L4' T8 32w/EL	wrap wide	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	17
1957	Northeast MS	Foyer K	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,200	2,240	OCC SENSOR WALLSWITCH 1GANG	1	13
1958	Northeast MS	Office Fish	1	3x13W CF HARDWIRED	drum	2	2	45	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	19
1962	Northeast MS	Storage Wood	1	3x13W CF HARDWIRED	drum	4	4	45	0.2	16 WATT LED/NEW	new LED drum	4	17	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	16
1965	Northeast MS	Hall K-S1	1	2L4' T8 32w/EL	trof acr	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	3,200	2,240	OCC SENSOR CEILING	1	219
1966	Northeast MS	Foyer Locker Room	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	3,200	2,240	OCC SENSOR WALLSWITCH 1GANG	1	13
1967	Northeast MS	Gym Main	1	4L4' T5 HO/EL	high bay	28	28	234	6.6	98 WATT LED/NEW	new LED hibay wg	28	103	2.9	2,980	2,086	OCC. SENSOR ON HI BAY FIXTURE	28	2,061
1969	Northeast MS	Locker Boys	1	2x13W CF HARDWIRED	drum	7	7	30	0.2	16 WATT LED/NEW	new LED drum	7	17	0.1	2,800	1,960	OCC SENSOR CORNER MT. DT 1GANG	1	79
1970	Northeast MS	Locker Boys	1	60W INCANDESCENT	can rec 6"	3	3	60	0.2	8 WATT LED SI	screw in LED par20	3	8	0.0	2,800	1,960	INCLUDED ABOVE		17
1971	Northeast MS	Storage Balls	1	3x13W CF HARDWIRED	drum	2	2	45	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	8
1973	Northeast MS	Foyer Near Girls Locker	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	3,200	2,240	OCC SENSOR CEILING	1	55
1976	Northeast MS	Locker Girls	1	2x13W CF HARDWIRED	drum	4	4	30	0.1	16 WATT LED/NEW	new LED drum	4	17	0.1	2,800	1,960	OCC SENSOR CORNER MT. DT 1GANG	1	45
1977	Northeast MS	Locker Girls	1	60W INCANDESCENT	can rec 6"	9	9	60	0.5	8 WATT LED SI	screw in LED par20	9	8	0.1	2,800	1,960	INCLUDED ABOVE		51
1980	Northeast MS	Bath Main	1	2x60W INCANDESCENTS	square surface mt.	1	1	120	0.1	16 WATT LED/NEW	new LED drum	1	17	0.0	2,800	1,960	OCC SENSOR WALLSWITCH 1GANG	1	11
1983	Northeast MS	Lobby Main	1	2L4' T8 32w/EL	trof acr	9	9	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	36	0.3	3,200	2,240	OCC SENSOR CEILING	1	247
1985	Northeast MS	Hall S1-Gym	1	2L4' T8 32w/EL	trof acr	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	3,200	2,240	OCC SENSOR CEILING	1	219
1986	Northeast MS	Bath Woman	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,800	1,960	OCC SENSOR WALLSWITCH DT 1GANG	1	48
1987	Northeast MS	Bath Men	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,800	1,960	OCC SENSOR WALLSWITCH DT 1GANG	1	48
1993	Northeast MS	Bath Nurse	1	2L4' T8 32w/EL	trof acr 1' wide	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,800	1,960	OCC SENSOR WALLSWITCH 1GANG	1	24
2005	Northeast MS	Hall C30-C24	1	2L4' T8 32w/EL	trof acr	9	9	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	36	0.3	3,200	2,240	OCC SENSOR CEILING	1	247
2013	Northeast MS	Hall Lib-C21	1	2L4' T8 32w/EL	trof acr	13	13	60	0.8	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	13	36	0.5	3,200	2,240	OCC SENSOR CEILING	1	356
2014	Northeast MS	Hall C21-Exit	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	3,200	2,240	OCC SENSOR CEILING	1	55
2019	Northeast MS	Foyer Near Lib	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	3,200	2,240	OCC SENSOR WALLSWITCH 1GANG	1	27
2020	Northeast MS	Foyer To New Section	1	4L2' T8 17wEL	box acrylic	3	3	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	3	29	0.1	3,200	2,240	PHOTO SENSOR FOR DIMMING	1	68
2033	Northeast MS	Storage 5	1	3x13W CF HARDWIRED	drum	1	1	45	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	2
2034	Northeast MS	Bath Men (2)	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	2,800	1,960	OCC SENSOR WALLSWITCH DT 1GANG	2	96
2037	Northeast MS	Storage Custodian	1	3x13W CF HARDWIRED	drum	2	2	45	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	4
2038	Northeast MS	Hall C1-C8	1	2L4' T8 32w/EL	trof acr	14	14	60	0.8	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	14	36	0.5	3,200	2,240	OCC SENSOR CEILING	1	384
2040	Northeast MS	Bath Hc	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,800	1,960	OCC SENSOR WALLSWITCH DT 1GANG	1	24
2041	Northeast MS	Storage Textbook	1	3x13W CF HARDWIRED	drum	3	3	45	0.1	16 WATT LED/NEW	new LED drum	3	17	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	6
2048	Northeast MS	Storage Copy	1	4x60W INCANDESCENTS	square surface mt.	1	1	240	0.2	16 WATT LED/NEW	new LED drum	1	17	0.0	500	350	OCC SENSOR CEILING	1	2
2051	Northeast MS	Storage 90	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	9
2052	Northeast MS	Bath Women	1	3x13W CF HARDWIRED	drum	2	2	45	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	2,800	1,960	OCC SENSOR WALLSWITCH DT 1GANG	1	23
2053	Northeast MS	Bath Women	1	15W CF SCREWIN	globe	2	2	17	0.0	8 WATT LED SI	screw in LED Alamp	2	8	0.0	2,800	1,960	INCLUDED ABOVE		11
2200	Mountain View ES	Mechanical Boiler	1	4L4' T8 32wEL-8'	industrial	7	7	112	0.8	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	7	71	0.5	500	350	TIMER WALLSWITCH 1GANG	1	75
2206	Mountain View ES	Office Custodian	1	4L2' T8 17wEL	trof acr	4	4	62	0.2	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	4	29	0.1	2,000	1,400	OCC SENSOR CEILING	1	71
2221	Ellen P. Hubbell ES	Office Maint	1	2L4' T8 32w/ELEE	wrap	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	2,000	1,400	OCC SENSOR CEILING	1	41
2222	Ellen P. Hubbell ES	Bath Maint	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	8
2223	Ellen P. Hubbell ES	Bath Boys	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	3,000	2,100	OCC SENSOR WALLSWITCH DT 1GANG	1	80
2224	Ellen P. Hubbell ES	Bath Staff	1	2L4' T8 32w/ELEE	trof acr	1	1	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	1	40	0.0	3,000	2,100	OCC SENSOR WALLSWITCH DT 1GANG	1	31
2225	Ellen P. Hubbell ES	Bath Girls	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	3,000	2,100	OCC SENSOR WALLSWITCH DT 1GANG	1	80
2226	Ellen P. Hubbell ES	Bath Staff	1	2L4' T8 32w/ELEE	trof acr	1	1	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	1	40	0.0	3,000	2,100	OCC SENSOR WALLSWITCH DT 1GANG	1	31
2227	Ellen P. Hubbell ES	Office 134	1	4L4' T8 32wEL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,000	1,400	OCC SENSOR CEILING	1	328
2228	Ellen P. Hubbell ES	Office 134	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	2,000	1,400	INCLUDED ABOVE		41
2229	Ellen P. Hubbell ES	Classroom 133	1	4L4' T8 32wEL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
2230	Ellen P. Hubbell ES	Classroom 133	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	2,200	1,540	INCLUDED ABOVE		45
2231	Ellen P. Hubbell ES	Classroom 132	1	4L4' T8 32wEL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
2232	Ellen P. Hubbell ES	Classroom 132	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	2,200	1,540	INCLUDED ABOVE		45
2233	Ellen P. Hubbell ES	Classroom 130	1	4L4' T8 32wEL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
2234	Ellen P. Hubbell ES	Classroom 130	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	2,200	1,540	INCLUDED ABOVE		45
2235	Ellen P. Hubbell ES	Classroom 131	1	4L4' T8 32wEL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
2236	Ellen P. Hubbell ES	Classroom 131	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	2,200	1,540	INCLUDED ABOVE		45

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	Annual Hours	Hours With Controls	*Control Description*	*Control Qty*	Control kWH Saved
2237	Ellen P. Hubbell ES	Classroom 129	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
2238	Ellen P. Hubbell ES	Classroom 129	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	2,200	1,540	INCLUDED ABOVE		45
2239	Ellen P. Hubbell ES	Classroom 128	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
2240	Ellen P. Hubbell ES	Classroom 128	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	2,200	1,540	INCLUDED ABOVE		45
2241	Ellen P. Hubbell ES	Classroom 126	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
2242	Ellen P. Hubbell ES	Classroom 126	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	2,200	1,540	INCLUDED ABOVE		45
2243	Ellen P. Hubbell ES	Classroom 127	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
2244	Ellen P. Hubbell ES	Classroom 127	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	2,200	1,540	INCLUDED ABOVE		45
2245	Ellen P. Hubbell ES	Storage Janitor	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	7
2246	Ellen P. Hubbell ES	Office 125	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	54
2247	Ellen P. Hubbell ES	Storage 124 Books	1	1L4' T8 32w/EL	trof acr 1' wide	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	5
2248	Ellen P. Hubbell ES	Office 123 Copy	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	54
2249	Ellen P. Hubbell ES	Office 123 Copy	1	3L4' T8 32w/EL	task strip	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	55
2250	Ellen P. Hubbell ES	Office 122	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	54
2251	Ellen P. Hubbell ES	Bath Men	1	1L4' T8 32w/EL	vanity	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	14
2252	Ellen P. Hubbell ES	Bath Boys	1	2L2' F36 BIAX/EL	trof acr	3	3	74	0.2	36 WATT LED/KIT	trof kit LED	3	38	0.1	3,000	2,100	OCC SENSOR CORNER MT. DT 1GANG	1	87
2253	Ellen P. Hubbell ES	Bath Boys	1	1L4' T8 32w/EL	trof para 1' wide	4	4	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	18	0.1	3,000	2,100	INCLUDED ABOVE		55
2254	Ellen P. Hubbell ES	Bath Hc	1	2L2' F36 BIAX/EL	trof acr	1	1	74	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	29
2255	Ellen P. Hubbell ES	Bath Hc	1	1L4' T8 32w/EL	trof para 1' wide	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	3,000	2,100	INCLUDED ABOVE		27
2256	Ellen P. Hubbell ES	Bath Women	1	1L4' T8 32w/EL	vanity	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	14
2257	Ellen P. Hubbell ES	Bath Girls	1	2L2' F36 BIAX/EL	trof acr	3	3	74	0.2	36 WATT LED/KIT	trof kit LED	3	38	0.1	3,000	2,100	OCC SENSOR CORNER MT. DT 1GANG	1	87
2258	Ellen P. Hubbell ES	Bath Girls	1	1L4' T8 32w/EL	trof para 1' wide	4	4	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	18	0.1	3,000	2,100	INCLUDED ABOVE		55
2259	Ellen P. Hubbell ES	Classroom 121	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
2260	Ellen P. Hubbell ES	Classroom 121	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	2,200	1,540	INCLUDED ABOVE		45
2261	Ellen P. Hubbell ES	Classroom 120	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
2262	Ellen P. Hubbell ES	Classroom 120	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	2,200	1,540	INCLUDED ABOVE		45
2263	Ellen P. Hubbell ES	Classroom 119	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
2264	Ellen P. Hubbell ES	Classroom 119	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	2,200	1,540	INCLUDED ABOVE		45
2265	Ellen P. Hubbell ES	Classroom 118	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
2266	Ellen P. Hubbell ES	Classroom 118	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	2,200	1,540	INCLUDED ABOVE		45
2267	Ellen P. Hubbell ES	Storage Book Room 6	1	2L4' T8 32w/ELEE	trof acr 1' wide	1	1	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	1	40	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	10
2268	Ellen P. Hubbell ES	Classroom 116	1	4L4' T8 32w/EL-8'	wrap	15	15	112	1.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	15	71	1.1	2,200	1,540	OCC SENSOR CEILING	1	601
2269	Ellen P. Hubbell ES	Classroom 116	1	2L4' T8 32w/ELEE	trof acr	4	4	53	0.2	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	4	40	0.2	2,200	1,540	INCLUDED ABOVE		90
2270	Ellen P. Hubbell ES	Storage Janitor	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	7
2271	Ellen P. Hubbell ES	Classroom 117	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
2272	Ellen P. Hubbell ES	Classroom 117	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	2,200	1,540	INCLUDED ABOVE		45
2273	Ellen P. Hubbell ES	Classroom 115	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
2274	Ellen P. Hubbell ES	Classroom 115	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	2,200	1,540	INCLUDED ABOVE		45
2275	Ellen P. Hubbell ES	Storage Book Room 1	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	13
2276	Ellen P. Hubbell ES	Classroom 114	1	4L4' T8 32w/EL-8'	wrap	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	2,200	1,540	OCC SENSOR CEILING	1	240
2277	Ellen P. Hubbell ES	Classroom 114	1	2L4' T8 32w/ELEE	wrap	3	3	53	0.2	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	3	40	0.1	2,200	1,540	INCLUDED ABOVE		67
2278	Ellen P. Hubbell ES	Classroom 114	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	2,200	1,540	OCC SENSOR CORNER MT.	1	29
2279	Ellen P. Hubbell ES	Classroom 114	1	2L2' F36 BIAX/EL	trof acr	3	3	74	0.2	36 WATT LED/KIT	trof kit LED	3	38	0.1	2,200	1,540	INCLUDED ABOVE		64
2280	Ellen P. Hubbell ES	Classroom 114	1	2x13W CF HARDWIRED	can rec 6"	2	2	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	2,200	1,540	INCLUDED ABOVE		12
2281	Ellen P. Hubbell ES	Storage 114	1	2L2' F36 BIAX/EL	trof acr	1	1	74	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	10
2282	Ellen P. Hubbell ES	Classroom 114	1	2L3' T8 25w/EL-6'	valance	5	5	47	0.2	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	5	25	0.1	2,200	1,540	OCC SENSOR WALLSWITCH 1GANG	1	71
2283	Ellen P. Hubbell ES	Classroom 114	1	1L3' T8 25w/EL	valance	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	2,200	1,540	INCLUDED ABOVE		14
2284	Ellen P. Hubbell ES	Bath 114	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	8
2285	Ellen P. Hubbell ES	Classroom 113	1	4L4' T8 32w/EL-8'	wrap	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	2,200	1,540	OCC SENSOR CEILING	1	240
2286	Ellen P. Hubbell ES	Classroom 113	1	2L4' T8 32w/ELEE	wrap	3	3	53	0.2	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	3	40	0.1	2,200	1,540	INCLUDED ABOVE		67
2287	Ellen P. Hubbell ES	Classroom 113	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	2,200	1,540	OCC SENSOR CORNER MT.	1	29
2288	Ellen P. Hubbell ES	Classroom 113	1	2L2' F36 BIAX/EL	trof acr	3	3	74	0.2	36 WATT LED/KIT	trof kit LED	3	38	0.1	2,200	1,540	INCLUDED ABOVE		64
2289	Ellen P. Hubbell ES	Classroom 113	1	2x13W CF HARDWIRED	can rec 6"	2	2	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	2,200	1,540	INCLUDED ABOVE		12
2290	Ellen P. Hubbell ES	Classroom 113	1	2L3' T8 25w/EL-6'	valance	5	5	47	0.2	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	5	25	0.1	2,200	1,540	OCC SENSOR WALLSWITCH 1GANG	1	71
2291	Ellen P. Hubbell ES	Classroom 113	1	1L3' T8 25w/EL	valance	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	2,200	1,540	INCLUDED ABOVE		14
2292	Ellen P. Hubbell ES	Bath 113	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	8
2293	Ellen P. Hubbell ES	Classroom 112	1	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	2,200	1,540	OCC SENSOR CORNER MT.	1	118
2294	Ellen P. Hubbell ES	Storage Bookroom 2	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	27
2295	Ellen P. Hubbell ES	Classroom 111	1	4L4' T8 32w/EL	trof acr	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	2,200	1,540	OCC SENSOR WALLSWITCH 1GANG	1	265
2297	Ellen P. Hubbell ES	Storage 111	1	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	1,000	700	OCC SENSOR CEILING	1	40
2298	Ellen P. Hubbell ES	Bath Near C111	1	1L4' T8 32w/EL	vanity	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	14
2299	Ellen P. Hubbell ES	Storage Janitor	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	7
2300	Ellen P. Hubbell ES	Classroom 110	1	4L4' T8 32w/EL-8'	wrap	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	2,200	1,540	OCC SENSOR CEILING	1	240
2301	Ellen P. Hubbell ES	Classroom 110	1	2L4' T8 32w/ELEE	wrap	3	3	53	0.2	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	3	40	0.1	2,200	1,540	INCLUDED ABOVE		67
2302	Ellen P. Hubbell ES	Classroom 110	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	2,200	1,540	OCC SENSOR CORNER MT.	1	29
2303	Ellen P. Hubbell ES	Classroom 110	1	2L2' F36 BIAX/EL	trof acr	3	3	74	0.2	36 WATT LED/KIT	trof kit LED	3	38	0.1	2,200	1,540	INCLUDED ABOVE		64
2304	Ellen P. Hubbell ES	Classroom 110	1	2x13W CF HARDWIRED	can rec 6"	2	2	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	2,200	1,540	INCLUDED ABOVE		12
2305	Ellen P. Hubbell ES	Storage 110	1	2L2' F36 BIAX/EL	trof acr	1	1	74	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	10
2306	Ellen P. Hubbell ES	Classroom 110	1	2L3' T8 25w/EL-6'	valance	5	5	47	0.2	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	5	25	0.1	2,200	1,540	OCC SENSOR WALLSWITCH 1GANG	1	71
2307	Ellen P. Hubbell ES	Classroom 110	1	1L3' T8 25w/EL	valance	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	2,200	1,540	INCLUDED ABOVE		14
2308	Ellen P. Hubbell ES	Bath 110	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	8
2309	Ellen P. Hubbell ES	Classroom 109	1	4L4' T8 32w/EL-8'	wrap	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	2,200	1,540	OCC SENSOR CEILING	1	240
2310	Ellen P. Hubbell ES	Classroom 109	1	2L4' T8 32w/ELEE	wrap	3	3	53	0.2	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	3	40	0.1	2,200	1,540	INCLUDED ABOVE		67
2311	Ellen P. Hubbell ES	Classroom 109	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	2,200	1,540	OCC SENSOR CORNER MT.	1	29
2312	Ellen P. Hubbell ES	Classroom 109	1	2L2' F36 BIAX/EL	trof acr	3	3	74	0.2	36 WATT LED/KIT	trof kit LED	3	38	0.1	2,200	1,540	INCLUDED ABOVE		64
2313	Ellen P. Hubbell ES	Classroom 109	1	2x13W CF HARDWIRED	can rec 6"	2	2	30	0.1	10 WATT LED/KIT	can kit LED Spectrum	2	11	0.0	2,200	1,540	INCLUDED ABOVE		12
2314	Ellen P. Hubbell ES	Classroom 109	1	2L3' T8 25w/EL-6'	valance	5	5	47	0.2	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	5	25	0.1	2,200	1,540	OCC SENSOR WALLSWITCH 1GANG	1	71
2315	Ellen P. Hubbell ES	Classroom 109	1	1L3' T8 25w/EL	valance	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	2,200	1,540	INCLUDED ABOVE		14
2316	Ellen P. Hubbell ES	Bath 109	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	8
2317	Ellen P. Hubbell ES	Classroom 107	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
2318	Ellen P. Hubbell ES	Classroom 107	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	2,200	1,540	INCLUDED ABOVE		45
2319	Ellen P. Hubbell ES	Bath 107	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	8

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	Annual Hours	Hours With Controls	*Control Description*	*Control Qty*	Control kWH Saved
2320	Ellen P. Hubbell ES	Classroom 108	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
2321	Ellen P. Hubbell ES	Classroom 108	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	2,200	1,540	INCLUDED ABOVE		45
2322	Ellen P. Hubbell ES	Bath 108	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	8
2323	Ellen P. Hubbell ES	Classroom 106	1	4L4' T8 32w/EL-8'	wrap	12	12	112	1.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	71	0.9	2,200	1,540	OCC SENSOR CEILING	1	481
2324	Ellen P. Hubbell ES	Classroom 106	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	2,200	1,540	INCLUDED ABOVE		45
2325	Ellen P. Hubbell ES	Bath 106	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	8
2326	Ellen P. Hubbell ES	Classroom 105	1	4L4' T8 32w/EL-8'	wrap	12	12	112	1.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	71	0.9	2,200	1,540	OCC SENSOR CEILING	1	481
2327	Ellen P. Hubbell ES	Classroom 105	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	2,200	1,540	INCLUDED ABOVE		45
2328	Ellen P. Hubbell ES	Bath 105	1	2x13W CF HARDWIRED	can rec 6"	1	1	30	0.0	10 WATT LED/KIT	can kit LED Spectrum	1	11	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	8
2329	Ellen P. Hubbell ES	Classroom 104	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
2330	Ellen P. Hubbell ES	Classroom 104	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	2,200	1,540	INCLUDED ABOVE		45
2332	Ellen P. Hubbell ES	Classroom 103	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
2333	Ellen P. Hubbell ES	Classroom 103	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	2,200	1,540	INCLUDED ABOVE		45
2335	Ellen P. Hubbell ES	Classroom 101	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
2336	Ellen P. Hubbell ES	Classroom 101	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	2,200	1,540	INCLUDED ABOVE		45
2338	Ellen P. Hubbell ES	Classroom 102	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
2339	Ellen P. Hubbell ES	Classroom 102	1	2L4' T8 32w/ELEE	trof acr	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	2,200	1,540	INCLUDED ABOVE		45
2341	Ellen P. Hubbell ES	Office Health Room	1	2L2' F36 BIAX/EL	trof acr	7	7	74	0.5	36 WATT LED/KIT	trof kit LED	7	38	0.3	2,000	1,400	OCC SENSOR CORNER MT. 2GANG	1	135
2342	Ellen P. Hubbell ES	Bath Health Room	1	1L4' T8 32w/EL	vanity	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	14
2343	Ellen P. Hubbell ES	Bath Staff	1	1L4' T8 32w/EL	vanity	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	14
2344	Ellen P. Hubbell ES	Storage Paper	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	13
2345	Ellen P. Hubbell ES	Mechanical Paper	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	7
2346	Ellen P. Hubbell ES	Library Media Center	1	2L2' F36 BIAX/EL	trof parabolic	9	9	74	0.7	36 WATT LED/KIT	trof kit LED	9	38	0.3	1,800	1,260	OCC SENSOR CEILING	1	156
2347	Ellen P. Hubbell ES	Library Media Center	1	2L2' F36 BIAX/EL	trof parabolic	12	12	74	0.9	36 WATT LED/KIT	trof kit LED	12	38	0.5	1,800	1,260	OCC SENSOR CORNER MT. DT 1GANG	1	208
2348	Ellen P. Hubbell ES	Library Media Center (2)	1	4L4' T8 32w/EL-8'	indirect/direct	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	1,800	1,260	OCC SENSOR CORNER MT. 2GANG	2	131
2349	Ellen P. Hubbell ES	Library Media Center (2)	1	2L4' T8 32w/ELEE	indirect/direct	4	4	53	0.2	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	4	40	0.2	1,800	1,260	INCLUDED ABOVE		73
2350	Ellen P. Hubbell ES	Library Media Center (2)	1	2L3' T8 25w/EL	indirect/direct	8	8	47	0.4	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	8	25	0.2	1,800	1,260	INCLUDED ABOVE		93
2351	Ellen P. Hubbell ES	Storage Media Center	1	2L4' T8 32w/ELEE	strip	1	1	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	1	40	0.0	500	350	INCLUDED ABOVE		5
2352	Ellen P. Hubbell ES	Storage Bookroom 5	1	2L4' T8 32w/ELEE	trof acr 1' wide	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	10
2353	Ellen P. Hubbell ES	Office Library	1	2L2' F36 BIAX/EL	trof parabolic	2	2	74	0.1	36 WATT LED/KIT	trof kit LED	2	38	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	39
2354	Ellen P. Hubbell ES	Office 141 Psych	1	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	80
2355	Ellen P. Hubbell ES	Office 142	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	54
2356	Ellen P. Hubbell ES	Office 142	1	1L3' T12 25w EE/EEMAG	task strip	3	3	38	0.1	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	3	13	0.0	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	19
2357	Ellen P. Hubbell ES	Lounge 143 Staff	1	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	72
2358	Ellen P. Hubbell ES	Bath 143 Staff (2)	1	1L4' T8 32w/EL	vanity	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	2	27
2361	Ellen P. Hubbell ES	Storage Main	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	1,000	700	OCC SENSOR CEILING	1	27
2362	Ellen P. Hubbell ES	Locker Kitchen	1	2L2' F36 BIAX/EL	trof acr	1	1	74	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	29
2363	Ellen P. Hubbell ES	Bath Kitchen	1	2L2' F36 BIAX/EL	trof acr	1	1	74	0.1	36 WATT LED/KIT	trof kit LED	1	38	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	29
2364	Ellen P. Hubbell ES	Hall Kitch-Caf	1	2L2' F36 BIAX/EL	trof acr	4	4	74	0.3	36 WATT LED/KIT	trof kit LED	4	38	0.2	3,000	2,100	OCC SENSOR WALLSWITCH 2GANG	1	116
2365	Ellen P. Hubbell ES	Hall Kitch-Caf	1	2L2' F36 BIAX/EL	trof acr	6	6	74	0.4	36 WATT LED/KIT	trof kit LED	6	38	0.2	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	174
2366	Ellen P. Hubbell ES	Cafeteria Main (4)	1	4L4' T8 32w/EL-8'	indirect/direct	8	8	112	0.9	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	71	0.6	1,700	1,190	OCC. SENSOR ON HI BAY FIXTURE	8	248
2376	Ellen P. Hubbell ES	Gym Main	1	4L4' T5 HO/EL	high bay	22	22	234	5.1	98 WATT LED/NEW	new LED hibay wg	22	103	2.3	2,000	1,400	OCC. SENSOR ON HI BAY FIXTURE	22	1,155
2378	Ellen P. Hubbell ES	Office Phys Ed	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	27
2379	Ellen P. Hubbell ES	Storage Gymnasium	1	2L4' T8 32w/ELEE	trof acr 1' wide	2	2	53	0.1	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	2	40	0.1	1,000	700	OCC SENSOR CEILING	1	20
2380	Ellen P. Hubbell ES	Stage Main	1	2L4' T8 32w/ELEE	wrap	9	9	53	0.5	2L4' LED/EL/RELAMP ONLY	relamp LEDho 4'	9	40	0.4	1,600	1,120	OCC SENSOR CORNER MT.	1	147
2381	Ellen P. Hubbell ES	Stage Main	1	2x13W CF HARDWIRED	square recessed	2	2	30	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	1,600	1,120	INCLUDED ABOVE		14
2382	Ellen P. Hubbell ES	Office Open Main Waiting	1	2L2' F36 BIAX/EL	trof parabolic	5	5	74	0.4	36 WATT LED/KIT	trof kit LED	5	38	0.2	2,400	1,680	OCC SENSOR WALLSWITCH 2GANG	1	116
2383	Ellen P. Hubbell ES	Office Open Main Files	1	2L2' F36 BIAX/EL	trof parabolic	6	6	74	0.4	36 WATT LED/KIT	trof kit LED	6	38	0.2	2,400	1,680	OCC SENSOR CORNER MT.	1	139
2384	Ellen P. Hubbell ES	Office Staff	1	2L2' F36 BIAX/EL	trof parabolic	3	3	74	0.2	36 WATT LED/KIT	trof kit LED	3	38	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	58
2385	Ellen P. Hubbell ES	Office Principal	1	2L2' F36 BIAX/EL	trof parabolic	6	6	74	0.4	36 WATT LED/KIT	trof kit LED	6	38	0.2	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	116
2386	Ellen P. Hubbell ES	Lobby Main	1	2L2' F36 BIAX/EL	trof opaque	8	8	74	0.6	36 WATT LED/KIT	trof kit LED	8	38	0.3	3,000	2,100	OCC SENSOR WALLSWITCH 2GANG	1	231
2387	Ellen P. Hubbell ES	Lobby Main (4)	1	1L4' T8 32w/EL	trof acr 6" wide	16	16	30	0.5	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	16	18	0.3	3,000	2,100	INCLUDED ABOVE		218
2388	Ellen P. Hubbell ES	Hall Near Main Lobby	1	2L2' F36 BIAX/EL	trof opaque	6	6	74	0.4	36 WATT LED/KIT	trof kit LED	6	38	0.2	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	174
2389	Ellen P. Hubbell ES	Hall Near Main Lobby	1	1L4' T8 32w/EL	trof acr 6" wide	4	4	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	18	0.1	3,000	2,100	INCLUDED ABOVE		55
2438	Main Library	Storage To Roof	2	1L4' T8 32w/EL	strip	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	3
2462	Main Library	Storage Story Time Room	1	2L2' F40 BIAX/EL	indirect/direct	9	9	72	0.6	36 WATT LED/KIT	trof kit LED	9	38	0.3	1,000	700	OCC SENSOR WALLSWITCH 2GANG	1	102
2463	Main Library	Storage Story Time Room	1	2L2' F40 BIAX/EL	indirect/direct	19	19	72	1.4	36 WATT LED/KIT	trof kit LED	19	38	0.7	1,000	700	OCC SENSOR WALLSWITCH 2GANG	1	215
2545	Manross Library	Mechanical Boiler	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	11
2546	Manross Library	Storage Elect	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	11
2547	Manross Library	Storage Elect	1	26W CF SCREWIN	keyless	1	1	28	0.0	8 WATT LED SI	screw in LED Alamp	1	8	0.0	500	350	INCLUDED ABOVE		1
2548	Manross Library	Hall Near Mech	1	2L4' T8 32w/EL	trof acr 1' wide	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,600	1,820	OCC SENSOR CEILING	1	56
2550	Manross Library	Office Near Mech	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	1,800	1,260	OCC SENSOR CEILING	1	57
2551	Manross Library	Kitchen Near Mech	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	1,500	1,050	OCC SENSOR CEILING	1	47
2552	Manross Library	Office Near Librarian	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	57
2553	Manross Library	Office Librarian	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	57
2554	Manross Library	Storage To Stained Glass	1	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	6
2556	Manross Library	Storage To Stained Glass	1	13W CF HARDWIRED	jar	1		15	0.0	NO RETRO	no change		16	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	2
2569	Manross Library	Lobby Entry	1	28W CF HARDWIRED	can rec 6"	7	7	30	0.2	10 WATT LED/KIT	can kit LED Spectrum	7	11	0.1	2,600	1,820	OCC SENSOR WALLSWITCH 2GANG	1	57
2575	Manross Library	Lobby Basement	b	2L2' T8 17w/EL	trof acr	7	7	33	0.2	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	7	19	0.1	2,600	1,820	OCC SENSOR CEILING	1	103
2576	Manross Library	Lobby Basement	b	26W CF HARDWIRED	can rec 6"	3	3	28	0.1	10 WATT LED/KIT	can kit LED Spectrum	3	11	0.0	2,600	1,820	INCLUDED ABOVE		25
2577	Manross Library	Lobby Basement	b	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	2,600	1,820	INCLUDED ABOVE		29
2578	Manross Library	Mechanical Basement	b	26W CF SCREWIN	keyless	1	1	28	0.0	8 WATT LED SI	screw in LED Alamp	1	8	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	1
2579	Manross Library	Bath Womans	b	2L4' T8 32w/EL	wrap wide	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,500	1,750	OCC SENSOR WALLSWITCH DT 1GANG	1	27
2580	Manross Library	Bath Mens	b	2L4' T8 32w/EL	wrap wide	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,500	1,750	OCC SENSOR WALLSWITCH DT 1GANG	1	27
2581	Manross Library	Storage Meeting Room	b	2L4' T8 32w U/EL	trof acr	10	10	60	0.6	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	10	38	0.4	1,000	700	OCC SENSOR CEILING	1	113
2582	Manross Library	Storage Meeting Room	b	2x18W CF HARDWIRED/EL	can eyeball rec	22		38	0.8	NO RETRO	no change		40	0.8	1,000	700	INCLUDED ABOVE		251
2583	Manross Library	Storage Meeting Room	b	2x26W CF HARDWIRED/EL	can rec 8"	4	4	54	0.2	15 WATT LED/KIT	can kit LED Spectrum	4	16	0.1	1,000	700	INCLUDED ABOVE		19
2584	Manross Library	Storage Meeting Room	b	2L4' T8 32w/EL	trof opaque	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	11
2592	Water Main Office & Garage	Storage Garage	1	2L4' T8 32w/EL	industrial	12	12	60	0.7	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	36	0.4	1,000	700	OCC. SENSOR ON HI BAY FIXTURE	12	129
2593	Water Main Office & Garage	Storage Garage	1	2L4' T8 32w/EL	industrial	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	1,000	700	OCC. SENSOR ON HI BAY FIXTURE	3	32
2599	Water Main Office & Garage	Office Joe	1	3 WATT LED	box acrylic	2		3	0.0	NO RETRO	no change		3	0.0	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	4
2602	Water Main Office & Garage	Office Staff	1	4L4' T8 32w/EL	box opaque	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	74

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	Annual Hours	Hours With Controls	*Control Description*	*Control Qty*	Control kWH Saved
2603	Water Main Office & Garage	Hall Lockers-Main Office	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	2,600	1,820	OCC SENSOR WALLSWITCH 1GANG	1	82
2604	Water Main Office & Garage	Hall Lockers-Main Office	1	4L4' T8 32w/EL	box opaque	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	2,600	1,820	OCC SENSOR WALLSWITCH 1GANG	1	41
2605	Water Main Office & Garage	Locker Staff	1	2L8' T12 60w EE/EEMAG	strip	3	3	123	0.4	2L4' T8 28w/ELEE HI/NEW-8'	new LF strip	3	67	0.2	2,600	1,820	OCC SENSOR CEILING	1	157
2606	Water Main Office & Garage	Storage Fittings	1	2L8' T12 60w EE/EEMAG	strip	2	2	123	0.2	2L4' T8 28w/ELEE HI/NEW-8'	new LF strip	2	67	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	40
2607	Water Main Office & Garage	Office Open Meters	1	4L4' T8 32w/EL	trof acr	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	2,860	2,002	OCC SENSOR CEILING	1	405
2608	Water Main Office & Garage	Bath Meters	1	2L4' T8 32w/EL	wrap	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	2,600	1,820	OCC SENSOR WALLSWITCH DT 1GANG	1	84
2609	Water Main Office & Garage	Office Open Plans	1	4L4' T8 32w/EL	trof acr	8	8	112	0.9	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	8	53	0.4	2,860	2,002	OCC SENSOR CEIL DT 1GANG	1	360
2610	Water Main Office & Garage	Foyer Plans	1	22W & 32W CIRCLELINE HARDWIRED	box opaque	1	1	58	0.1	16 WATT LED/NEW	new LED drum	1	17	0.0	2,600	1,820	OCC SENSOR WALLSWITCH 1GANG	1	13
2611	Water Main Office & Garage	Bath Women	1	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	2,600	1,820	OCC SENSOR WALLSWITCH 1GANG	1	42
2615	Water Main Office & Garage	Storage Safe	1	4L4' T8 32w/EL	box opaque	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	500	350	OCC SENSOR CEILING	1	16
2616	Water Main Office & Garage	Office Printers	1	4L4' T8 32w/EL	box opaque	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	2,340	1,638	OCC SENSOR CEILING	1	74
2626	Water Pollution Control Park	Office Open Operations	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	2,340	1,638	OCC SENSOR CEILING	1	100
2627	Water Pollution Control Park	Office Manager	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,200	1,540	OCC SENSOR WALLSWITCH 2GANG	1	47
2628	Water Pollution Control Park	Office Map	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,200	1,540	OCC SENSOR WALLSWITCH 1GANG	1	47
2630	Water Pollution Control Park	Lounge Staff	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	1,900	1,330	OCC SENSOR CEILING	1	81
2631	Water Pollution Control Park	Foyer To Basement	1	75W INCANDESCENT	can rec 6"	1	1	75	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	2,600	1,820	OCC SENSOR WALLSWITCH 1GANG	1	7
2632	Water Pollution Control Park	Bath Men	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,600	1,820	OCC SENSOR CEIL DT 1GANG	1	56
2633	Water Pollution Control Park	Locker Men	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,600	1,820	OCC SENSOR WALLSWITCH 1GANG	1	56
2635	Water Pollution Control Park	Storage Janitor	1	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	1
2636	Water Pollution Control Park	Bath Woman	1	2L4' T8 32w/EL	wrap	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	2,600	1,820	OCC SENSOR CEIL DT 1GANG	1	84
2637	Water Pollution Control Park	Bath Woman	1	2L4' T8 32w/EL	vapor tight	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,600	1,820	INCLUDED ABOVE		28
2638	Water Pollution Control Park	Lab Testing	1	2L4' T8 32w/EL	trof acr	7	7	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	7	36	0.2	2,080	1,456	OCC SENSOR CEILING	1	156
2639	Water Pollution Control Park	Office Testing	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,200	1,540	OCC SENSOR WALLSWITCH 1GANG	1	24
2640	Water Pollution Control Park	Storage Testing	1	2L4' T8 32w/EL	vapor tight	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	5
2663	Water Pollution Control Park	Storage Lawn Mowers	1	2L4' T8 32w/EL	vanity	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	11
2664	Water Pollution Control Park	Storage Elect	1	2L4' T8 32w/EL	vapor tight	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	21
2672	Water Pollution Control Park	Office Admin Bldg	1	4L4' T8 32w/EL-8'	trof parabolic	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	2,200	1,540	OCC SENSOR WALLSWITCH 2GANG	1	94
2673	Water Pollution Control Park	Office Brian	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	2,200	1,540	OCC SENSOR WALLSWITCH 2GANG	1	94
2674	Water Pollution Control Park	Bath Men (2)	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,600	1,820	OCC SENSOR WALLSWITCH DT 1GANG	2	56
2675	Water Pollution Control Park	Foyer Admin Bldg	1	18W CF HARDWIRED	can rec 6"	4	4	20	0.1	10 WATT LED/KIT	can kit LED Spectrum	4	11	0.0	2,600	1,820	OCC SENSOR WALLSWITCH 1GANG	1	33
2676	Water Pollution Control Park	Conference Admin Bldg	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	2,200	1,540	OCC SENSOR WALLSWITCH 2GANG	1	94
2678	Water Pollution Control Park	Storage Files	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	1,000	700	OCC SENSOR WALLSWITCH 2GANG	1	21
2679	Water Pollution Control Park	Foyer Rear	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,600	1,820	OCC SENSOR WALLSWITCH 1GANG	1	28
2689	City Yard	Lobby Main Entry	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	2,600	1,820	OCC SENSOR WALLSWITCH 2GANG	1	39
2690	City Yard	Lobby Main Entry	1	1L4' T8 32w/EL	wrap narrow	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	2,600	1,820	INCLUDED ABOVE		10
2691	City Yard	Office Dispatch	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,200	1,540	OCC SENSOR WALLSWITCH 1GANG	1	33
2692	City Yard	Storage Supplies	1	1L4' T8 32w/EL	wrap narrow	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	4
2693	City Yard	Office Dispatch	1	2L4' T8 32w/EL	trof acr 1' wide	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,804	1,963	OCC SENSOR WALLSWITCH 1GANG	1	21
2694	City Yard	Bath Executive	1	1L4' T8 32w/EL	wrap narrow	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	2,600	1,820	OCC SENSOR WALLSWITCH 1GANG	1	10
2695	City Yard	Office Solid Waste	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,628	1,840	OCC SENSOR WALLSWITCH 1GANG	1	39
2696	City Yard	Office Streets	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,200	1,540	OCC SENSOR WALLSWITCH 1GANG	1	33
2697	City Yard	Lounge Staff	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	1,900	1,330	OCC SENSOR WALLSWITCH 1GANG	1	28
2698	City Yard	Lounge Lunch Room	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	1,900	1,330	OCC SENSOR WALLSWITCH 1GANG	1	57
2699	City Yard	Storage Chain Room	1	2L4' T8 32w/EL	industrial	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	15
2700	City Yard	Storage Main Garage	1	4L4' T5 HO/EL	high bay	18	18	234	4.2	98 WATT LED/NEW	new LED hibay wg	18	103	1.9	1,000	700	OCC. SENSOR ON HI BAY FIXTURE	18	389
2704	City Yard	Locker Main	1	2L4' T8 32w/EL	trof acr 1' wide	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	2,600	1,820	OCC SENSOR WALLSWITCH 1GANG	1	78
2705	City Yard	Bath Men	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,600	1,820	OCC SENSOR WALLSWITCH DT 1GANG	1	39
2706	City Yard	Storage Tool Room	1	2L4' T8 32w/EL	industrial	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	1,000	700	OCC SENSOR CEILING	1	22
2707	City Yard	Shop Signs	1	2L4' T8 32w/EL-8'	industrial	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	2,340	1,638	OCC SENSOR CEILING	1	105
2710	City Yard	Shop Oil Storage	1	2L4' T8 32w/EL-8'	industrial	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	70
2711	City Yard	Hall Mechanics Garage	1	2L4' T8 32w/EL-8'	industrial	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,600	1,820	OCC SENSOR WALLSWITCH 1GANG	1	19
2712	City Yard	Office Mechanics Garage	1	2L4' T8 32w/EL-8'	industrial	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,200	1,540	OCC SENSOR WALLSWITCH 1GANG	1	33
2713	City Yard	Office Mechanics Garage	1	1L4' T8 32w/EL	industrial	3	3	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	18	0.1	2,200	1,540	INCLUDED ABOVE		25
2714	City Yard	Shop Mechanics Garage	1	4L4' T5 HO/EL	high bay	29	29	234	6.8	98 WATT LED/NEW	new LED hibay wg	29	103	3.0	2,340	1,638	OCC. SENSOR ON HI BAY FIXTURE	29	1,466
2715	City Yard	Office Fleet Super	2	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,200	1,540	OCC SENSOR WALLSWITCH 1GANG	1	33
2716	City Yard	Storage Parts	2	2L4' T8 32w/EL	industrial	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	1,000	700	OCC SENSOR CEIL DT 1GANG	1	60
2717	City Yard	Storage Parts	2	2L4' T8 32w/EL-8'	industrial	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	1,000	700	INCLUDED ABOVE		15
2718	City Yard	Shop Fab	2	2L4' T8 32w/EL	industrial	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	2,340	1,638	OCC SENSOR CEIL DT 1GANG	1	140
2719	City Yard	Shop Fab	2	2L4' T8 32w/EL-8'	industrial	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,340	1,638	INCLUDED ABOVE		35
2720	City Yard	Office Johnny	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	2,200	1,540	OCC SENSOR WALLSWITCH 1GANG	1	49
2721	City Yard	Shop Fab	2	4L4' T8 32w/EL-8'	industrial	5	5	112	0.6	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	71	0.4	2,340	1,638	OCC SENSOR CEILING	1	175
2725	City Yard	Storage Quonsett Hut	1	2L4' T8 32w/EL	industrial	15	15	60	0.9	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	15	36	0.5	1,000	700	OCC. SENSOR ON HI BAY FIXTURE	15	112
2736	Transfer Stations - Lake Ave	Storage Quonset	1	400W HI PRESSURE SODIUM	lowbay	6	6	460	2.8	107 WATT LED/NEW	new LED canopy	6	112	0.7	1,000	700	OCC. SENSOR ON HI BAY FIXTURE	6	202
2739	Transfer Stations - Lake Ave	Storage Attendant Shack Brown	1	2L4' T12 34w EE/EEMAG	wrap	1	1	70	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	5
2740	Transfer Stations - Lake Ave	Storage Attendant Shack Brown	1	2L4' T12 34w EE/EEMAG	wrap	1	1	70	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	5
2743	Transfer Stations - Lake Ave	Office Trailer	1	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	2,200	1,540	OCC SENSOR WALLSWITCH 1GANG	1	139
2744	Transfer Stations - Lake Ave	Bath Trailer	1	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	2,132	1,492	OCC SENSOR WALLSWITCH 1GANG	1	24
2745	Transfer Stations - Lake Ave	Office Main	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	2,200	1,540	OCC SENSOR WALLSWITCH 1GANG	1	69
2747	Transfer Stations - Lake Ave	Office Scale House	1	4L4' T8 32w/EL	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	2,200	1,540	OCC SENSOR WALLSWITCH 1GANG	1	47
2749	Animal Control	Office Main	1	2L4' T8 32w/EL	wrap	5	5	60	0.3	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	36	0.2	500	350	OCC SENSOR WALLSWITCH 1GANG	1	27
2750	Animal Control	Bath Main	1	2x60W INCANDESCENTS	vanity	1	1	120	0.1	1L2' T8 15w/ELEE LO/NEW	new LF vanity	1	15	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	2
2751	Animal Control	Hall To Kennel	1	2L4' T8 32w/EL	wrap	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	16
2752	Animal Control	Mechanical Furnace	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	250	175	OCC SENSOR WALLSWITCH 1GANG	1	3
2753	Animal Control	Storage Janitor	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	5
2755	Animal Control	Kitchen Quarantine	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	11
2758	Animal Control	Hall By Kennel 2-3	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	5
2774	Fire Head Quarters	Hall By Front Offices	1	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	2,500	1,750	OCC SENSOR CEILING	1	130
2775	Fire Head Quarters	Bath By Front Offices	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	2,500	1,750	OCC SENSOR WALLSWITCH 1GANG	1	87
2776	Fire Head Quarters	Office Admin	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	3,000	2,100	OCC SENSOR CEILING	1	104
2777	Fire Head Quarters	Office Chief	1	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	6	53	0.3	3,000	2,100	OCC SENSOR CEILING	1	312
2778	Fire Head Quarters	Office Fire Marshal	1	4L4' T8 32w/EL	trof acr	8	8	112	0.9	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	8	53	0.4	3,000	2,100	OCC SENSOR CORNER MT.	1	416
2779	Fire Head Quarters	Storage Files	1	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	52

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	Annual Hours	Hours With Controls	*Control Description*	*Control Qty*	Control kWH Saved
2780	Fire Head Quarters	Office Fire Prevention	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	3,000	2,100	OCC SENSOR CEILING	1	104
2781	Fire Head Quarters	Office Plans	1	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	52
2782	Fire Head Quarters	Shop Mechanics Bay	1	4L4' T5 HO/EL	lowbay	5	5	234	1.2	98 WATT LED/NEW	new LED hibay wg	5	103	0.5	2,340	1,638	OCC. SENSOR ON HI BAY FIXTURE	5	397
2783	Fire Head Quarters	Office Mechanics Bay	1	4L4' T8 32w/EL-8'	industrial	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	3,000	2,100	OCC SENSOR WALLSWITCH 2GANG	1	141
2784	Fire Head Quarters	Storage Oil	1	300W INCANDESCENT	keyless	1	1	300	0.3	19 WATT LED SI	screw in LED Alamp	1	20	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	3
2785	Fire Head Quarters	Storage Parts	1	300W INCANDESCENT	keyless	1	1	300	0.3	19 WATT LED SI	screw in LED Alamp	1	20	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	3
2787	Fire Head Quarters	Lounge Staff	2	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	1,900	1,330	OCC SENSOR CEILING	1	132
2790	Fire Head Quarters	Kitchen Main	2	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	1,500	1,050	OCC SENSOR CEILING	1	104
2794	Fire Head Quarters	Bath Near Sleeping Quarters	2	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	2,500	1,750	OCC SENSOR WALLSWITCH DT 1GANG	1	43
2795	Fire Head Quarters	Bath Near Sleeping Quarters	2	1L2' T12 20w STD/STD	strip	1	1	32	0.0	1L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	9	0.0	2,500	1,750	INCLUDED ABOVE		8
2796	Fire Head Quarters	Bedroom Sleeping Quarters Private (3)	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	1,300	910	OCC SENSOR WALLSWITCH 1GANG	3	68
2797	Fire Head Quarters	Bedroom Open Quarters	2	4L4' T8 32w/EL	trof acr	10	10	112	1.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	10	53	0.5	1,300	910	OCC SENSOR CEILING	1	225
2798	Fire Head Quarters	Hall Near Kitchen	2	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	2,500	1,750	OCC SENSOR CEILING	1	43
2799	Fire Head Quarters	Locker All	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	2,500	1,750	OCC SENSOR CEILING	1	130
2800	Fire Head Quarters	Hall Near Locker	2	4L4' T8 32w/EL	trof acr	1	1	112	0.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	1	53	0.1	2,500	1,750	OCC SENSOR WALLSWITCH 1GANG	1	43
2801	Fire Head Quarters	Bath Near Locker	2	2L4' T8 32w U/EL	trof acr	3	3	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	3	38	0.1	2,500	1,750	OCC SENSOR CEIL DT 1GANG	1	94
2802	Fire Head Quarters	Bath Near Locker	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	2,500	1,750	INCLUDED ABOVE		87
2803	Fire Head Quarters	Bath Near Locker	2	1L4' T8 32w/EL	vanity	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	2,500	1,750	INCLUDED ABOVE		15
2806	Fire Head Quarters	Mechanical Boiler	1	60W INCANDESCENT	keyless	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	3
2807	Engine 2	Office Main	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,804	1,963	OCC SENSOR WALLSWITCH 1GANG	1	63
2808	Engine 2	Lounge Main	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	1,900	1,330	OCC SENSOR WALLSWITCH 1GANG	1	43
2809	Engine 2	Kitchen Main	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	1,500	1,050	OCC SENSOR CEILING	1	34
2812	Engine 2	Bedroom Sleeping Quarters	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	1,300	910	OCC SENSOR CEILING	1	29
2814	Engine 2	Storage Fire Alarm Bureau	1	2L4' T8 32w/EL-8'	industrial	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	1,000	700	OCC SENSOR CEILING	1	34
2816	Engine 2	Storage Special Ops Truck	1	4L4' T8 32w/EL-8'	industrial	5	5	112	0.6	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	71	0.4	1,000	700	OCC SENSOR CORNER MT.	1	112
2820	Engine 2	Mechanical Boiler	1	60W INCANDESCENT	keyless	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	3
2821	Engine 5	Office Main	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	67
2822	Engine 5	Lounge Staff	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	1,900	1,330	OCC SENSOR CEILING	1	43
2823	Engine 5	Kitchen Main	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	1,500	1,050	OCC SENSOR WALLSWITCH 1GANG	1	34
2824	Engine 5	Storage Janitor	1	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	1
2825	Engine 5	Bath Staff	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,500	1,750	OCC SENSOR WALLSWITCH DT 1GANG	1	28
2826	Engine 5	Bath Staff	1	2x13W CF HARDWIRED	vanity	1		30	0.0	NO RETRO	no change		32	0.0	2,500	1,750	INCLUDED ABOVE		24
2827	Engine 5	Bedroom Sleeping Quarters	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	1,300	910	OCC SENSOR WALLSWITCH 2GANG	1	29
2828	Engine 5	Storage Trucks	1	2L4' T8 32w/EL-8'	industrial	16	16	60	1.0	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	16	36	0.6	1,000	700	OCC. SENSOR ON HI BAY FIXTURE	16	180
2831	Engine 5	Mechanical Boiler	1	60W INCANDESCENT	keyless	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	3
2832	Engine 3	Office Main	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	34
2833	Engine 3	Lounge Staff	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	1,900	1,330	OCC SENSOR WALLSWITCH 1GANG	1	43
2834	Engine 3	Hall Main	1	1L4' T8 32w/EL	vanity	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	2,500	1,750	OCC SENSOR WALLSWITCH 1GANG	1	28
2835	Engine 3	Kitchen Main	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	1,500	1,050	OCC SENSOR WALLSWITCH 1GANG	1	34
2838	Engine 3	Bath Main	1	1L2' 24W T5HO/EL	vanity	1		29	0.0	NO RETRO	no change -specialized fixture		30	0.0	2,500	1,750	OCC SENSOR WALLSWITCH DT 1GANG	1	23
2839	Engine 3	Bedroom Sleeping Quarters	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	1,300	910	OCC SENSOR CEILING	1	29
2841	Engine 3	Storage Janitor	1	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	1
2845	Engine 3	Mechanical Boiler	1	60W INCANDESCENT	keyless	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	3
2846	Youth Services Building	Lobby Main	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	2,600	1,820	OCC SENSOR WALLSWITCH 1GANG	1	47
2847	Youth Services Building	Hall Main	1	2L4' T8 32w U/EL	trof acr	6	6	60	0.4	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	6	38	0.2	2,600	1,820	OCC SENSOR CEILING	1	142
2848	Youth Services Building	Office Reception	1	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	16
2849	Youth Services Building	Bath Near Recept	1	13W CF HARDWIRED	square surface mt.	1		15	0.0	NO RETRO	no change		16	0.0	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	8
2850	Youth Services Building	Office CindyS	1	2L4' T8 32w U/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	4	38	0.2	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	65
2851	Youth Services Building	Conference Staff	1	2L4' T8 32w U/EL	trof acr	10	10	60	0.6	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	10	38	0.4	1,800	1,260	OCC SENSOR WALLSWITCH 2GANG	1	163
2852	Youth Services Building	Office Director	1	2L4' T8 32w U/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	4	38	0.2	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	65
2853	Youth Services Building	Office Alison	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	33
2854	Youth Services Building	Office Front	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	33
2855	Youth Services Building	Hall Victorian Side	1	2L4' T8 32w U/EL	trof acr	15	15	60	0.9	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	15	38	0.6	2,600	1,820	OCC SENSOR CEILING	1	354
2856	Youth Services Building	Lounge Front	1	2L4' T8 32w U/EL	trof acr	8	8	60	0.5	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	8	38	0.3	1,900	1,330	OCC SENSOR WALLSWITCH 2GANG	1	138
2857	Youth Services Building	Storage Tv Cart	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	9
2858	Youth Services Building	Storage Files	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	9
2859	Youth Services Building	Lounge Rear	1	2L4' T8 32w U/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	4	38	0.2	1,900	1,330	OCC SENSOR WALLSWITCH 1GANG	1	69
2860	Youth Services Building	Storage Day Care	1	2L4' T8 32w U/EL	trof acr	9	9	60	0.5	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	9	38	0.3	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	82
2861	Youth Services Building	Storage Janitor	1	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	5
2862	Youth Services Building	Bath Staff (2)	1	13W CF HARDWIRED	square surface mt.	2		15	0.0	NO RETRO	no change		16	0.0	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	2	17
2863	Youth Services Building	Bath Mf	1	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	21
2864	Youth Services Building	Storage Paper	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	9
2865	Youth Services Building	Office Near Kitchen	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	33
2866	Youth Services Building	Kitchen Near Kitchen	1	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	1,500	1,050	OCC SENSOR WALLSWITCH 1GANG	1	14
2869	Youth Services Building	Office Open Main	1	2L4' T8 32w U/EL	trof parabolic	3	3	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	3	38	0.1	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	64
2870	Youth Services Building	Office Open Waiting	1	2L4' T8 32w U/EL	trof parabolic	4	4	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	4	38	0.2	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	85
2871	Youth Services Building	Office Dr.	1	2L4' T8 32w U/EL	trof parabolic	4	4	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	4	38	0.2	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	65
2872	Youth Services Building	Storage Files	1	2L4' T8 32w U/EL	trof parabolic	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	9
2873	Youth Services Building	Bath Hc	1	2L4' T8 32w U/EL	trof parabolic	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	21
2874	Youth Services Building	Bath Hc	1	2L4' T12 34w U EE/EEMAG	trof parabolic	1	1	70	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	1	29	0.0	2,340	1,638	INCLUDED ABOVE		17
2875	Youth Services Building	Storage Janitor	1	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	1
2876	Youth Services Building	Storage Files	1	2L4' T8 32w U/EL	trof parabolic	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	9
2877	Youth Services Building	Office Exam Room	1	2L4' T8 32w U/EL	trof parabolic	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	33
2878	Youth Services Building	Office Exam Room	1	2L4' T8 32w U/EL	trof parabolic	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 2GANG	1	33
2879	Youth Services Building	Hall Exam Rooms-Oo-Stair	1	2L4' T8 32w U/EL	trof parabolic	4	4	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	4	38	0.2	2,600	1,820	OCC SENSOR CEILING	1	94
2881	Youth Services Building	Stair Front Building Entry	stair	2L4' T8 32w U/EL	trof acr	3	3	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	3	38	0.1	2,600	1,820	OCC SENSOR CORNER MT.	1	71
2882	Youth Services Building	Lounge Sitting	2	2L4' T8 32w U/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	4	38	0.2	1,900	1,330	OCC SENSOR WALLSWITCH 1GANG	1	69
2883	Youth Services Building	Kitchen Sitting	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	1,500	1,050	OCC SENSOR WALLSWITCH 1GANG	1	27
2884	Youth Services Building	Office Caitlin	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	33
2885	Youth Services Building	Conference Quilt	2	2L4' T8 32w U/EL	trof acr	6	6	60	0.4	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	6	38	0.2	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	98
2886	Youth Services Building	Office Liz	2	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	16
2887	Youth Services Building	Conference Rear	2	2L4' T8 32w U/EL	trof acr	6	6	60	0.4	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	6	38	0.2	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	98

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	Annual Hours	Hours With Controls	*Control Description*	*Control Qty*	Control kWH Saved
2888	Youth Services Building	Hall 2Nd Fl	2	2L4' T8 32w U/EL	trof acr	6	6	60	0.4	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	6	38	0.2	2,600	1,820	OCC SENSOR CORNER MT.	1	142
2889	Youth Services Building	Hall Back	2	2L4' T8 32w U/EL	trof acr	5	5	60	0.3	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	5	38	0.2	2,600	1,820	OCC SENSOR CORNER MT.	1	118
2890	Youth Services Building	Bath Back	2	60W INCANDESCENT	square surface mt.	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	5
2891	Youth Services Building	Office Back	2	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	33
2892	Youth Services Building	Conference Back	2	2L4' T8 32w U/EL	trof acr	6	6	60	0.4	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	6	38	0.2	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	98
2903	Beals Senior Center	Office Main Office Boe	1 boe	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	1,800	1,260	OCC SENSOR CEILING	1	113
2904	Beals Senior Center	Storage Server	1 boe	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	8
2905	Beals Senior Center	Bath Staff	1 boe	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	25
2906	Beals Senior Center	Bath Staff (2)	1 boe	3L4' T8 32w/EL	trof parabolic	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	2,340	1,638	OCC SENSOR CEIL DT 1GANG	2	150
2907	Beals Senior Center	Bath Staff (2)	1 boe	2L2' T8 17w/EL	trof parabolic	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	2,340	1,638	INCLUDED ABOVE		27
2909	Beals Senior Center	Bath 13	1 boe	2x13W CF HARDWIRED	drum	1	1	30	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	12
2920	Beals Senior Center	Bath 16B	1 boe	2x13W CF HARDWIRED	old drum	1	1	30	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	12
2926	Beals Senior Center	Hall Main	1 boe	4L4' T8 32w/EL	trof acr	14	14	112	1.6	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	14	53	0.7	2,860	2,002	OCC SENSOR CORNER MT.	1	631
2928	Beals Senior Center	Storage Chairs	1 senior center	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	6
2931	Beals Senior Center	Office Med Specialist	1 senior center	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	58
2932	Beals Senior Center	Bath Staff	1 senior center	2L2' T8 17w/EL	trof parabolic	1	1	33	0.0	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	19	0.0	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	13
2933	Beals Senior Center	Storage Elect	1 senior center	2L4' T8 32w/EL	trof parabolic	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	500	350	OCC SENSOR CEILING	1	5
2934	Beals Senior Center	Lounge Staff	1 senior center	3L4' T8 32w/EL	trof parabolic	3	3	88	0.3	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	54	0.2	1,900	1,330	OCC SENSOR WALLSWITCH 1GANG	1	92
2936	Beals Senior Center	Bath Women	1 senior center	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	38
2937	Beals Senior Center	Bath Men	1 senior center	2L4' T8 32w U/EL	trof parabolic	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	27
2939	Beals Senior Center	Storage Ping Pong	1 senior center	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	8
2947	Beals Senior Center	Office Dir Nursing	1 senior center	2L4' T8 32w/EL	trof parabolic	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	1,800	1,260	OCC SENSOR CEILING	1	39
2951	Beals Senior Center	Bath Women	1 senior center	2L4' T8 32w/EL	trof parabolic	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	2,340	1,638	OCC SENSOR CEIL DT 1GANG	1	75
2952	Beals Senior Center	Bath Men	1 senior center	2L4' T8 32w/EL	trof parabolic	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	2,340	1,638	OCC SENSOR CEIL DT 1GANG	1	75
2953	Beals Senior Center	Storage Maint	1 senior center	2L4' T8 32w/EL	trof parabolic	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	5
2954	Beals Senior Center	Hall Health	1 senior center	4L4' T8 32w/EL-8'	trof parabolic	23	23	112	2.6	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	23	71	1.6	2,860	2,002	OCC SENSOR CEILING	1	1,409
2955	Beals Senior Center	Hall Health	1 senior center	4L3' T8 25w/EL-6'	trof parabolic	2	2	88	0.2	4L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	50	0.1	2,860	2,002	INCLUDED ABOVE		86
2956	Beals Senior Center	Hall Health	1 senior center	2L3' T8 25w/EL	trof parabolic	2	2	47	0.1	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	25	0.1	2,860	2,002	INCLUDED ABOVE		43
2962	Beals Senior Center	Stage Main	1 senior center	2L4' T8 32w/EL	trof parabolic	12	12	60	0.7	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	36	0.4	2,340	1,638	OCC SENSOR CEILING	1	301
2963	Beals Senior Center	Stage Main	1 senior center	75W INCANDESCENT	track can	5	5	75	0.4	8 WATT LED SI	screw in LED par20	5	8	0.0	2,340	1,638	INCLUDED ABOVE		29
2964	Beals Senior Center	Office Nutrition	1 senior center	2L4' T8 32w/EL	trof parabolic	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	39
2965	Beals Senior Center	Office Maint6	1 senior center	2L4' T8 32w/EL	trof parabolic	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	1,800	1,260	OCC SENSOR CEILING	1	116
2967	Beals Senior Center	Kitchen Ice	1 senior center	2L4' T8 32w/EL	trof parabolic	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	25
2968	Beals Senior Center	Storage Plates	1 senior center	2L4' T8 32w/EL	trof parabolic	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	11
2971	Beals Senior Center	Hall To Billiards	1 senior center	4L4' T8 32w/EL-8'	valance	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	2,860	2,002	OCC SENSOR CEILING	1	184
2972	Beals Senior Center	Hall To Billiards	1 senior center	2L3' T8 25w/EL	valance	1	1	47	0.0	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	25	0.0	2,860	2,002	INCLUDED ABOVE		22
2973	Beals Senior Center	Hall To Billiards	1 senior center	2L4' T8 32w/EL	valance	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,860	2,002	INCLUDED ABOVE		61
2976	Beals Senior Center	Gym Main	1 senior center	4L4' T5 HO/EL	high bay	24	24	234	5.6	98 WATT LED/NEW	new LED hibay wg	24	103	2.5	1,820	1,274	OCC. SENSOR ON HI BAY FIXTURE	24	1,348
2979	Beals Senior Center	Bath Men (2)	1 senior center	2L4' T8 32w/EL	trof parabolic	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	2	50
2980	Beals Senior Center	Storage Shower	1 senior center	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	6
2983	Beals Senior Center	Bath Men	1 senior center	2L4' T8 32w/EL	trof parabolic	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	2,340	1,638	OCC SENSOR CEIL DT 1GANG	1	75
2984	Beals Senior Center	Bath Ladies	1 senior center	2L4' T8 32w/EL	trof parabolic	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	2,340	1,638	OCC SENSOR CEIL DT 1GANG	1	75
2986	Beals Senior Center	Storage Janitor	1 senior center	2L4' T8 32w U/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	6
2989	Beals Senior Center	Lobby Wood Shop	1 senior center	2L4' T8 32w U/EL	trof parabolic	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	32
2990	Beals Senior Center	Storage Drill Press	1 senior center	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	11
2993	Beals Senior Center	Classroom 104	1 senior center	2L4' T8 32w/EL	trof parabolic	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	2,340	1,638	OCC SENSOR CEILING	1	200
2997	Beals Senior Center	Cafeteria Coffee	1 senior center	2L4' T8 32w/EL	trof parabolic	9	9	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	36	0.3	2,340	1,638	OCC SENSOR CEILING	1	226
2998	Beals Senior Center	Retail Tag Sale	1 senior center	3L4' T8 32w/EL	trof parabolic	3	3	88	0.3	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	54	0.2	2,340	1,638	OCC SENSOR CEILING	1	113
3003	Beals Senior Center	Office Open Clinic	1 senior center	3L4' T8 32w/EL	trof parabolic	3	3	88	0.3	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	54	0.2	2,340	1,638	OCC SENSOR CEILING	1	113
3004	Beals Senior Center	Bath Clinic	1 senior center	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	25
3005	Beals Senior Center	Storage Compressor	1 senior center	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	5
3006	Beals Senior Center	Storage Supplies	1 senior center	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	16
3007	Beals Senior Center	Office Dental	1 senior center	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	29
3008	Beals Senior Center	Office Exam A	1 senior center	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	29
3009	Beals Senior Center	Office Aprn	1 senior center	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	29
3010	Beals Senior Center	Office Exam B	1 senior center	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	1,800	1,260	OCC SENSOR CEILING	1	29
3011	Beals Senior Center	Kitchen Near Exam Rooms	1 senior center	3L4' T8 32w/EL	trof parabolic	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	38
3013	Beals Senior Center	Hall Clinic - Conf 101	1 senior center	4L4' T8 32w/EL-8'	valance	15	15	112	1.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	15	71	1.1	2,860	2,002	OCC SENSOR CEILING	1	919
3015	Beals Senior Center	Hall Adjacent To Maint Office	1 senior center	4L4' T8 32w/EL-8'	valance	5	5	112	0.6	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	71	0.4	2,860	2,002	OCC SENSOR CEILING	1	306
3016	Beals Senior Center	Hall Adjacent To Maint Office	1 senior center	2L3' T8 25w/EL	valance	1	1	47	0.0	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	25	0.0	2,860	2,002	INCLUDED ABOVE		22
3017	Beals Senior Center	Hall Conf 101 - K	1 senior center	4L4' T8 32w/EL-8'	valance	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	2,860	2,002	OCC SENSOR CEILING	1	123
3018	Beals Senior Center	Hall Conf 101 - K	1 senior center	2L4' T8 32w/EL	valance	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,860	2,002	INCLUDED ABOVE		31
3019	Beals Senior Center	Hall Adj To Art	1 senior center	4L4' T8 32w/EL-8'	valance	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	2,860	2,002	OCC SENSOR CEILING	1	184
3020	Beals Senior Center	Hall Adj To Art	1 senior center	2L4' T8 32w/EL	valance	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,860	2,002	INCLUDED ABOVE		31
3021	Beals Senior Center	Hall K - Billiards	1 senior center	4L4' T8 32w/EL-8'	valance	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,860	2,002	OCC SENSOR CEILING	1	551
3022	Beals Senior Center	Hall K - Billiards	1 senior center	2L4' T8 32w/EL	valance	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,860	2,002	INCLUDED ABOVE		31
3023	Beals Senior Center	Hall K - Billiards	1 senior center	2L3' T8 25w/EL	valance	1	1	47	0.0	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	25	0.0	2,860	2,002	INCLUDED ABOVE		22
3025	Beals Senior Center	Hall K - Main Entry	1 senior center	4L4' T8 32w/EL-8'	valance	10	10	112	1.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	10	71	0.7	2,860	2,002	OCC SENSOR CEILING	1	613
3026	Beals Senior Center	Hall K - Main Entry	1 senior center	4L3' T8 25w/EL-6'	valance	1	1	88	0.1	4L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	50	0.1	2,860	2,002	INCLUDED ABOVE		43
3027	Beals Senior Center	Hall K - Main Entry	1 senior center	2L2' T8 17w/EL	trof parabolic	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	2,860	2,002	INCLUDED ABOVE		32
3041	Dennis Malone Aquatic Center	Locker Mens Vestibule	1	13W CF HARDWIRED	can rec 6"	1		15	0.0	NO RETRO	no change		16	0.0	5,278	3,695	OCC SENSOR WALLSWITCH 1GANG	1	23
3042	Dennis Malone Aquatic Center	Storage Fire Alarm	1	60W INCANDESCENT	drum	1	1	60	0.1	16 WATT LED/NEW	new LED drum	1	17	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	2
3046	Dennis Malone Aquatic Center	Locker Men	1	13W CF HARDWIRED	can rec 6"	1		15	0.0	NO RETRO	no change		16	0.0	5,278	3,695	OCC SENSOR CEIL DT 1GANG	1	23
3049	Dennis Malone Aquatic Center	Locker Womans	1	13W CF HARDWIRED	can rec 6"	5		15	0.1	NO RETRO	no change		16	0.1	5,278	3,695	OCC SENSOR CEIL DT 1GANG	1	113
3051	Dennis Malone Aquatic Center	Locker Staff	1	2L4' T8 32w/EL	wrap	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	5,278	3,695	OCC SENSOR CEILING	1	161
3052	Dennis Malone Aquatic Center	Bath Staff	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	5,278	3,695	OCC SENSOR WALLSWITCH 1GANG	1	54
3053	Dennis Malone Aquatic Center	Bath Shower	1	18W CF HARDWIRED	box acrylic	2	2	20	0.0	16 WATT LED/NEW	new LED drum	2	17	0.0	5,278	3,695	OCC SENSOR WALLSWITCH 1GANG	1	51
3056	Dennis Malone Aquatic Center	Locker Changing	1	4L4' T8 32w/EL-8'	vanity	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	5,278	3,695	OCC SENSOR WALLSWITCH DT 1GANG	1	107
3057	Dennis Malone Aquatic Center	Storage Air Handler	1	4L4' T8 32w/EL-8'	industrial	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	41
3060	Dennis Malone Aquatic Center	Storage Janitor	1	1L4' T8 32w/EL	industrial	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	3
3061	Dennis Malone Aquatic Center	Storage Chairs	1	1L4' T8 32w/EL	industrial	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	1,000	700	OCC SENSOR CORNER MT.	1	10
3062	Dennis Malone Aquatic Center	Office Front	1	65W INCANDESCENT	can rec 6"	6	6	65	0.4	8 WATT LED SI	screw in LED Alamp	6	8	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	26

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	Annual Hours	Hours With Controls	*Control Description*	*Control Qty*	Control kWH Saved
3066	Water Filtration Plant & High Service Pump Station	Storage Back Garage	1	4L4' T8 32w/EL-8'	industrial	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	500	350	OCC SENSOR CEIL DT 1GANG	1	96
3067	Water Filtration Plant & High Service Pump Station	Hall Back Garage	1	2L4' T8 32w/EL	vapor tight	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	2,500	1,750	OCC SENSOR WALLSWITCH 1GANG	1	80
3068	Water Filtration Plant & High Service Pump Station	Storage Raw Water Pump Station	1	60W INCANDESCENT	keyless	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	3
3069	Water Filtration Plant & High Service Pump Station	Storage High Service Station	1	150W INCANDESCENT	keyless	4	4	150	0.6	11 WATT LED SI	screw in LED Alamp	4	12	0.0	500	350	OCC SENSOR WALLSWITCH DT 1GANG	1	7
3070	Water Filtration Plant & High Service Pump Station	Foyer Main	1	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	2,500	1,750	OCC SENSOR CEILING	1	28
3071	Water Filtration Plant & High Service Pump Station	Office 202	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	77
3072	Water Filtration Plant & High Service Pump Station	Office 203	1	2L4' T8 32w/EL	trof acr	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	58
3073	Water Filtration Plant & High Service Pump Station	Office 204	1	2L4' T8 32w/EL	trof acr	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	58
3074	Water Filtration Plant & High Service Pump Station	Office 207 Control Room	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 2GANG	1	77
3075	Water Filtration Plant & High Service Pump Station	Storage 214 Elect	1	2L4' T8 32w/EL	trof acr	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	32
3076	Water Filtration Plant & High Service Pump Station	Storage 212	1	2L4' T8 32w/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	21
3077	Water Filtration Plant & High Service Pump Station	Office 216	1	2L4' T8 32w/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	77
3078	Water Filtration Plant & High Service Pump Station	Lab 217	1	2L4' T8 32w/EL	trof acr	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	8,760	6,132	OCC SENSOR CEILING	1	751
3079	Water Filtration Plant & High Service Pump Station	Lab 217	1	2L2' T8 17w/EL	trof acr	1	1	33	0.0	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	19	0.0	8,760	6,132	OCC SENSOR WALLSWITCH 1GANG	1	50
3080	Water Filtration Plant & High Service Pump Station	Storage 217	1	2L4' T8 32w/EL	trof acr	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	500	350	OCC SENSOR CEILING	1	16
3081	Water Filtration Plant & High Service Pump Station	Storage 217	1	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	5
3082	Water Filtration Plant & High Service Pump Station	Bath 226	1	1L4' T8 32w/EL	trof acr 1' wide	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	2,500	1,750	OCC SENSOR WALLSWITCH DT 1GANG	1	27
3083	Water Filtration Plant & High Service Pump Station	Bath 226	1	60W INCANDESCENT	can rec 6"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	2,500	1,750	INCLUDED ABOVE		13
3084	Water Filtration Plant & High Service Pump Station	Locker 226	1	1L4' T8 32w/EL	trof acr 1' wide	3	3	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	18	0.1	2,500	1,750	OCC SENSOR CORNER MT.	1	40
3086	Water Filtration Plant & High Service Pump Station	Storage 225	1	2L2' T8 17w/EL	trof parabolic	1	1	33	0.0	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	19	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	3
3087	Water Filtration Plant & High Service Pump Station	Bath 224	1	1L4' T8 32w/EL	trof acr 1' wide	3	3	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	18	0.1	2,500	1,750	OCC SENSOR WALLSWITCH DT 1GANG	1	40
3088	Water Filtration Plant & High Service Pump Station	Bath 224	1	15W CF SCREWIN	can rec 6"	2	2	17	0.0	8 WATT LED SI	screw in LED Alamp	2	8	0.0	2,500	1,750	INCLUDED ABOVE		13
3089	Water Filtration Plant & High Service Pump Station	Locker 224	1	1L4' T8 32w/EL	trof acr 1' wide	6	6	30	0.2	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	18	0.1	2,500	1,750	OCC SENSOR WALLSWITCH DT 1GANG	1	80
3092	Water Filtration Plant & High Service Pump Station	Kitchen Near Lockers	1	2L4' T8 32w/EL	trof acr	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	1,500	1,050	OCC SENSOR WALLSWITCH 1GANG	1	48
3093	Water Filtration Plant & High Service Pump Station	Lounge Near Lockers	1	2L4' T8 32w/EL	trof acr	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	1,900	1,330	OCC SENSOR WALLSWITCH 1GANG	1	163
3094	Water Filtration Plant & High Service Pump Station	Conference 209	1	4L4' T8 32w/EL-8'	trof acr	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	77
3095	Water Filtration Plant & High Service Pump Station	Hall Main	1	2L2' T8 17w/EL	trof acr	14	14	33	0.5	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	14	19	0.3	2,500	1,750	OCC SENSOR CEILING	1	198
3096	Water Filtration Plant & High Service Pump Station	Hall Control-Lockers	1	2L2' T8 17w/EL	trof acr	13	13	33	0.4	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	13	19	0.2	2,500	1,750	OCC SENSOR CEILING	1	184
3097	Water Filtration Plant & High Service Pump Station	Hall 228	1	2L4' T8 32w/EL	trof acr	25	25	60	1.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	25	36	0.9	2,500	1,750	OCC SENSOR CORNER MT.	1	669
3098	Water Filtration Plant & High Service Pump Station	Storage Tank Gallery	1	2L4' T8 32w/EL	vapor tight	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	500	350	OCC SENSOR CEILING	1	43
3099	Water Filtration Plant & High Service Pump Station	Storage Tank Gallery	1	150W INCANDESCENT	flood	4	4	150	0.6	21 WATT LED/NEW	new LED flood	4	22	0.1	500	350	INCLUDED ABOVE		13
3100	Water Filtration Plant & High Service Pump Station	Storage Tank Gallery	1	2L4' T8 32w/EL	vapor tight	6	6	60	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	36	0.2	500	350	INCLUDED ABOVE		32
3101	Water Filtration Plant & High Service Pump Station	Storage 231	1	2L4' T8 32w/EL	vapor tight	15	15	60	0.9	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	15	36	0.5	1,000	700	OCC SENSOR CEILING	1	161
3102	Water Filtration Plant & High Service Pump Station	Storage 231	1	2L4' T8 32w/EL	vapor tight	12	12	60	0.7	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	36	0.4	1,000	700	OCC SENSOR CEILING	1	129
3103	Water Filtration Plant & High Service Pump Station	Storage 231	1	2L4' T8 32w/EL	vapor tight	15	15	60	0.9	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	15	36	0.5	1,000	700	OCC SENSOR CEILING	1	161
3104	Water Filtration Plant & High Service Pump Station	Storage 230	1	2L4' T8 32w/EL	industrial	5	5	60	0.3	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	36	0.2	500	350	OCC SENSOR CEILING	1	27
3105	Water Filtration Plant & High Service Pump Station	Stair Off 231	stair	2L4' T8 32w/EL	vanity	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	2,500	1,750	OCC SENSOR WALLSWITCH 1GANG	1	80
3107	Water Filtration Plant & High Service Pump Station	Storage Chem Lines (2)	lower	100W INCANDESCENT	explosion	2	2	100	0.2	15 WATT LED SI	screw in LED Alamp	2	16	0.0	500	350	OCC SENSOR CEILING	2	5
3108	Water Filtration Plant & High Service Pump Station	Storage Wash Water Drains	lower	2L4' T8 32w/EL	vapor tight	12	12	60	0.7	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	12	36	0.4	1,000	700	OCC. SENSOR ON HI BAY FIXTURE	12	129
3109	Water Filtration Plant & High Service Pump Station	Lobby Generator	lower	2L4' T8 32w/EL	industrial	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	2,500	1,750	OCC SENSOR WALLSWITCH 1GANG	1	107
3110	Water Filtration Plant & High Service Pump Station	Storage Generator	lower	2L4' T8 32w/EL	industrial	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	21
3111	Water Filtration Plant & High Service Pump Station	Stair Near Generator	stair	2L4' T8 32w/EL	vanity	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,500	1,750	OCC. SENSOR ON HI BAY FIXTURE	2	54
3114	Water Filtration Plant & High Service Pump Station	Stair Near Main Lobby	stair	2L4' T8 32w/EL	vanity	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,500	1,750	OCC. SENSOR ON HI BAY FIXTURE	2	54
3116	Water Filtration Plant & High Service Pump Station	Storage Chem Treatment	lower	2L4' T8 32w/EL	vapor tight	49	49	60	2.9	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	49	36	1.7	1,000	700	OCC SENSOR CEILING	1	525
3117	Water Filtration Plant & High Service Pump Station	Storage 113	lower	2L4' T8 32w/EL	vapor tight	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	500	350	OCC SENSOR CEILING	1	21
3118	Water Filtration Plant & High Service Pump Station	Hall Time Clock	lower	2L4' T8 32w/EL	industrial	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	2,500	1,750	OCC SENSOR WALLSWITCH 1GANG	1	80
3119	Water Filtration Plant & High Service Pump Station	Storage Garage	lower	4L4' T5 HO/EL	high bay	6	6	234	1.4	98 WATT LED/NEW	new LED hibay wg	6	103	0.6	1,000	700	OCC. SENSOR ON HI BAY FIXTURE	6	185
3122	Water Filtration Plant & High Service Pump Station	Storage Chain Saws	lower	2L4' T8 32w/EL	industrial	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	5
3123	Water Filtration Plant & High Service Pump Station	Storage 103	lower	2L4' T8 32w/EL	industrial	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	11
3124	Water Filtration Plant & High Service Pump Station	Storage 104	lower	2L4' T8 32w/EL	industrial	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	500	350	OCC SENSOR CEILING	1	11
3125	Water Filtration Plant & High Service Pump Station	Storage 105	lower	2L4' T8 32w/EL	industrial	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	500	350	OCC SENSOR CEILING	1	11
3126	Water Filtration Plant & High Service Pump Station	Storage 106	lower	2L4' T8 32w/EL	industrial	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	5
3127	Water Filtration Plant & High Service Pump Station	Bath 107	lower	2L4' T8 32w/EL	trof acr	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,500	1,750	OCC SENSOR WALLSWITCH 1GANG	1	27
3128	Water Filtration Plant & High Service Pump Station	Storage Garage Mez	lower	2L4' T8 32w/EL	industrial	5	5	60	0.3	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	36	0.2	500	350	OCC SENSOR CEILING	1	27
3130	Water Filtration Plant & High Service Pump Station	Stair Near Lockers	stair	2L4' T8 32w/EL	vanity	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,500	1,750	OCC. SENSOR ON HI BAY FIXTURE	2	54
3131	Water Filtration Plant & High Service Pump Station	Storage 110	lower	2L4' T8 32w/EL	vapor tight	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	21
3132	Water Filtration Plant & High Service Pump Station	Storage 111	lower	2L4' T8 32w/EL	vapor tight	5	5	60	0.3	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	36	0.2	500	350	OCC SENSOR CORNER MT.	1	27
3165	Rockwell Park & Pavilion	Bath Men (2)	1	2x13W CF HARDWIRED	square surface mt.	2	2	30	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	2	5
3166	Rockwell Park & Pavilion	Storage Christmas Supplies	1	13W CF HARDWIRED	keyless	1		15	0.0	NO RETRO	no change		16	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	2
3167	Rockwell Park & Pavilion	Mechanical Boiler	1	60W INCANDESCENT	keyless	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	3
3169	Rockwell Park & Pavilion	Kitchen Main	1	2x60W INCANDESCENTS	square surface mt.	1	1	120	0.1	16 WATT LED/NEW	new LED drum	1	17	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	3
3170	Rockwell Park & Pavilion	Storage K	1	2x60W INCANDESCENTS	square surface mt.	1	1	120	0.1	16 WATT LED/NEW	new LED drum	1	17	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	3
3200	Ski Lodge	Bath Men	1	26W CF HARDWIRED	square surface mt.	1	1	28	0.0	16 WATT LED/NEW	new LED drum	1	17	0.0	500	350	OCC SENSOR WALLSWITCH DT 1GANG	1	3
3201	Ski Lodge	Exercise Rec	1	2L4' T12 34w EE/EEMAG	wrap wide	5	5	70	0.4	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	36	0.2	500	350	OCC SENSOR WALLSWITCH 1GANG	1	27
3202	Ski Lodge	Storage Tennis	1	2L4' T12 34w EE/EEMAG	wrap	1	1	70	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	5
3203	Ski Lodge	Bath Women	1	2x60W INCANDESCENTS	square surface mt.	1	1	120	0.1	16 WATT LED/NEW	new LED drum	1	17	0.0	500	350	OCC SENSOR WALLSWITCH DT 1GANG	1	3
3206	Page Park Pavilion	Exercise Mats	1	4L4' T8 32w/EL-8'	wrap	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	1,200	840	OCC. SENSOR ON HI BAY FIXTURE	4	103
3207	Page Park Pavilion	Exercise Mats	1	60W INCANDESCENT	rectangular	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	1,200	840	OCC SENSOR WALLSWITCH 1GANG	1	6
3208	Page Park Pavilion	Exercise Mats	1	2L4' T12 34w EE/EEMAG	wrap	2	2	70	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	1,200	840	OCC SENSOR WALLSWITCH 1GANG	1	26
3209	Page Park Pavilion	Exercise Mats	1	4L4' T8 32w/EL-8'	wrap	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	1,200	840	OCC SENSOR WALLSWITCH 1GANG	1	51
3210	Page Park Pavilion	Storage Boiler	1	60W INCANDESCENT	keyless	1	1	60	0.1	8 WATT LED SI	screw in LED Alamp	1	8	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	1
3211	Page Park Pavilion	Bath Men (2)	1	22W & 32W CIRCLELINE HARDWIRED	drum	2	2	58	0.1	16 WATT LED/NEW	new LED drum	2	17	0.0	1,200	840	OCC SENSOR WALLSWITCH DT 1GANG	2	12
3212	Page Park Pavilion	Bath Men (2)	1	2L2' T8 17w/EL	vanity	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	1,200	840	INCLUDED ABOVE		14
3214	Page Park Pavilion	Walkway All	ext	175W METAL HALIDE	decorative	1	1	205	0.2	40 WATT LED/KIT	area kit LED	1	42	0.0	8,760	4,380	PHOTO SENSOR FIXTURE MOUNTED	1	184
3219	Pool	Lounge Main	1	4L4' T12 34w EE/EEMAG-8'	wrap wide	1	1	140	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	11
3221	Pool	Storage Sink	1	60W INCANDESCENT	square recessed	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	500	350	OCC SENSOR WALLSWITCH 1GANG	1	3
3234	Recreation Building	Locker Equip	1	2L4' T12 34w EE/EEMAG	old industrial	11		70	0.8	NO RETRO	no change per customer		74	0.8	20	14	OCC SENSOR WALLSWITCH 2GANG	1	5
3235	Recreation Building	Bath Equip	1	60W INCANDESCENT	keyless	1		60	0.1	NO RETRO	no change per customer		63	0.1	20	14	OCC SENSOR WALLSWITCH 1GANG	1	0
3288	Administration Building & Warehouse	Office Paint	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	39
3306	Administration Building & Warehouse	Office Open 34	3	4L4' T8 32w/EL	trof acr	5	5	112	0.6	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	5	53	0.3	2,716	1,901	OCC SENSOR CEILING	1	214
3307	Administration Building & Warehouse	Storage 34	3	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	16
3308	Administration Building & Warehouse	Office Open 32	3	4L4' T8 32w/EL	trof acr	5	5	112	0.6	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	5	53	0.3	2,340	1,638	OCC SENSOR CEILING	1	184

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	Annual Hours	Hours With Controls	*Control Description*	*Control Qty*	Control kWH Saved
3309	Administration Building & Warehouse	Office 32	3	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	57
3310	Administration Building & Warehouse	Conference 32	3	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	1,800	1,260	OCC SENSOR CEILING	1	85
3314	Administration Building & Warehouse	Conference Main	2	4L4' T8 32w/EL	trof acr	3	3	112	0.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	3	53	0.2	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	85
3320	Administration Building & Warehouse	Bath Men	2	2L2' T8 17w/EL	box acrylic	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	2,340	1,638	OCC SENSOR WALLSWITCH DT 1GANG	1	27
3321	Administration Building & Warehouse	Bath Men	2	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,340	1,638	INCLUDED ABOVE		25
3322	Administration Building & Warehouse	Office Open 25	2	4L4' T8 32w/EL	trof acr	18	18	112	2.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	18	53	0.9	2,340	1,638	OCC SENSOR CEIL DT 1GANG	1	663
3323	Administration Building & Warehouse	Office 25	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	57
3324	Administration Building & Warehouse	Conference 25	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	57
3326	Administration Building & Warehouse	Office Open 26	2	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	6	53	0.3	2,891	2,024	OCC SENSOR CEILING	1	273
3327	Administration Building & Warehouse	Office Open 26	2	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	2,340	1,638	INCLUDED ABOVE		27
3329	Administration Building & Warehouse	Office 26	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	57
3330	Administration Building & Warehouse	Office 26	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	57
3331	Administration Building & Warehouse	Conference 26	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	57
3332	Administration Building & Warehouse	Office Open 24	2	4L4' T8 32w/EL	trof acr	5	5	112	0.6	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	5	53	0.3	2,340	1,638	OCC SENSOR CEILING	1	184
3333	Administration Building & Warehouse	Office Open 24	2	4L4' T8 32w/EL-8'	strip	2	2	112	0.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	71	0.1	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	100
3334	Administration Building & Warehouse	Office Open 24	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	74
3335	Administration Building & Warehouse	Office Open 24	2	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	2,340	1,638	OCC SENSOR WALLSWITCH 1GANG	1	74
3336	Administration Building & Warehouse	Lounge 22	2	2L2' T8 17w/EL	trof acr	6	6	33	0.2	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	6	19	0.1	1,900	1,330	OCC SENSOR CEILING	1	65
3337	Administration Building & Warehouse	Bath Women	2	2L2' T8 17w/EL	box acrylic	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	2,340	1,638	OCC SENSOR WALLSWITCH DT 1GANG	1	27
3338	Administration Building & Warehouse	Bath Women	2	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,340	1,638	INCLUDED ABOVE		25
3340	Administration Building & Warehouse	Office Open 11	1	4L4' T8 32w/EL	trof acr	12	12	112	1.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	12	53	0.6	2,340	1,638	OCC SENSOR CEILING	1	442
3341	Administration Building & Warehouse	Office 11	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	57
3342	Administration Building & Warehouse	Office 11	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	57
3343	Administration Building & Warehouse	Office 11	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	57
3361	Administration Building & Warehouse	Classroom 17	1	3L4' T8 32w/EL	wrap wide	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	2,600	1,820	OCC SENSOR CEILING	1	167
3362	Administration Building & Warehouse	Office Open 14	1	3L4' T8 32w/EL	wrap wide	6	6	88	0.5	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	54	0.3	2,278	1,595	OCC SENSOR CEILING	1	220
3369	Administration Building & Warehouse	Bath Women	1	2L2' T8 17w/EL	box acrylic	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	2,340	1,638	OCC SENSOR WALLSWITCH DT 1GANG	1	27
3372	Stafford ES	Office Principal	1	65W INCANDESCENT	can rec	7	7	65	0.5	8 WATT LED SI	screw in LED Alamp	7	8	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 2GANG	1	35
3373	Stafford ES	Office Literacy	1	65W INCANDESCENT	can rec	2	2	65	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	2,000	1,400	OCC SENSOR WALLSWITCH 2GANG	1	10
3374	Stafford ES	Office Literacy	1	2L4' T8 32w U/EL	box acrylic	1	1	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	1	38	0.0	2,000	1,400	INCLUDED ABOVE		23
3375	Stafford ES	Office Literacy	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	21
3383	Stafford ES	Bath Boys	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	3,000	2,100	OCC SENSOR WALLSWITCH DT 1GANG	1	64
3384	Stafford ES	Bath Girls	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	3,000	2,100	OCC SENSOR WALLSWITCH DT 1GANG	1	64
3387	Stafford ES	Library Main	1	4L4' T8 32w/EL-8'	box acr 6" wide	8	8	112	0.9	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	71	0.6	1,800	1,260	OCC SENSOR CEILING	1	308
3388	Stafford ES	Library Main	1	2L4' T8 32w/EL	box acr 6" wide	4	4	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	36	0.1	1,800	1,260	INCLUDED ABOVE		77
3392	Stafford ES	Office Lib	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	43
3394	Stafford ES	Storage Lib	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	21
3443	Stafford ES	Office 36	B	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	21
3446	Stafford ES	Storage Pantry	B	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	21
3449	Stafford ES	Classroom 35	B	2L4' T8 32w U/EL	trof acr	4	4	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	4	38	0.2	2,200	1,540	OCC SENSOR WALLSWITCH DT 1GANG	1	100
3490	Stafford ES	Bath Girls	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	3,000	2,100	OCC SENSOR WALLSWITCH DT 1GANG	1	64
3491	Stafford ES	Bath Boys	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	3,000	2,100	OCC SENSOR WALLSWITCH DT 1GANG	1	64
3507	Stafford ES	Gym Main	1	4L4' T5 HO/EL	high bay	24	24	234	5.6	98 WATT LED/NEW	new LED hibay wg	24	103	2.5	2,000	1,400	OCC. SENSOR ON HI BAY FIXTURE	24	1,482
3511	Stafford ES	Conference Main	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	43
3512	Stafford ES	Lounge Staff	1	2L4' T8 32w/EL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	1,800	1,260	OCC SENSOR WALLSWITCH 1GANG	1	39
3553	Edgewood ES	Classroom K-B	1	4L4' T8 32w/EL-8'	box acr 1' wide	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
3554	Edgewood ES	Classroom K-B	1	2L4' T8 32w/EL-8'	cove	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	2,200	1,540	INCLUDED ABOVE		60
3555	Edgewood ES	Classroom K-B	1	60W INCANDESCENT	square surface mt.	2	2	60	0.1	8 WATT LED SI	screw in LED Alamp	2	8	0.0	2,200	1,540	INCLUDED ABOVE		9
3558	Edgewood ES	Classroom K-A	1	4L4' T8 32w/EL-8'	box acr 1' wide	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
3559	Edgewood ES	Classroom K-A	1	2L4' T8 32w/EL-8'	cove	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	2,200	1,540	INCLUDED ABOVE		60
3560	Edgewood ES	Classroom K-A	1	60W INCANDESCENT	square surface mt.	3	3	60	0.2	8 WATT LED SI	screw in LED Alamp	3	8	0.0	2,200	1,540	INCLUDED ABOVE		14
3563	Edgewood ES	Classroom Art	1	4L4' T8 32w/EL-8'	wrap	11	11	112	1.2	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	11	71	0.8	2,200	1,540	OCC SENSOR CEILING	1	441
3565	Edgewood ES	Classroom 19	1	4L4' T8 32w/EL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
3568	Edgewood ES	Classroom 18	1	4L4' T8 32w/EL-8'	box acr 1' wide	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
3569	Edgewood ES	Classroom 17	1	4L4' T8 32w/EL-8'	box acr 1' wide	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
3570	Edgewood ES	Classroom 16	1	4L4' T8 32w/EL-8'	box acr 1' wide	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
3571	Edgewood ES	Bath Boys	1	4L4' T8 32w/EL-8'	vanity	3	3	112	0.3	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	71	0.2	3,000	2,100	OCC SENSOR CEILING	1	164
3572	Edgewood ES	Bath Boys	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	3,000	2,100	INCLUDED ABOVE		27
3573	Edgewood ES	Bath Boys	1	2L3' T8 25w/EL	vanity	1	1	47	0.0	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	25	0.0	3,000	2,100	INCLUDED ABOVE		19
3585	Edgewood ES	Storage Pantry	1	2L4' T8 32w U/EL	trof acr	3	3	60	0.2	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	3	38	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	29
3586	Edgewood ES	Classroom 15	1	4L4' T8 32w/EL-8'	box acr 1' wide	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
3588	Edgewood ES	Office 153	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	2,000	1,400	OCC SENSOR WALLSWITCH 2GANG	1	9
3589	Edgewood ES	Office 153	1	1L4' T8 32w/EL	cove	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	2,000	1,400	INCLUDED ABOVE		9
3590	Edgewood ES	Office 153	1	1L3' T8 25w/EL	cove	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	2,000	1,400	INCLUDED ABOVE		13
3591	Edgewood ES	Office 153	1	1L4' T8 32w/EL	task strip	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	2,000	1,400	INCLUDED ABOVE		9
3592	Edgewood ES	Office 153	1	1L3' T8 25w/EL	task strip	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	2,000	1,400	INCLUDED ABOVE		13
3593	Edgewood ES	Office 152	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	2,000	1,400	OCC SENSOR WALLSWITCH 2GANG	1	9
3594	Edgewood ES	Office 152	1	1L4' T8 32w/EL	cove	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	2,000	1,400	INCLUDED ABOVE		9
3595	Edgewood ES	Office 152	1	1L3' T8 25w/EL	cove	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	2,000	1,400	INCLUDED ABOVE		13
3596	Edgewood ES	Office 152	1	1L4' T8 32w/EL	task strip	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	2,000	1,400	INCLUDED ABOVE		9
3597	Edgewood ES	Office 152	1	1L3' T8 25w/EL	task strip	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	2,000	1,400	INCLUDED ABOVE		13
3598	Edgewood ES	Office 149	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	2,000	1,400	OCC SENSOR WALLSWITCH 2GANG	1	9
3599	Edgewood ES	Office 149	1	1L4' T8 32w/EL	cove	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	2,000	1,400	INCLUDED ABOVE		9
3600	Edgewood ES	Office 149	1	1L3' T8 25w/EL	cove	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	2,000	1,400	INCLUDED ABOVE		13
3601	Edgewood ES	Office 149	1	1L4' T8 32w/EL	task strip	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	2,000	1,400	INCLUDED ABOVE		9
3602	Edgewood ES	Office 149	1	1L3' T8 25w/EL	task strip	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	2,000	1,400	INCLUDED ABOVE		13
3603	Edgewood ES	Office 148	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	2,000	1,400	OCC SENSOR WALLSWITCH 2GANG	1	9
3604	Edgewood ES	Office 148	1	1L4' T8 32w/EL	cove	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	2,000	1,400	INCLUDED ABOVE		9
3605	Edgewood ES	Office 148	1	1L3' T8 25w/EL	cove	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	2,000	1,400	INCLUDED ABOVE		13
3606	Edgewood ES	Office 148	1	1L4' T8 32w/EL	task strip	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	2,000	1,400	INCLUDED ABOVE		9
3607	Edgewood ES	Office 148	1	1L3' T8 25w/EL	task strip	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	2,000	1,400	INCLUDED ABOVE		13
3608	Edgewood ES	Office 146	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	2,000	1,400	OCC SENSOR WALLSWITCH 2GANG	1	9

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	Annual Hours	Hours With Controls	*Control Description*	*Control Qty*	Control kWH Saved
3609	Edgewood ES	Office 146	1	1L4' T8 32wEL	cove	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	2,000	1,400	INCLUDED ABOVE		9
3610	Edgewood ES	Office 146	1	1L3' T8 25wEL	cove	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	2,000	1,400	INCLUDED ABOVE		13
3611	Edgewood ES	Office 146	1	1L4' T8 32wEL	task strip	1	1	30	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	2,000	1,400	INCLUDED ABOVE		9
3612	Edgewood ES	Office 146	1	1L3' T8 25wEL	task strip	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	2,000	1,400	INCLUDED ABOVE		13
3613	Edgewood ES	Office 154	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	2,000	1,400	OCC SENSOR WALLSWITCH 2GANG	1	9
3614	Edgewood ES	Office 154	1	1L4' T8 32wEL	cove	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	2,000	1,400	INCLUDED ABOVE		18
3615	Edgewood ES	Office 154	1	1L4' T8 32wEL	task strip	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	2,000	1,400	INCLUDED ABOVE		18
3616	Edgewood ES	Office 151	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	2,000	1,400	OCC SENSOR WALLSWITCH 2GANG	1	9
3617	Edgewood ES	Office 151	1	1L4' T8 32wEL	cove	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	2,000	1,400	INCLUDED ABOVE		18
3618	Edgewood ES	Office 151	1	1L4' T8 32wEL	task strip	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	2,000	1,400	INCLUDED ABOVE		18
3619	Edgewood ES	Office 147	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	2,000	1,400	OCC SENSOR WALLSWITCH 2GANG	1	9
3620	Edgewood ES	Office 147	1	2L4' T8 32wEL-8'	cove	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,000	1,400	INCLUDED ABOVE		36
3621	Edgewood ES	Office 147	1	1L3' T8 25wEL	cove	2	2	24	0.0	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	2,000	1,400	INCLUDED ABOVE		13
3622	Edgewood ES	Office 147	1	2L4' T8 32wEL-8'	task strip	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,000	1,400	INCLUDED ABOVE		36
3623	Edgewood ES	Library Main	1	4L4' T8 32wEL	trof acr	14	14	112	1.6	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	14	53	0.7	1,800	1,260	OCC SENSOR CEILING	1	337
3624	Edgewood ES	Library Main	1	2L2' T8 17wEL	trof acr	1	1	33	0.0	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	19	0.0	1,800	1,260	INCLUDED ABOVE		9
3625	Edgewood ES	Library Main	1	4L4' T8 32wEL	trof acr	12	12	112	1.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	12	53	0.6	1,800	1,260	OCC SENSOR CEILING	1	289
3629	Edgewood ES	Office Lib	1	4L4' T8 32wEL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	36
3630	Edgewood ES	Office Lib	1	1L4' T12 34w EE/EEMAG	cove	6	6	40	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' tw	3	36	0.1	2,000	1,400	INCLUDED ABOVE		55
3631	Edgewood ES	Office Lib	1	1L4' T12 34w EE/EEMAG	cove	2	2	40	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	2,000	1,400	INCLUDED ABOVE		18
3632	Edgewood ES	Office Lib	1	1L3' T12 25w EE/EEMAG	cove	3	3	38	0.1	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	3	13	0.0	2,000	1,400	INCLUDED ABOVE		19
3634	Edgewood ES	Office Lib	1	1L4' T12 34w EE/EEMAG	cove	4	4	40	0.2	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	18	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 2GANG	1	36
3635	Edgewood ES	Office Lib	1	1L3' T12 25w EE/EEMAG	cove	2	2	38	0.1	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	2,000	1,400	INCLUDED ABOVE		13
3636	Edgewood ES	Office Lib	1	1L4' T8 32wEL	task strip	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	2,000	1,400	INCLUDED ABOVE		18
3637	Edgewood ES	Office Lib	1	1L3' T8 25wEL	task strip	3	3	24	0.1	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	3	13	0.0	2,000	1,400	INCLUDED ABOVE		19
3640	Edgewood ES	Office Coach	1	2L4' T8 32wEL	wrap	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	36
3641	Edgewood ES	Office Open Main	1	3L4' T8 32wEL	trof parabolic	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	2,400	1,680	OCC SENSOR WALLSWITCH 1GANG	1	66
3642	Edgewood ES	Office Open Main	1	3L4' T8 32wEL	trof parabolic	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	2,400	1,680	OCC SENSOR CEILING	1	66
3643	Edgewood ES	Office Open Main	1	60W INCANDESCENT	can rec 8"	2	2	60	0.1	8 WATT LED SI	screw in LED par20	2	8	0.0	2,400	1,680	INCLUDED ABOVE		10
3645	Edgewood ES	Office Principal	1	3L4' T8 32wEL	trof parabolic	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 2GANG	1	55
3646	Edgewood ES	Office Principal	1	1L4' T8 32wEL	cove	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	2,000	1,400	INCLUDED ABOVE		18
3647	Edgewood ES	Conference Principal	1	3L4' T8 32wEL	trof parabolic	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 2GANG	1	55
3648	Edgewood ES	Conference Principal	1	1L4' T8 32wEL	cove	2	2	30	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	18	0.0	2,000	1,400	INCLUDED ABOVE		18
3649	Edgewood ES	Office Small Copier	1	4L4' T8 32wEL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 2GANG	1	36
3650	Edgewood ES	Office Small Copier	1	1L4' T12 34w EE/EEMAG	task strip	1	1	40	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	2,000	1,400	INCLUDED ABOVE		9
3651	Edgewood ES	Office Small Copier	1	1L3' T12 25w EE/EEMAG	task strip	3	3	38	0.1	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	3	13	0.0	2,000	1,400	INCLUDED ABOVE		19
3652	Edgewood ES	Office Copier	1	4L4' T8 32wEL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 2GANG	1	36
3653	Edgewood ES	Office Copier	1	1L4' T12 34w EE/EEMAG	task strip	6	6	40	0.2	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	18	0.1	2,000	1,400	INCLUDED ABOVE		55
3654	Edgewood ES	Office Copier	1	1L3' T12 25w EE/EEMAG	task strip	2	2	38	0.1	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	2	13	0.0	2,000	1,400	INCLUDED ABOVE		13
3655	Edgewood ES	Office Copier	1	1L4' T12 34w EE/EEMAG	cove	6	6	40	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' tw	3	36	0.1	2,000	1,400	INCLUDED ABOVE		55
3656	Edgewood ES	Office Copier	1	1L4' T12 34w EE/EEMAG	cove	3	3	40	0.1	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	18	0.1	2,000	1,400	INCLUDED ABOVE		27
3657	Edgewood ES	Lounge Staff	1	60W INCANDESCENT	can rec 8"	8	8	60	0.5	8 WATT LED SI	screw in LED par20	8	8	0.1	1,800	1,260	OCC SENSOR CEILING	1	31
3658	Edgewood ES	Lounge Staff	1	1L3' T12 25w EE/EEMAG	task strip	5	5	38	0.2	1L3' LED/ELEE LO/RLRB	rlrb LED 3'	5	13	0.1	1,800	1,260	INCLUDED ABOVE		29
3659	Edgewood ES	Lounge Staff	1	1L4' T12 34w EE/EEMAG	cove	6	6	40	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' tw	3	36	0.1	1,800	1,260	INCLUDED ABOVE		49
3660	Edgewood ES	Lounge Staff	1	1L4' T12 34w EE/EEMAG	cove	1	1	40	0.0	1L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	18	0.0	1,800	1,260	INCLUDED ABOVE		8
3663	Edgewood ES	Bath Staff	1	60W INCANDESCENT	can rec 8"	9	9	60	0.5	8 WATT LED SI	screw in LED par20	9	8	0.1	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	58
3664	Edgewood ES	Bath Staff	1	60W INCANDESCENT	can rec 8"	4	4	60	0.2	8 WATT LED SI	screw in LED par20	4	8	0.0	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	26
3674	Edgewood ES	Bath Boys	1	4L4' T8 32wEL-8'	vanity	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	3,000	2,100	OCC SENSOR CEILING	1	55
3675	Edgewood ES	Bath Boys	1	2L4' T8 32wEL	vanity	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	3,000	2,100	INCLUDED ABOVE		82
3676	Edgewood ES	Bath Boys	1	2L3' T8 25wEL	vanity	1	1	47	0.0	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	25	0.0	3,000	2,100	INCLUDED ABOVE		19
3677	Edgewood ES	Bath Girls	1	4L4' T8 32wEL-8'	vanity	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	3,000	2,100	OCC SENSOR CEILING	1	55
3678	Edgewood ES	Bath Girls	1	2L4' T8 32wEL	vanity	3	3	60	0.2	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	36	0.1	3,000	2,100	INCLUDED ABOVE		82
3679	Edgewood ES	Bath Girls	1	2L3' T8 25wEL	vanity	1	1	47	0.0	2L3' LED/ELEE LO/RLRB	rlrb LED 3'	1	25	0.0	3,000	2,100	INCLUDED ABOVE		19
3680	Edgewood ES	Classroom 1	1	4L4' T8 32wEL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
3682	Edgewood ES	Classroom 2	1	4L4' T8 32wEL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
3684	Edgewood ES	Classroom 3	1	4L4' T8 32wEL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
3686	Edgewood ES	Classroom 4	1	4L4' T8 32wEL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
3688	Edgewood ES	Classroom 5	1	4L4' T8 32wEL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
3690	Edgewood ES	Classroom 6	1	4L4' T8 32wEL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
3692	Edgewood ES	Classroom 7	1	4L4' T8 32wEL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
3694	Edgewood ES	Classroom 8	1	4L4' T8 32wEL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
3696	Edgewood ES	Classroom 9	1	4L4' T8 32wEL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
3698	Edgewood ES	Classroom 10	1	4L4' T8 32wEL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
3700	Edgewood ES	Classroom 11	1	4L4' T8 32wEL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
3702	Edgewood ES	Classroom 12	1	4L4' T8 32wEL-8'	wrap	9	9	112	1.0	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	9	71	0.6	2,200	1,540	OCC SENSOR CEILING	1	360
3706	Ivy Drive ES	Mechanical Boiler	1	4L4' T8 32wEL-8'	industrial	6	6	112	0.7	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	71	0.4	500	350	TIMER WALLSWITCH 1GANG	1	64
3710	Ivy Drive ES	Storage Dry Good	1	4L4' T8 32wEL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	1,000	700	OCC SENSOR WALLSWITCH 1GANG	1	21
3712	Ivy Drive ES	Hall Slop Sink	1	4L2' T8 17wEL	trof acr	2	2	62	0.1	2L2' LED HO/ELEE HI/RLRB	rlrb LEDho 2' trof rfl kit	2	29	0.1	3,000	2,100	OCC SENSOR WALLSWITCH 1GANG	1	53
3713	Ivy Drive ES	Office Custodian	1	4L4' T8 32wEL-8'	wrap	4	4	112	0.4	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	71	0.3	2,000	1,400	OCC SENSOR CEIL DT 1GANG	1	171
3714	Ivy Drive ES	Office Custodian	1	2L4' T8 32wEL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,000	1,400	INCLUDED ABOVE		21
3792	Ivy Drive ES	Storage A	1	4L4' T8 32wEL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	500	350	OCC SENSOR WALLSWITCH 1GANG	1	11
3862	Ivy Drive ES	Office Pe	1	3L4' T8 32wEL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	2,000	1,400	OCC SENSOR WALLSWITCH 1GANG	1	64
3867	City Hall & Annex	Mechanical Pent	P	100W INCANDESCENT	keyless	11	11	100	1.1	15 WATT LED SI	screw in LED Alamp	11	16	0.2	500	350	TIMER WALLSWITCH 1GANG	1	26
3898	City Hall & Annex	Office Open Probate	3	2L2' T8 17wEL	trof acr	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	2,860	2,002	OCC SENSOR CEILING	1	32
3899	City Hall & Annex	Office Open Probate	3	4L4' T8 32wEL	trof acr	8	8	112	0.9	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	8	53	0.4	2,860	2,002	INCLUDED ABOVE		360
3904	City Hall & Annex	Office Probate	3	2L2' T8 17wEL	trof acr	8	8	33	0.3	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	8	19	0.2	2,860	2,002	OCC SENSOR CEILING	1	130
3905	City Hall & Annex	Office Probate	3	4L4' T8 32wEL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	2,860	2,002	INCLUDED ABOVE		90
3906	City Hall & Annex	Conference Probate	3	2L2' T8 17wEL	trof acr	3	3	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	3	19	0.1	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	49
3909	City Hall & Annex	Office Comptroller	3	4L4' T8 32wEL	trof acr	6	6	112	0.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	6	53	0.3	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	270
3910	City Hall & Annex	Office Comptroller	3	2L2' T8 17wEL	trof acr	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	65
3913	City Hall & Annex	Office Cousel	3	4L4' T8 32wEL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	90
3914	City Hall & Annex	Office Cousel	3	2L2' T8 17wEL	trof acr	1	1	33	0.0	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	19	0.0	2,860	2,002	INCLUDED ABOVE		16

Line	Building Name	Location	Fl	Pre Fixture Description	Pre Fixture Style	Pre Qty	Pre Qty Inc	Pre Watts	Pre kW	Post Fixture Description	Post Fixture Style	Post Qty	Post Watts	Post kW	Annual Hours	Hours With Controls	*Control Description*	*Control Qty*	Control kWH Saved
3922	City Hall & Annex	Office Open Treasurer	3	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	2,860	2,002	OCC SENSOR CEILING	1	180
3923	City Hall & Annex	Office Open Treasurer	3	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	2,860	2,002	INCLUDED ABOVE		32
3926	City Hall & Annex	Office Open Mayor	3	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	2,860	2,002	OCC SENSOR CEILING	1	180
3927	City Hall & Annex	Office Open Mayor	3	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	2,860	2,002	INCLUDED ABOVE		32
3934	City Hall & Annex	Office Mayor	3	2L2' T8 17w/EL	trof acr	8	8	33	0.3	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	8	19	0.2	2,860	2,002	OCC SENSOR CEILING	1	130
3935	City Hall & Annex	Office Mayor	3	13W CF SCREWIN	can rec	10		15	0.2	NO RETRO	no change		16	0.2	2,860	2,002	INCLUDED ABOVE		129
3941	City Hall & Annex	Office Open Development	2	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	6	53	0.3	2,860	2,002	OCC SENSOR CEILING	1	270
3942	City Hall & Annex	Office Open Development	2	2L2' T8 17w/EL	trof acr	5	5	33	0.2	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	5	19	0.1	2,860	2,002	INCLUDED ABOVE		81
3962	City Hall & Annex	Office Open Parks	2	4L4' T8 32w/EL	trof acr	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	2,860	2,002	OCC SENSOR CEILING	1	405
3963	City Hall & Annex	Office Open Parks	2	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	2,860	2,002	INCLUDED ABOVE		65
3966	City Hall & Annex	Office Parks	2	4L4' T8 32w/EL	trof acr	5	5	112	0.6	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	5	53	0.3	2,860	2,002	OCC SENSOR CEILING	1	225
3967	City Hall & Annex	Office Parks	2	2L2' T8 17w/EL	trof acr	1	1	33	0.0	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	1	19	0.0	2,860	2,002	INCLUDED ABOVE		16
3968	City Hall & Annex	Office Open Renaissance	2	3L4' T8 32w/EL	trof acr	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	184
3976	City Hall & Annex	Conference Purchasing	2	2L2' T8 17w/EL	trof acr	6	6	33	0.2	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	6	19	0.1	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	97
3987	City Hall & Annex	Bath Building	2	3L4' T8 32w/EL	trof acr	1	1	88	0.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	54	0.1	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	46
3993	City Hall & Annex	Office Open Personnel	2	4L4' T8 32w/EL	trof acr	11	11	112	1.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	11	53	0.6	2,860	2,002	OCC SENSOR CEILING	2	495
3994	City Hall & Annex	Office Open Personnel	2	2L2' T8 17w/EL	trof acr	6	6	33	0.2	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	6	19	0.1	2,860	2,002	INCLUDED ABOVE		97
4005	City Hall & Annex	Office Open Clerk	1	3L4' T8 32w/EL	trof acr	13	13	88	1.1	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	13	54	0.7	2,860	2,002	OCC SENSOR CEILING	2	597
4006	City Hall & Annex	Office Open Clerk	1	2L2' T8 17w/EL	trof acr	5	5	33	0.2	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	5	19	0.1	2,860	2,002	INCLUDED ABOVE		81
4012	City Hall & Annex	Office Clerk	1	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	65
4013	City Hall & Annex	Office Clerk	1	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	65
4014	City Hall & Annex	Office Open Tax	1	4L4' T8 32w/EL	trof acr	16	16	112	1.8	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	16	53	0.8	2,860	2,002	OCC SENSOR CEILING	2	721
4015	City Hall & Annex	Office Open Tax	1	2L2' T8 17w/EL	trof acr	2	2	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	2	19	0.0	2,860	2,002	INCLUDED ABOVE		32
4017	City Hall & Annex	Office Tax	1	2L2' T8 17w/EL	trof acr	4	4	33	0.1	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	4	19	0.1	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	65
4020	City Hall & Annex	Office Open Assessor	1	4L4' T8 32w/EL	trof acr	15	15	112	1.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	15	53	0.8	2,860	2,002	OCC SENSOR CEILING	2	676
4021	City Hall & Annex	Office Open Assessor	1	2L2' T8 17w/EL	trof acr	5	5	33	0.2	2L2' LED HO/ELEE LO/RLRB	rlrb LEDho 2'	5	19	0.1	2,860	2,002	INCLUDED ABOVE		81
4026	City Hall & Annex	Conference Assessor	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	90
4028	City Hall & Annex	Bath Men	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	2,860	2,002	OCC SENSOR CEIL DT 1GANG	1	61
4029	City Hall & Annex	Bath Men	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,860	2,002	INCLUDED ABOVE		31
4030	City Hall & Annex	Bath Men	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,860	2,002	INCLUDED ABOVE		31
4033	City Hall & Annex	Bath Women	1	4L4' T8 32w/EL-8'	wrap	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	2,860	2,002	OCC SENSOR CEIL DT 1GANG	1	61
4034	City Hall & Annex	Bath Women	1	2L4' T8 32w/EL	wrap	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,860	2,002	INCLUDED ABOVE		31
4035	City Hall & Annex	Bath Women	1	2L4' T8 32w/EL	vanity	1	1	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	36	0.0	2,860	2,002	INCLUDED ABOVE		31
4037	City Hall & Annex	Office Open Registrar	1	4L4' T8 32w/EL	trof acr	10	10	112	1.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	10	53	0.5	2,860	2,002	OCC SENSOR CEILING	1	450
4048	City Hall & Annex	Office Army	1	4L4' T8 32w/EL	trof acr	2	2	112	0.2	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	2	53	0.1	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	90
4049	City Hall & Annex	Office Army	1	4L4' T8 32w/EL	trof acr	4	4	112	0.4	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	4	53	0.2	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	180
4051	City Hall & Annex	Hall Executive	1	2x13W CF HARDWIRED	can rec	4		30	0.1	NO RETRO	no change		32	0.1	3,900	2,730	OCC SENSOR WALLSWITCH 1GANG	1	140
4052	City Hall & Annex	Conference Mtg Rm	1	4L4' T8 32w/EL	trof acr	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	2,860	2,002	OCC SENSOR CEILING	1	405
4053	City Hall & Annex	Conference Mtg Rm	1	2x13W CF HARDWIRED	can rec	2		30	0.1	NO RETRO	no change		32	0.1	2,860	2,002	INCLUDED ABOVE		51
4074	City Hall & Annex	Office Open Landuse	G	4L4' T8 32w/EL	trof acr	8	8	112	0.9	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	8	53	0.4	2,860	2,002	OCC SENSOR CEILING	1	360
4093	City Hall & Annex	Storage Custodian	G	2L4' T8 32w/EL	industrial	8	8	60	0.5	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	8	36	0.3	2,860	2,002	TIMER WALLSWITCH 1GANG	1	245
4120	Police Court & Parking Garage	Office Open Court3	2	4L4' T8 32w/EL	trof acr	12	12	112	1.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	12	53	0.6	2,860	2,002	OCC SENSOR CEILING	1	541
4140	Police Court & Parking Garage	Office Judge	2	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	6	53	0.3	2,860	2,002	OCC SENSOR CEILING	1	270
4166	Police Court & Parking Garage	Office Open 204	2	4L4' T8 32w/EL	trof acr	9	9	112	1.0	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	9	53	0.5	2,860	2,002	OCC SENSOR CEILING	1	405
4180	Police Court & Parking Garage	Office Open Jury	2	4L4' T8 32w/EL	trof acr	15	15	112	1.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	15	53	0.8	2,860	2,002	OCC SENSOR CEILING	1	676
4181	Police Court & Parking Garage	Office Open Jury	2	2L4' T8 32w/EL	trof acr 1' wide	2	2	60	0.1	2L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	36	0.1	2,860	2,002	INCLUDED ABOVE		61
4186	Police Court & Parking Garage	Storage Files	2	4L4' T8 32w/EL	trof acr	14	14	112	1.6	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	14	53	0.7	500	350	TIMER WALLSWITCH 1GANG	1	110
4190	Police Court & Parking Garage	Classroom Training	2	4L4' T8 32w/EL	trof acr	28	28	112	3.1	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	28	53	1.5	2,860	2,002	OCC SENSOR CEILING	2	1,261
4195	Police Court & Parking Garage	Office Narc	2	4L4' T8 32w/EL	trof acr	6	6	112	0.7	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	6	53	0.3	2,860	2,002	OCC SENSOR CEILING	1	270
4211	Police Court & Parking Garage	Office Open State Atty	2	4L4' T8 32w/EL	trof acr	12	12	112	1.3	2L4' LED HO/ELEE HI/RLRB	rlrb LEDho 4' trof rfl kit	12	53	0.6	2,860	2,002	OCC SENSOR CEILING	2	541
4220	Police Court & Parking Garage	Bath Police Lobby	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	2,860	2,002	OCC SENSOR CEIL DT 1GANG	1	92
4221	Police Court & Parking Garage	Bath Police Lobby	1	3L4' T8 32w/EL	trof acr	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	2,860	2,002	OCC SENSOR CEIL DT 1GANG	1	92
4223	Police Court & Parking Garage	Office Reception	1	3L4' T8 32w/EL	trof para dbl swtch	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	2	54	0.1	2,860	2,002	OCC SENSOR WALLSWITCH 2GANG	1	92
4227	Police Court & Parking Garage	Office Open Detective	1	3L4' T8 32w/EL	trof para dbl swtch	16	16	88	1.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	16	54	0.9	2,860	2,002	OCC SENSOR CEILING	1	735
4229	Police Court & Parking Garage	Office Open Detective	1	3L4' T8 32w/EL	trof para dbl swtch	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	2	54	0.1	2,860	2,002	OCC SENSOR CEILING	1	92
4230	Police Court & Parking Garage	Lounge Detective	1	2L2' F40 BIAX/EL	trof parabolic	2	2	72	0.1	36 WATT LED/KIT	trof kit LED	2	38	0.1	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	65
4232	Police Court & Parking Garage	Office Detective	1	3L4' T8 32w/EL	trof para dbl swtch	3	3	88	0.3	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	3	54	0.2	2,860	2,002	OCC SENSOR CEILING	1	138
4238	Police Court & Parking Garage	Office Poly	1	3L4' T8 32w/EL	trof parabolic	3	3	88	0.3	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	3	54	0.2	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	138
4239	Police Court & Parking Garage	Office Open Evidence	1	3L4' T8 32w/EL	trof parabolic	6	6	88	0.5	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	54	0.3	2,860	2,002	OCC SENSOR CEILING	1	276
4244	Police Court & Parking Garage	Office Open Squad	1	3L4' T8 32w/EL	trof parabolic	6	6	88	0.5	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	54	0.3	2,860	2,002	OCC SENSOR CEILING	1	276
4245	Police Court & Parking Garage	Office Sergeant	1	3L4' T8 32w/EL	trof parabolic	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	4	54	0.2	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	184
4247	Police Court & Parking Garage	Lounge Staff	1	3L4' T8 32w/EL	trof para dbl swtch	6	6	88	0.5	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	6	54	0.3	2,860	2,002	OCC SENSOR CEILING	1	276
4250	Police Court & Parking Garage	Office Ert	1	3L4' T8 32w/EL	trof para dbl swtch	6	6	88	0.5	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	6	54	0.3	2,860	2,002	OCC SENSOR CEILING	1	276
4252	Police Court & Parking Garage	Locker Women	1	3L4' T8 32w/EL	trof parabolic	7	7	88	0.6	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	7	54	0.4	2,860	2,002	OCC SENSOR CEIL DT 1GANG	1	322
4253	Police Court & Parking Garage	Locker Women	1	4L4' T8 32w/EL-8'	wrap narrow	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	2,860	2,002	OCC SENSOR CEIL DT 1GANG	1	61
4270	Police Court & Parking Garage	Locker Mens	1	3L4' T8 32w/EL	trof parabolic	22	22	88	1.9	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	22	54	1.2	2,860	2,002	OCC SENSOR CEIL DT 1GANG	3	1,011
4271	Police Court & Parking Garage	Locker Mens	1	4L4' T8 32w/EL-8'	wrap narrow	1	1	112	0.1	4L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	1	71	0.1	2,860	2,002	OCC SENSOR CEIL DT 1GANG	1	61
4278	Police Court & Parking Garage	Office Comm	1	3L4' T8 32w/EL	trof para dbl swtch	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	4	54	0.2	2,860	2,002	OCC SENSOR CEILING	1	184
4283	Police Court & Parking Garage	Office Id Lab	1	3L4' T8 32w/EL	trof parabolic	5	5	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	5	54	0.3	2,860	2,002	OCC SENSOR CEILING	1	230
4284	Police Court & Parking Garage	Office Id Lab	1	2L4' T8 32w U/EL	trof acr	2	2	60	0.1	2L4' LED HO/ELEE/RLRB	rlrb LEDho Ubent	2	38	0.1	2,860	2,002	INCLUDED ABOVE		65
4290	Police Court & Parking Garage	Office Open Traffic	1	3L4' T8 32w/EL	trof parabolic	6	6	88	0.5	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	6	54	0.3	2,860	2,002	OCC SENSOR CEILING	1	276
4291	Police Court & Parking Garage	Office Traffic	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	92
4293	Police Court & Parking Garage	Office Open Admin	1	2L2' F40 BIAX/EL	trof parabolic	10	10	72	0.7	36 WATT LED/KIT	trof kit LED	10	38	0.4	2,860	2,002	OCC SENSOR CEILING	1	324
4297	Police Court & Parking Garage	Office Admin Cmdr	1	3L4' T8 32w/EL	trof para dbl swtch	3	3	88	0.3	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	3	54	0.2	2,860	2,002	OCC SENSOR CEILING	1	138
4298	Police Court & Parking Garage	Conference Z	1	3L4' T8 32w/EL	trof para dbl swtch	4	4	88	0.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	4	54	0.2	2,860	2,002	OCC SENSOR CEILING	1	184
4301	Police Court & Parking Garage	Office Chief	1	3L4' T8 32w/EL	trof para dbl swtch	6	6	88	0.5	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	6	54	0.3	2,860	2,002	OCC SENSOR CEILING	1	276
4304	Police Court & Parking Garage	Office Community	1	3L4' T8 32w/EL	trof parabolic	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4'	2	54	0.1	2,860	2,002	OCC SENSOR WALLSWITCH 1GANG	1	92
4306	Police Court & Parking Garage	Office Open Records	1	3L4' T8 32w/EL	trof para dbl swtch	16	16	88	1.4	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	16	54	0.9	2,860	2,002	OCC SENSOR CEILING	2	735
4308	Police Court & Parking Garage	Storage G	1	3L4' T8 32w/EL	trof para dbl swtch	6	6	88	0.5	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	6	54	0.3	2,860	2,002	OCC SENSOR CEILING	1	276
4310	Police Court & Parking Garage	Office Records Lt	1	3L4' T8 32w/EL	trof para dbl swtch	2	2	88	0.2	3L4' LED HO/ELEE LO/RLRB	rlrb LEDho 4' dbl switched	2	54	0.1	2,860	2,002	OCC SENSOR WALLSWITCH 2GANG	1	92
Totals						**5,321**	**5,245**					**5,236**						**1,399**	**154,041**

Appendix for ESM 3: Lighting Controls

II. Manufacturer Specification Sheets

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

Catalog Number	
Notes	Type

WSD FAMILY

WALL SWITCH SENSOR w/ CONVERTIBLE NEUTRAL / NO NEUTRAL WIRING, PASSIVE INFRARED (PIR) or DUAL TECH (PDT)

PRODUCT OVERVIEW

The **WSD** is a stylish, easy to install, and simple to use Wall Switch Decorator style Passive Infrared (PIR) sensor. It is ideal for private offices, copy rooms, closets, or any small enclosed space without obstructions. A user programmable time delay ensures that once the room is vacated the sensor will time out and turn off the lights. Additionally, the WSD sensor has several On Modes and Switch Modes that can be programmed using the front push-button. For rooms with obstructions, the Dual Technology WSD PDT Series sensor is recommended. Additionally, all **WSD** Family sensors have a patent-pending wiring method that enables them to function either with or without a neutral connection. **WSD** units come pre-configured for wiring without a neutral; however, if connection to neutral is required by code, contractors can convert the unit in seconds (see page 3).

All **WSD** Family sensors utilize 100% digital Passive Infrared (PIR) detection. Dual Technology (**PDT** option) versions add Microphonics detection and are recommended for offices and rooms with obstructions. Additional versions include units with dual relays - perfect for bi-level applications, or bathrooms with a light and a fan.

SENSOR OPERATION — WSD sensors detect changes in the Passive Infrared (PIR) energy given off by occupants as they move within the field-of-view. In an Auto-On sensor, once occupancy is detected, an internal relay switches on the connected lighting load. In a Vacancy (Manual On) sensor, the unit's push button must first be pressed to initiate the lights on. In a dual relay sensor, once occupancy is detected the unit will automatically close Pole 1's relay while still requiring Pole 2's push-button be pressed in order to close Pole 2's relay. All modes are user adjustable (see On Modes section).

After the lights are turned on, an internal timer keeps them on during brief periods of inactivity. Once the time delay has expired, lights are turned off automatically. The default time delay is 10 minutes - chosen in order to maximize energy savings while preventing false-offs. This timer is programmable from 30 seconds to 30 minutes, and is reset every time occupancy is re-detected. Patented LampMaximzer technology is also present in these sensors, providing an additional minimum on time (disabled by default) to be utilized if desired.

WSD sensors with Passive Dual Technology (**PDT** option) first see motion using Passive Infrared (PIR) and then engage Microphonics to listen for sounds that also indicate continued occupancy. This patented technology dynamically adapts a sensor to its environment by filtering out constant background noise and detecting only noises typical of human activity.



WSD
WSD PDT



WSD 2P
WSD PDT 2P

KEY OPTIONS

VACANCY OPERATION (SA and VA)
Increased energy savings and required by many codes
- The unit's push button must first be pressed to initiate the lights on
- SA version can be reprogrammed to Auto-On operation
- VA version operates in Manual On mode only

DUAL RELAY (2P, 2P-SA, and 2P-VA)
Ideal for bi-level switched rooms or restroom with light & fan
- Includes two isolated relays, Pole 1 defaulted to Auto-On, Pole 2 to Vacancy
- Enables separate time delay per pole - programmed via each pole's push-button
- UL listed to switch different loads per pole - e.g. 277 VAC lights on Pole 1 and 120 VAC fan on Pole 2
- 2P-SA and 2P-VA versions are factory set with both poles set to manual on

LOW TEMPERATURE / HIGH HUMIDITY (LT)
Required for cold or humid areas
- Device electronics are coated for corrosion resistance
- Operates down to -40º F/C (-4º F / 20º C for PDT)

FEATURES

- 100% digital PIR detection - excellent RF immunity
- Small motion detection to 20 ft
- Dual Technology (PDT) utilizes PIR / Microphonics detection (patented)
- 100% passive detection, no potential for interference with other building systems
- Self-grounding mounting strap
- Green LED status indicator
- Device accommodates powering over ground or neutral connection (patent pending)
- Ultra low current leakage (<0.5 mA) when connected via ground
- Fully meets NEC 2011 Section 404.2C neutral requirements - no current leakage to ground when connected to neutral
- Line power and load wires are interchangeable - impossible to wire backwards (patented)
- Compatible w/ LEDs, Electronic & Magnetic Ballasts, CFLs, & Incandescents
- Push-button programmable without removing cover plate - adjustable time delays & operating modes
- Photocell standard (disabled by default) - prevents lights from initially turning on if sufficient daylight is present, but does not turn lights off. Photocell not available in Vacancy only versions.
- Integrated LampMaximizer minimum on time (patented) provides increased fluorescent lamp life - disabled by default
- Non-volatile settings memory
- Available in 5 colors (White, Ivory, Gray, Light Almond, and Black)
- Includes matching wall plate

 ©2013 Acuity Brands Lighting, Inc. All rights reserved 04/22/13

OPERATIONAL SETTINGS

NOTE: (*) Indicates factory default (unless otherwise marked)

2 = Occupancy Time Delay

Duration sensor keeps lights on after last occupancy detection.

1 30 sec **4** 7.5 min **7** 15.0 min **10** 30.0 min
2 2.5 min **5** 10.0 min* **8** 17.5 min
3 5.0 min **6** 12.5 min **9** 20.0 min

For additional time settings, contact technical support at 1.800.PASSIVE

3 = On Mode

Automatic On turns lights on when occupancy is detected. Manual On requires a button press to turn the lights on. Reduced Turn-On directs the sensor to initially only detect large motions, such as a person entering a room. Weaker signals, such as reflections from glass, are ignored. Once lights are on, the sensor returns to maximum sensitivity.

1 Automatic On **2** Manual On **3** Reduced Turn-On

Settings 1 & 3 not available on -VA (Vacancy only) sensors.

Notes on Default Settings
- *WSD (PDT) Series default: Automatic On*
- *Default for units with -SA, -VA, or -NL option: Manual On*
- *WSD (PDT) 2P Series default: Pole 1 Auto On, Pole 2 Manual*
- *Default for 2P units with -2SA option: Both poles Manual On*

4 = Switch Modes

These modes dictate switch functionality. Pressing the button in Override Off mode (setting 1) turns off and keeps lights off until pressed again. Disabling the Switch (setting 2) prevents the button from turning the lights on. (continued next column)

Predictive Mode (setting 3) determines if a user has left the room after the lights are switched off. It does this by monitoring the space for a period after the button is pressed (Predictive Grace Time), following a delay to allow exiting the room (Predictive Exit Time). If occupancy is detected during this period the device will disable Auto-On & hold the lights off until manually switched. If no occupancy is detected the sensor instantly reverts to Auto-On mode.

If Predictive Mode with Expiration (setting 4) is enabled, once the sensor has disabled Auto-On it will continue to monitor the space. When no occupancy is detected for a duration equal to the occupancy time delay, the sensor will revert to Auto-On mode.

1 Override Off **
2 Switch Disable
3 Predictive Mode
4 Predictive Mode with Expiration*

* *Default for WSD (PDT) units & Pole 1 of WSD (PDT) 2P units*
** *Default for units with -SA or -VA options, Pole 2 of WSD (PDT) 2P units, and both poles of 2P units with -2SA options*

5 = Photocell Set-Point

The ambient light level at which the sensor prevents the lights from initially turning on. Once on, the lights will remain on until the occupancy time delay expires and turns them off.

1 Disabled* **3** 0.5 fc **5** 2 fc **7** 8 fc **9** 32 fc
2 Auto Set-pt. **4** 1 fc **6** 4 fc **8** 16 fc **10** 64 fc

Note: Sensor will be changed to Automatic On mode if photocell is enabled. LED flashes while Auto-Setpoint mode is running. Photocell not present in -VA versions.

7 = LED Operation

Indicates behavior of device's LED.

1 Occupancy Indication* **3** Disabled

9 = Restore Factory Defaults

Returns all functions to original settings.

1 Maintain Current* **2** Restore Defaults

10 = Minimum On Time

Required initial time for lamps to be on after each switch on, regardless of occupancy status. Once met, lights resume following occupancy time delay.

1 0 min (disabled)* **3** 30 min **5** 60 min
2 15 min **4** 45 min

11 = Manual On Grace Period

Time period after lights automatically turn off that they can be reactivated by motion. (Manual On (Semi-Auto) mode only)

1 0 sec **2** Unused **3** 15 sec*

12 = Dual Technology (Microphonics™)

Relative responsiveness of Microphonics detection. Included in -PDT versions only.

1 Normal* **3** Medium **5** Phase Off
2 Off **4** Low (15-10-5 min)

13 = Microphone Grace Period

Time period after lights are automatically turned off that they can be voice reactivated. Included in -PDT versions only.

1 0 sec **3** 20 sec **5** 40 sec **7** 60 sec
2 10 sec* **4** 30 sec **6** 50 sec

15 = Predictive Exit Time

Time period after manually switching lights off for occupant to leave the space.

1 5 sec **3** 7 sec **5** 9 sec **7** 15 sec **9** 30 sec
2 6 sec **4** 8 sec **6** 10 sec* **8** 20 sec

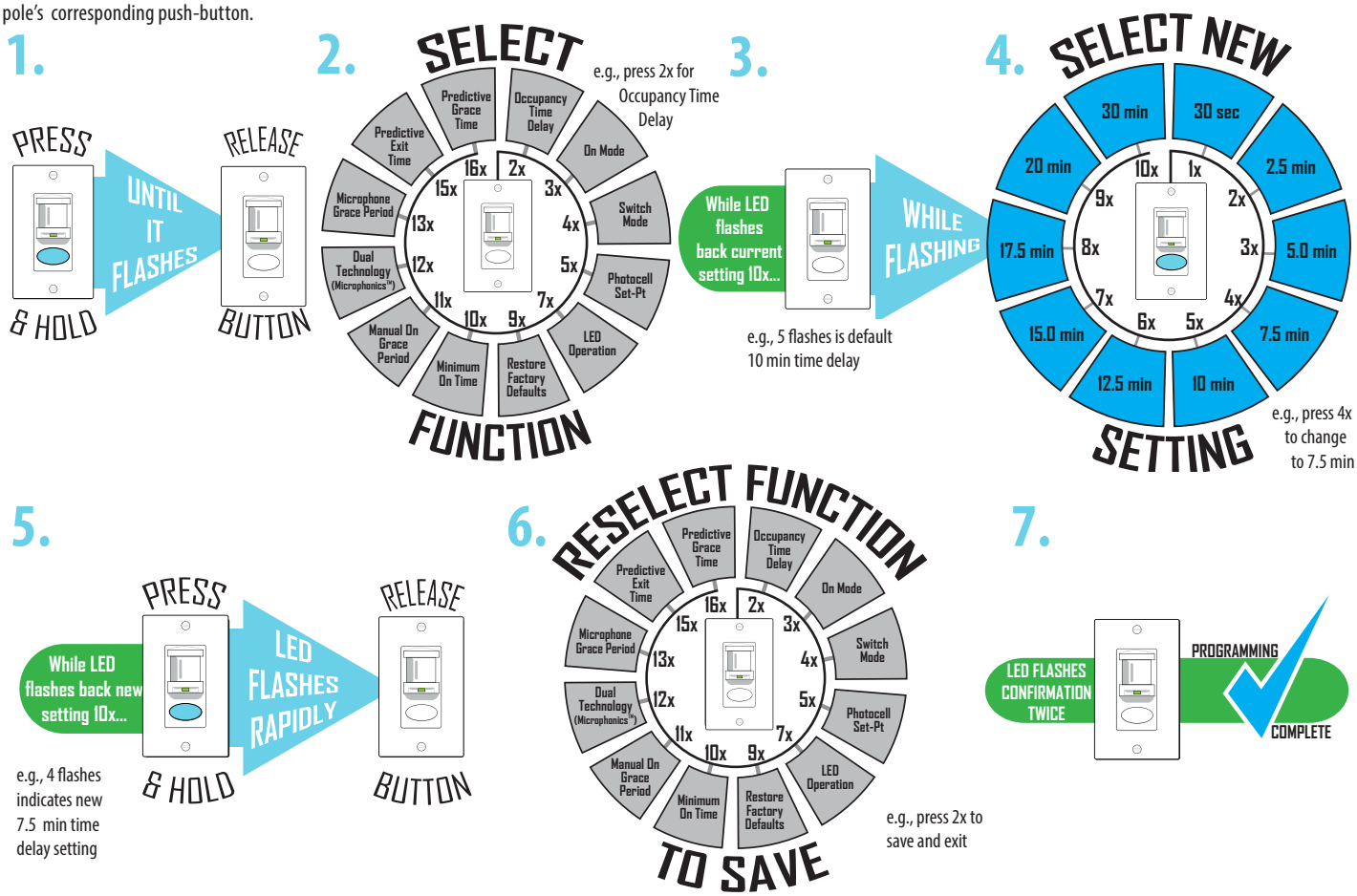
16 = Predictive Grace Time

Time period after Predictive Exit Time that sensor rescans the room for remaining occupants.

1 0 sec **3** 10 sec **5** 30 sec* **7** 50 sec
2 5 sec **4** 20 sec **6** 40 sec **8** 60 sec

PROGRAMMING INSTRUCTIONS

Operational settings can be changed via the push-button sequence outlined below (note the example used is for changing occupancy time delay). Programming for 2P units done with each pole's corresponding push-button.

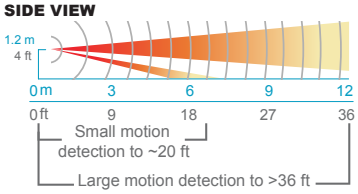


 ©2013 Acuity Brands Lighting, Inc. All rights reserved 06/07/13

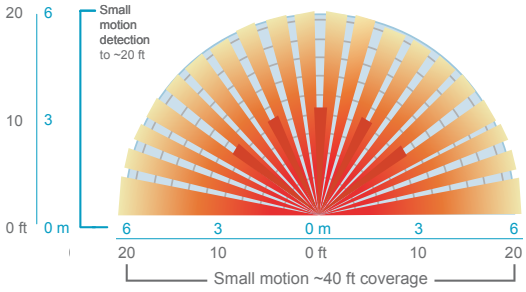
COVERAGE PATTERN

- Small motion (e.g., hand movements) detection up to 20 ft (6.10 m), ~625 ft²
- Large motion (e.g., walking) detection greater than 36 ft (10.97 m), ~2025 ft²
- Wall-to-Wall coverage
- Passive Dual Technology (Microphonics) provides overlapping detection of human activity over the complete PIR coverage area. Advanced filtering is utilized to prevent non-occupant noises from keeping the lights on.

SIDE VIEW



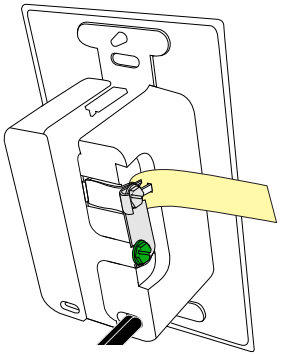
TOP VIEW



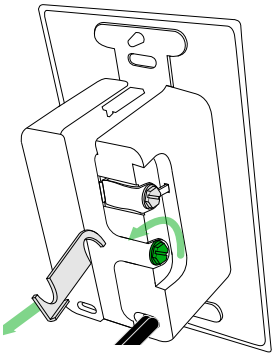
CONVERSION FROM GROUND ONLY (NO NEUTRAL) TO NEUTRAL WIRING

This product is pre-configured for wiring without a neutral; however, if connection to neutral is required by code, contractors can quickly and easily convert the unit in seconds.

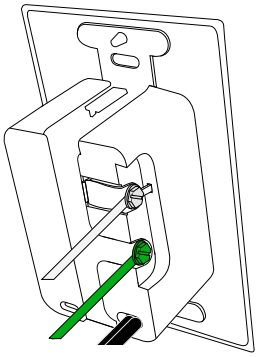
Step 1: Remove Yellow Label



Step 2: Loosen Screws and Remove Metal Link

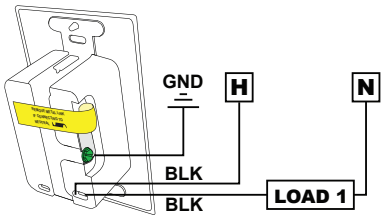


Step 3: Connect Neutral to Silver Screw and Ground to Green Screw

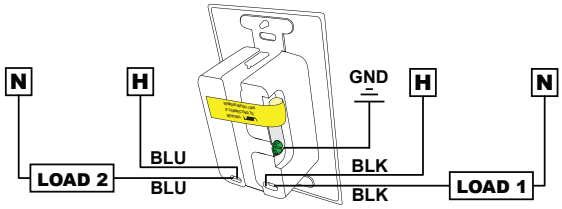


WIRING TO GROUND (NO NEUTRAL)

SINGLE RELAY



DUAL RELAY



WIRE COLOR KEY

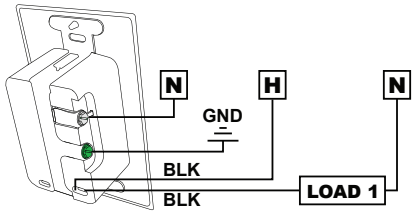
120/277 VAC WIRING

BLACK*	- Line 1 Input	*BLACK wires can be reversed
BLACK*	- Load 1 Output	
BLUE*	- Line 2 Input	*BLUE wires can be reversed
BLUE*	- Load 2 Output	

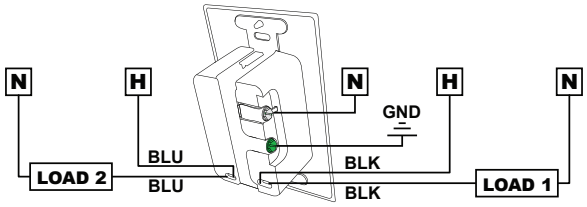
347 VAC WIRING (-347 Option)
Red wires replace Black wires.

WIRING TO NEUTRAL

SINGLE RELAY



DUAL RELAY



Notes:
- Unit will draw power from either line connection.
- Both poles' line connection must be same phase.

 ©2013 Acuity Brands Lighting, Inc. All rights reserved 06/07/13

SPECIFICATIONS

PHYSICAL SPECS
SIZE: 2.74"H x 1.68"W x 1.63"D (6.96 cm x 4.27 cm x 4.14 cm)
(not including ground strap)
WEIGHT: 5 oz
MOUNTING: Single Gang Switch Box
MOUNTING HEIGHT: 30-48 in (76.2-121.9 cm)
SILICONE FREE
ROHS COMPLIANT

ELECTRICAL SPECS
MAXIMUM LOAD / POLE (RELAY)
800 W @ 120 VAC
1200 W @ 277 VAC
1500 W @ 347 VAC
MINIMUM LOAD: None
MOTOR LOAD: 1/4 HP
FREQUENCY: 50/60 Hz (timers are 1.2x for 50 Hz)

ENVIRONMENTAL SPECS
OPERATING TEMP
Standard: 14º to 122º F (-10º to 50º C)
LT Option (PIR): -40º to 122º F (-40º to 50º C)
LT Option (PDT): -4º to 122º F (-20º to 50º C)
RELATIVE HUMIDITY:
Standard: 20 to 75% non-condensing
LT Option: 20 to 90% non-condensing
(electronics coated for corrosion resistance)

ORDERING LOGIC

SINGLE RELAY

(example: WSD PDT WH)

Series	Operating Mode[1]	Voltage	Color[3]	Temp/Humidity
WSD Passive Infrared (PIR)	**Blank** Auto On (default) or Vacancy	**Blank** 120/277 VAC	**WH** White	**Blank** Standard
WSD PDT Dual Technology (PIR / Microphonics)	**SA** Vacancy (default) or Auto-On	**347**[2] 347 VAC	**IV** Ivory	**LT** Low Temp
	VA Vacancy only		**GY** Gray	
			AL Lt. Almond	
			BK Black	

DUAL RELAY

(example: WSD PDT 2P WH LT)

Series	Operating Mode[1]	Voltage	Color[3]	Temp/Humidity
WSD 2P Passive Infrared (PIR)	**Blank** Pole 1-Auto On Pole 2-Vacancy (default)	**Blank** 120/277 VAC	**WH** White	**Blank** Standard
WSD PDT 2P Dual Technology (PIR / Microphonics)	**2SA** Both Poles Vacancy (defaut)	**347**[2] 347 VAC	**IV** Ivory	**LT** Low Temp
			GY Gray	
			AL Lt. Almond	
			BK Black	

Notes:
1 Operating Modes reprogrammable via push-button except for VA version
2 Wall plates included in white or ivory only for 347 VAC units
3 Matching wall plate provided for 120/277 VAC units

AcuityBrands.
Expanding the boundaries of lighting™

c UL US LISTED

TITLE 24
ASSEMBLED in U.S.A.
5 YEAR WARRANTY

Sheet#: TS-WSNB-001A

WARRANTY
5-year limited warranty. Complete warranty terms located at
www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

 ©2013 Acuity Brands Lighting, Inc. All rights reserved 06/07/13

sensorswitch®

CM 10



EXTENDED RANGE 360º SENSOR
CEILING MOUNT • LOW VOLTAGE • PASSIVE INFRARED (PIR)

SPECIFICATIONS

FEATURES

100% Digital PIR Detection,
Excellent RF Immunity
360º Coverage Pattern
Push-Button Programmable
Adjustable Time Delays
No Field Calibration or Sensitivity
Adjustments Required
Convenient Test Mode
100 hr Lamp Burn-in Timer
Green LED Indicator

LAMPMAXIMIZER® TECHNOLOGY
- Protects Lamp Life while Maximizing Energy Savings
- Minimum On Timer (15 min default)
- Occ. Time Delay (10 min defatult)
- LampMaximizer+ Mode - Optimizes Lamp Life & Energy Savings (disabled by default)
- Switch Counter (in 1000's)
- Total Lamp On Time (in khrs)

PHYSICAL SPECS

SIZE 4.55" Dia. (11.56 cm)
1.55" Deep (3.94 cm)
WEIGHT 6 oz
MOUNTING
Ceiling Tile Surface
3.5" Octagon Box
Single Gang Handy Box
COLOR White

ELECTRICAL SPECS

OPERATING VOLTAGE
12-24 VAC/VDC
CURRENT DRAW
Standard, 4 mA
w/ R option, 16 mA
DIMMING LOAD Sinks < 20mA;
~40 Ballasts @ .5mA each
RECOMMENDED POWER PACK
PP20

ENVIRONMENTAL SPECS

OPERATING TEMP
14º to 160º F (-10º to 71º C)
STORAGE TEMP
-14º to 160º F (-26º to 71º C)
RELATIVE HUMIDITY
20 to 90% non-condensing
SILICONE FREE
ROHS COMPLIANT

OVERVIEW

The **CM 10** Series Extended Range 360º occupancy sensor incorporates Passive Infrared (PIR) technology into an attractive and economical sensor to provide maximum viewing from the ceiling. When mounted at 9 ft (2.74 m), this sensor views up to 28 ft (8.53 m) in all directions. Its circular coverage pattern is designed for walking motions; making it ideal for T-shaped intersections in corridors, or other areas where wall mounting a sensor is not practical. A long hallway, for example, may require a **HW13** Series Hallway sensor at each end, with **CM 10**'s mounted in the center to fill in the distance. Low ceiling heights are also best covered by the **CM 10**. For example, when mounted at only 7 ft (2.13 m), the height of pick aisles in many distribution centers, the **CM 10** provides a 32 ft (9.75 m) diameter pattern of coverage. In applications where detection of minor motion is also required, use the **CM PDT 10** Series Dual Technology sensor.

SENSOR OPERATION

The sensor detects changes in the infrared energy given off by occupants as they move within the field-of-view. When occupancy is detected, a DC output goes high and can drive up to 200 mA of connected load. The sensor is powered with 12-24 VAC/VDC and typically operates with a **PP20** or **MP20** power pack, enabling complete 20 Amp circuits to be controlled. This innovative sensor requires no field calibration or sensitivity adjustments.

LAMPMAXIMIZER®

This sensor also contains patented LampMaximizer technology that allows users to aggressively target energy savings while still protecting lamp life. A minimum on timer, factory set at 15 minutes, helps preserve lamp life by eliminating all lamp cycles shorter than lamp manufacturers' recommendations.

A standard occupancy time delay is also present that ensures lights turn off (assuming minimum on timer has elapsed) if no occupancy is detected. This timer is factory set at 10 minutes to promote energy savings, but is adjustable between 30 seconds and 20 minutes. These adjustments can be done manually, through the units push-button, or automatically every two weeks through an advanced mode, called LampMaximizer+, that determines the optimum time delay in order to maximize both lamp life and energy savings. Additionally, this sensor maintains statistics on total lamp on time and number of cycles.

OPTIONS

LOW VOLTAGE RELAY (R)
- Enables sensors to interface with other systems (e.g., BMS, lighting panels)
- Provides dry contact closure via a SPDT, 1 Amp, 40 Volt relay
- Only one relay needed per zone
- Changes state when all connected sensors register unoccupied
- Relay requires sensor power to function

OCCUPANCY CONTROLLED DIMMING (D)
- Provides dimming output to control 0-10 VDC dimmable ballasts
- Provides a second occupancy time-out period that enables the lights to go to a dim setting before turning off
- Adjustable max/min dim setting
- Only one sensor per zone needs to have dimming output

PHOTOCELL (P)
- Auto set-point calibration
- Two selectable modes of operation
- On/Off mode: Photocell has full control during periods of occupancy
- Inhibit mode: Photocell can prevent lights from turning on if adequate daylight is available, but cannot turn lights off

PHOTOCELL W/ DIMMING (ADC)
- Photocell within sensor maintains total room light level by controlling levels of 0-10 VDC dimmable ballasts
- Photocell also has full on/off control during periods of occupancy
- Provides a second occupancy time-out period that enables the lights to go to a dim setting before turning off

Note: LampMaximizer+ features not available with ADC option

LOW TEMP/HIGH HUMIDITY (LT)
- Sensor electronics are coated for corrosion resistance
- Operates down to -40º F/C)
- Required for cooler/freezer applications

c UL US LISTED

TITLE 24
ASSEMBLED in U.S.A.
5 YEAR WARRANTY

ORDERING INFO

CM 10 [RELAY] [DIMMING/PHOTOCELL] [TEMP/HUMIDITY]

RELAY

Blank = None
R = Low Voltage Relay

DIMMING / PHOTOCELL *CHOOSE ONE ONLY*

Blank = None
D = Occupancy Controlled Dimming
P = Photocell
ADC = Photocell w/ Dimming

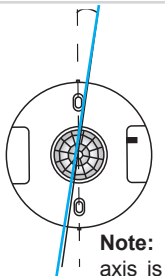
TEMP/HUMIDITY

Blank = Standard
LT = Low Temp

COVERAGE PATTERN

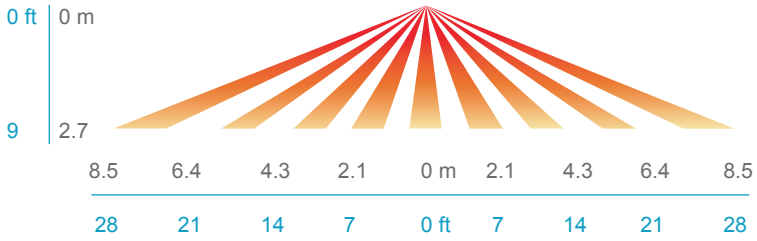
EXTENDED RANGE 360° LENS

- Best choice for large motion (e.g. walking) detection
- Viewing angle of 67° in a 360° conical shaped pattern
- Provides 28 ft (8.53 m) radial coverage when mounted to standard 9 ft (2.74 m) ceiling
- 7 to 15 ft (2.13 to 4.57 m) mounting heights provide 16 to 36 ft (4.88 to 10.97 m) radial coverage

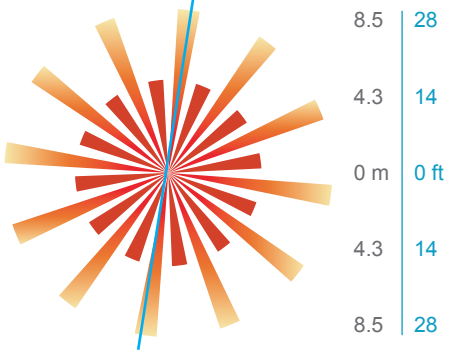


Note: Sensor's screw axis is offset 7.5° from a long detection segment

SIDE VIEW



TOP VIEW



WIRING (DO NOT WIRE HOT)

STANDARD WIRING

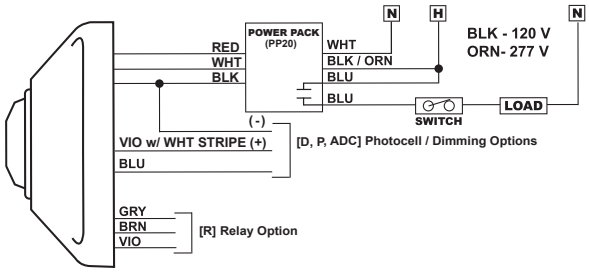
RED - Power Input (12-24 VAC/VDC)
BLACK - Common
WHITE - Occupancy State (high VDC for occupied)

PHOTOCELL/DIMMING OPTIONS (D, P, ADC)

BLUE - Direct output to power pack for providing photocell control and/or secondary dim time out. Output is high VDC with occupancy & low light. Output also held high during secondary dim time out. For multi-level control, use two power packs and connect White wire to primary load and Blue to daylight load.

VIOLET w/ WHITE STRIPE - Connect to 0-10 VDC control wire (typically Violet) from 0-10 VDC dimmable ballast

GRAY from Ballast - Connect to sensor Black wire

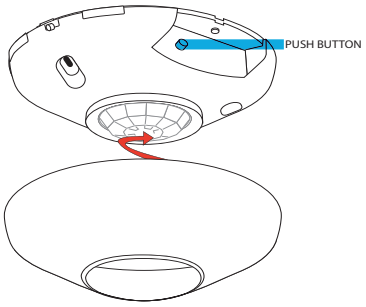


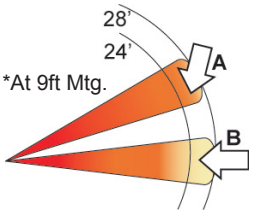
RELAY OPTION (R)

GRAY / BROWN - Connected during occupied state
VIOLET / BROWN - Connected during unoccupied state
Note: Relay is energized during unoccupied state

INSTALLATION

- Mount sensor directly to a ceiling tile or a metallic grid (two self-tapping screws provided).
- Sensor's mounting holes also align with 3.5" octagon or single gang handy box (screws not provided).
- Sensor will detect motions crossing segments more effectively than motions parallel to beams.
- For optimal detection, position sensor such that segments are crossed upon entrance and unable to view outside the space.





A: When walking across beam, detection will occur at approximately 28 feet. (8.53 m)
B: When walking into beam, detection will occur at approximately 24 feet. (7.32 m)

PROGRAMMING

Refer to instruction card IC7.001 for default settings and directions on programming the sensor via the push-button.

sensorswitch®
An AcuityBrands Company

WARRANTY: Sensor Switch warrants these products to be free of defects in manufacture and workmanship for a period of 60 months. Sensor Switch, upon prompt notice of such defect, will, at its option, provide a Returned Material Authorization number and repair or replace returned product.
LIMITATIONS AND EXCLUSIONS: This Warranty is in full lieu of all other representation and expressed and implied warranties (including the implied warranties of merchantability and fitness for use) and under no circumstances shall Sensor Switch be liable for any incidental or consequential property damages or losses.

TS-CM-001A

sensorswitch®

CM PDT 10



EXTENDED RANGE 360º SENSOR
CEILING MOUNT • LOW VOLTAGE • DUAL TECHNOLOGY (PDT)

SPECIFICATIONS

FEATURES

100% Digital PIR Detection,
Excellent RF Immunity
360º Coverage Pattern
Patented Dual Technology with
PIR / Microphonics Detection
Push-Button Programmable
Adjustable Time Delays
Convenient Test Mode
No Field Calibration or Sensitivity
Adjustments Required
100 hr Lamp Burn-in Timer
Green LED Indicator

LAMPMAXIMIZER® TECHNOLOGY
- Protects Lamp Life while Maximizing Energy Savings
- Minimum On Timer (15 min default)
- Occ. Time Delay (10 min defatult)
- LampMaximizer+ Mode - Optimizes Lamp Life & Energy Savings (disabled by default)
- Switch Counter (in 1000's)
- Total Lamp On Time (in khrs)

PHYSICAL SPECS

SIZE 4.55" Dia. (11.56 cm)
1.55" Deep (3.94 cm)
WEIGHT 6 oz
MOUNTING
Ceiling Tile Surface
3.5" Octagon Box
Single Gang Handy Box
COLOR White

ELECTRICAL SPECS

OPERATING VOLTAGE
12-24 VAC/VDC
CURRENT DRAW
Standard, 4 mA
w/ R option, 16 mA
DIMMING LOAD Sinks < 20mA;
~40 Ballasts @ .5mA each
RECOMMENDED POWER PACK
PP20

ENVIRONMENTAL SPECS

OPERATING TEMP
14º to 160º F (-10º to 71º C)
RELATIVE HUMIDITY
20 to 90% non-condensing
SILICONE FREE
ROHS COMPLIANT

OVERVIEW

Classrooms are ideal applications for the **CM PDT 10** Series Extended Range 360º occupancy sensor. When mounted at 9 ft (2.74 m), this sensor provides line of sight Passive Infrared (PIR) detection of walking type motions up to 28 ft (8.53 m) in all directions. Additionally, the **CM PDT 10** provides overlapping Microphonics™ technology to detect smaller motions and occupant movements that occur behind obstructions. When comparing small motion detection, the **CM PDT 10** far out performs dual technology sensors that are specified with 2,000 ft² of coverage. Spaces with low ceiling heights are also best covered by the **CM PDT 10**.

SENSOR OPERATION

Sensors with Passive Dual Technology (PDT) first see motion using 100% digital Passive Infrared (PIR) detection and then engage Microphonics™ to hear sounds that indicate continued occupancy. This patented technology uses Automatic Gain Control (AGC) to dynamically self adapt a sensor to its environment by filtering out constant background noise and registering only noises typical of human activity. When occupancy is detected, a DC output goes high and can drive up to 200 mA of connected load. If needed, a 10 second grace period also allows the lights to be voice reactivated after shutting off. The sensor is powered with 12-24 VAC/VDC and typically operates with a **PP20** or **MP20** power pack, enabling 20 Amp circuits to be controlled.

LAMPMAXIMIZER®

This sensor also contains patented LampMaximizer technology that allows users to aggressively target energy savings while still protecting lamp life. A minimum on timer, factory set at 15 minutes, helps preserve lamp life by eliminating all lamp cycles shorter than lamp manufacturers' recommendations. A standard occupancy time delay is also present that ensures lights turn off (assuming minimum on timer has elapsed) if no occupancy is detected. This timer is factory set at 10 minutes to promote energy savings, but is adjustable between 30 seconds and 20 minutes. These adjustments can be done manually, through the unit's push-button, or automatically every two weeks through an advanced mode, called LampMaximizer+, that determines the optimum time delay in order to maximize both lamp life and energy savings. Additionally, this sensor maintains statistics on total lamp on time and number of cycles.

OPTIONS

LOW VOLTAGE RELAY (R)
- Enables sensors to interface with other systems (e.g., BMS, lighting panels)
- Provides dry contact closure via a SPDT, 1 Amp, 40 Volt relay
- Only one relay needed per zone
- Changes state when all connected sensors register unoccupied
- Relay requires sensor power to function

OCCUPANCY CONTROLLED DIMMING (D)
- Provides dimming output to control 0-10 VDC dimmable ballasts
- Provides a second occupancy time-out period that enables the lights to go to a dim setting before turning off
- Adjustable max/min dim setting
- Only one sensor per zone needs to have dimming output

PHOTOCELL (P)
- Auto set-point calibration
- Two selectable modes of operation
- On/Off mode: Photocell has full control during periods of occupancy
- Inhibit mode: Photocell can prevent lights from turning on if adequate daylight is available, but cannot turn lights off

PHOTOCELL W/ DIMMING (ADC)
- Photocell within sensor maintains total room light level by controlling levels of 0-10 VDC dimmable ballasts
- Photocell also has full on/off control during periods of occupancy
- Provides a second occupancy time-out period that enables the lights to go to a dim setting before turning off

Note: LampMaximizer+ features not available with ADC option

LOW TEMP/HIGH HUMIDITY (LT)
- Sensor electronics are coated for corrosion resistance
- Operates down to -4º F (-20º C)
- Required for cooler/freezer applications

c UL US LISTED

TITLE 24
ASSEMBLED in U.S.A.
5 YEAR WARRANTY

ORDERING INFO

CM PDT 10 [RELAY] [DIMMING/PHOTOCELL] [TEMP/HUMIDITY]

RELAY

Blank = None
R = Low Voltage Relay

DIMMING / PHOTOCELL *CHOOSE ONE ONLY*

Blank = None
D = Occupancy Controlled Dimming
P = Photocell
ADC = Photocell w/ Dimming

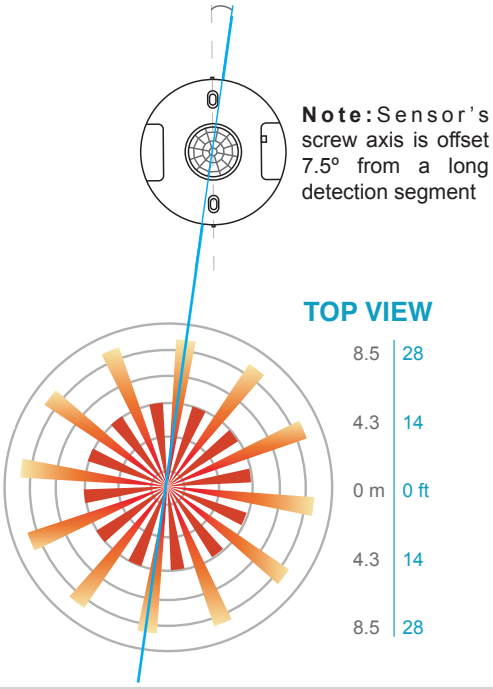
TEMP/HUMIDITY

Blank = Standard
LT = Low Temp

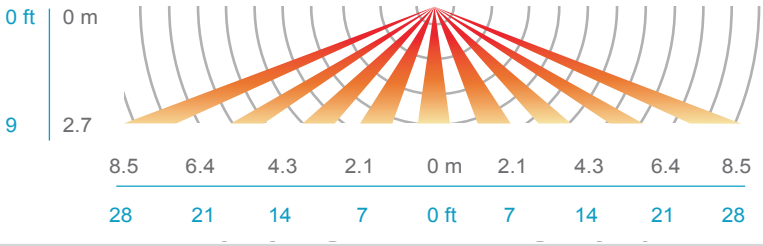
COVERAGE PATTERN

10 EXTENDED RANGE 360° LENS WITH MICROPHONICS™

- Best choice for large motion (e.g. walking) detection
- Viewing angle of 67° in a 360° conical shaped pattern
- Provides 28 ft (8.53 m) radial coverage when mounted to standard 9 ft (2.74 m) ceiling
- 7 to 15 ft (2.13 to 4.57 m) mounting heights provide 16 to 36 ft (4.88 to 10.97 m) radial coverage
- Microphonics™ provides overlapping detection of human activity over the complete PIR coverage area. Advanced filtering is also utilized to prevent non-occupant noises from keeping the lights on.



SIDE VIEW



WIRING (DO NOT WIRE HOT)

STANDARD WIRING

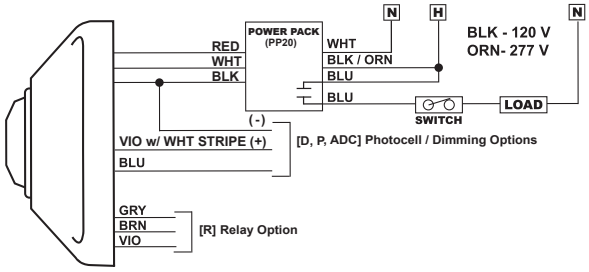
RED - Power Input (12-24 VAC/VDC)
BLACK - Common
WHITE - Occupancy State (high VDC for occupied)

PHOTOCELL/DIMMING OPTIONS (D, P, ADC)

BLUE - Direct output to power pack for providing photocell control and/or secondary dim time out. Output is high VDC with occupancy & low light. Output also held high during secondary dim time out. For multi-level control, use two power packs and connect White wire to primary load and Blue to daylight load.

VIOLET w/ WHITE STRIPE - Connect to 0-10 VDC control wire (typically Violet) from 0-10 VDC dimmable ballast

GRAY from Ballast - Connect to sensor Black wire

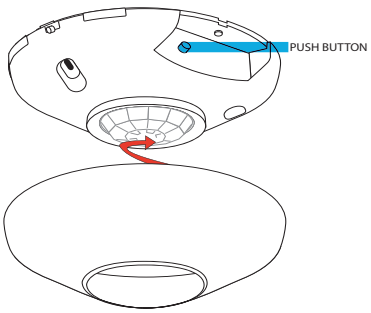


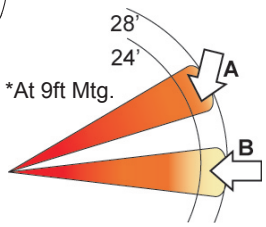
RELAY OPTION (R)

GRAY / BROWN - Connected during occupied state
VIOLET / BROWN - Connected during unoccupied state
Note: Relay is energized during unoccupied state

INSTALLATION

- Mount sensor directly to a ceiling tile or a metallic grid (two self-tapping screws provided).
- Sensor's mounting holes also align with 3.5" octagon or single gang handy box (screws not provided).
- Sensor will detect motions crossing segments more effectively than motions parallel to beams.
- For optimal detection, position sensor such that segments are crossed upon entrance and unable to view outside the space.





A: When walking across beam, detection will occur at approximately 28 ft (8.53 m)
B: When walking into beam, detection will occur at approximately 24 ft (7. 32 m)

PROGRAMMING

Refer to instruction card IC7.002 for default settings and directions on programming the sensor via the push-button.

sensorswitch®
An AcuityBrands Company

WARRANTY: Sensor Switch warrants these products to be free of defects in manufacture and workmanship for a period of 60 months. Sensor Switch, upon prompt notice of such defect, will, at its option, provide a Returned Material Authorization number and repair or replace returned product.
LIMITATIONS AND EXCLUSIONS: This Warranty is in full lieu of all other representation and expressed and implied warranties (including the implied warranties of merchantability and fitness for use) and under no circumstances shall Sensor Switch be liable for any incidental or consequential property damages or losses.

TS-CM-004A

sensorswitch®

WV 16





WIDE VIEW SENSOR
CORNER MOUNT • LOW VOLTAGE • PASSIVE INFRARED (PIR)

SPECIFICATIONS

FEATURES
- 100% Digital PIR Detection, Excellent RF Immunity
- 120° by 40 ft (12.19 m) Coverage for Small Motion
- Push-Button Programmable Adjustable Time Delays
- Convenient Test Mode
- No Field Calibration or Sensitivity Adjustments Required
- 100 hr Lamp Burn-in Timer
- Green LED Indicator

LAMPMAXIMIZER® TECHNOLOGY
- Protects Lamp Life while Maximizing Energy Savings
- Minimum On Timer (15 min default)
- Occ. Time Delay (10 min defatult)
- LampMaximizer+ Mode - Optimizes Lamp Life & Energy Savings (disabled by default)
- Switch Counter (in 1000's)
- Total Lamp On Time (in khrs)

PHYSICAL SPECS

SIZE 3.0" H x 3.6" W x 1.75" D (7.62 cm x 9.14 cm x 4.45 cm)
WEIGHT 5 oz
MOUNTING Directly to corner or to ceiling using **WV BR** bracket
COLOR White

ELECTRICAL SPECS

OPERATING VOLTAGE
12-24 VAC/VDC
CURRENT DRAW
Standard, 4 mA
w/ **R** option, 16 mA
RECOMMENDED POWER PACK
PP20

ENVIRONMENTAL SPECS

OPERATING TEMP
14° to 160° F (-10° to 71° C)
STORAGE TEMP
-14° to 160° F (-26° to 71° C)
RELATIVE HUMIDITY
20 to 90% non-condensing
SILICONE FREE
ROHS COMPLIANT

OVERVIEW

The **WV 16** Series Wide View occupancy sensor is designed to mount in a corner and detect small motions up to 40 ft (12.19 m) away, and larger motions up to 70 ft (21.34 m) away. This makes it ideal for 30 ft x 30 ft (9.14 m x 9.14 m) classrooms or corridors up to 70 ft (21.34 m) long (for specific long narrow hallway applications, see **HW13** product data sheet). The enclosure's convenient tilting feature enables the sensor to be mounted at any height from 8 to 10 ft (2.44 to 3.05 m). When corner or wall mounting is not possible, the **WV BR** bracket accessory can be used to mount the **WV 16** to the ceiling. Additionally, the **WV 16** may be used in combination with other sensors to customize coverage for very large or irregularly shaped spaces. For rooms with obstructions, use the **WV PDT 16** Series sensor which adds Microphonics™ detection.

SENSOR OPERATION

The sensor detects changes in the infrared energy given off by occupants as they move within the field-of-view. When occupancy is detected, a DC output goes high and can drive up to 200 mA of connected load. The sensor is powered with 12-24 VAC/VDC and typically operates with a **PP20** or **MP20** power pack, enabling complete 20 Amp circuits to be controlled. This innovative sensor requires no field calibration or sensitivity adjustments.

LAMPMAXIMIZER®

This sensor also contains patented LampMaximizer technology that allows users to aggressively target energy savings while still protecting lamp life. A minimum on timer, factory set at 15 minutes, helps preserve lamp life by eliminating all lamp cycles shorter than lamp manufacturers' recommendations.

A standard occupancy time delay is also present that ensures lights turn off (assuming minimum on timer has elapsed) if no occupancy is detected. This timer is factory set at 10 minutes to promote energy savings, but is adjustable between 30 seconds and 20 minutes. These adjustments can be done manually, through the unit's push-button, or automatically every two weeks through an advanced mode, called LampMaximizer+, that determines the optimum time delay in order to maximize both lamp life and energy savings. Additionally, this sensor maintains statistics on total lamp on time and number of cycles.

OPTIONS

LOW VOLTAGE RELAY (R)
- Enables sensors to interface with other systems (e.g., BMS, lighting panels)
- Provides dry contact closure via a SPDT, 1 Amp, 40 Volt relay
- Only one relay needed per zone
- Changes state when all connected sensors register unoccupied
- Relay requires sensor power to function

PHOTOCELL (P)
- Auto set-point calibration
- Two selectable modes of operation
- On/Off mode: Photocell has full control during periods of occupancy
- Inhibit mode: Photocell can prevent lights from turning on if adequate daylight is available, but cannot turn lights off

LOW TEMP/HIGH HUMIDITY (LT)
- Sensor is corrosion resistant to moisture
- Operates down to -40° F/C

BRACKET KIT (KIT)
- WV BR ceiling mount bracket included

c UL US LISTED

TITLE 24
ASSEMBLED in U.S.A.
5 YEAR WARRANTY

ORDERING INFO

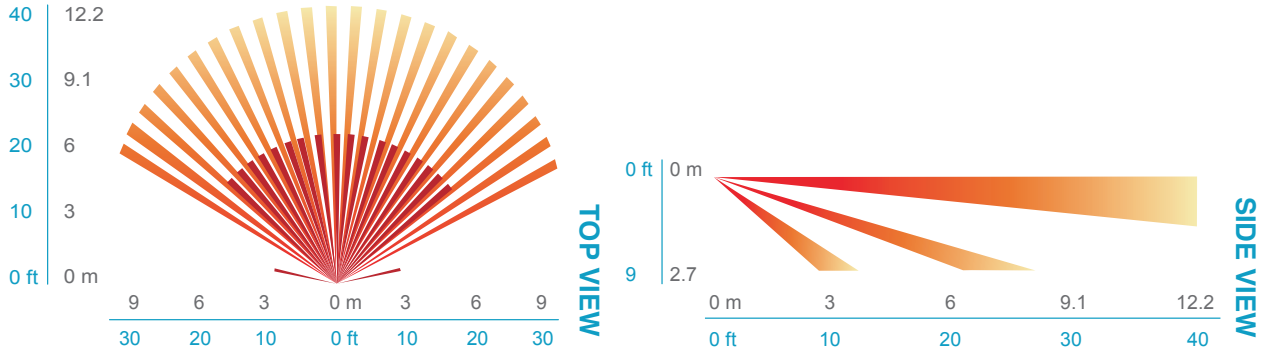
WV 16 [RELAY] [PHOTOCELL] [TEMP/HUMIDITY] [BRACKET KIT]

RELAY	PHOTOCELL	TEMP/HUMIDITY	BRACKET KIT
Blank = None	Blank = None	Blank = Standard	Blank = Sensor only
R = Low Voltage Relay	P = Photocell	LT = Low Temp	KIT = Sensor & WV BR Bracket

COVERAGE PATTERN

WIDE VIEW LENS

- Small motion (e.g. **hand movements**) detection up to 40 ft (12.19 m).
- Large motion (e.g. **walking**) detection up to 70 ft (21.34 m).
- Designed for 8 to 10 ft (2.44 to 3.05 m) high mounting in room corner.



WIRING (DO NOT WIRE HOT)

STANDARD WIRING

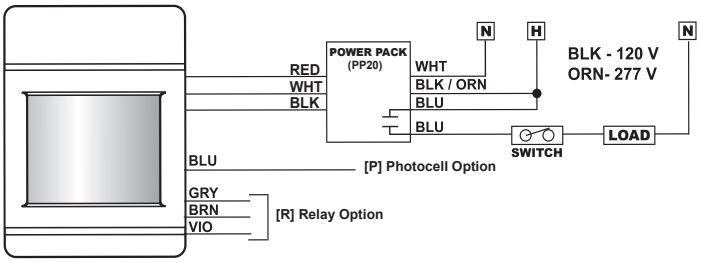
RED - Power Input (12-24 VAC/VDC)
BLACK - Common
WHITE - Occupancy State (high VDC for occupied)

PHOTOCELL/DIMMING OPTIONS (P)

BLUE - Direct output to power pack for providing photocell control. Output is high VDC with occupancy & low light. For multi-level control, use two power packs and connect White wire to primary load and Blue to daylight load.

RELAY OPTION (R)

GRAY / BROWN - Connected during occupied state
VIOLET / BROWN - Connected during unoccupied state
Note: Relay is energized during unoccupied state



INSTALLATION

- Sensor has rear enclosure, which is beveled so as to be corner mounted at 8-10 ft (2.44-3.05 m); see tilt settings below.
- Mount in corner above entrance door or in a corner along the same wall as the entrance. .
- For mounting heights above 10 ft (3.05 m), use the **WV BR** and mount sensor to angled side to provide an intial 30° look down.

TILT ADJUSTMENT
Mounting Height Position

7' - 8'	Vertical
8' - 9'	Center
9' - 10'	Forward
Above 10'	Use **WV BR**



CEILING MOUNT BRACKET (WV BR)

The **WV BR** Ceiling Mount Bracket allows the **WV PDT 16** to be mounted in the corner of the area from the ceiling for conditions where mounting to the wall is not possible.

SIZE 4.7" Dia (11.94 cm)
3.3" Deep (8.38 cm)
MOUNTING
Ceiling Tile Surface
3.5" Octagon Box
Single Gang Handy Box
COLOR White



PROGRAMMING

Refer to instruction card IC7.002 for default settings and directions on programming the sensor via the push-button.

sensorswitch®
An AcuityBrands Company

WARRANTY: Sensor Switch warrants these products to be free of defects in manufacture and workmanship for a period of 60 months. Sensor Switch, upon prompt notice of such defect, will, at its option, provide a Returned Material Authorization number and repair or replace returned product.
LIMITATIONS AND EXCLUSIONS: This Warranty is in full lieu of all other representation and expressed and implied warranties (including the implied warranties of merchantability and fitness for use) and under no circumstances shall Sensor Switch be liable for any incidental or consequential property damages or losses.

TS-WV-001A

sensorswitch

WIDE VIEW SENSOR - CORNER MOUNT
LOW VOLTAGE, PIR/MICROPHONICS™(PDT)

TYPICAL APPLICATIONS

- Classrooms
- Large Conference Rooms
- Large Storage Rooms
- Hallways

FEATURES

- Patented Dual Technology with PIR/Microphonics™ Detection
- Communicates with Other Sensors
- 120º by 40ft. Coverage for Small Motion
- Time Delay: 30 sec. to 20 minutes
- Push-Button Programmable, w/o removing cover
- Green LED Activity Indicator
- 100 Hr. Lamp Burn-in Timer Mode

AVAILABLE OPTIONS

- Isolated Low Voltage Relay (-R)
- On/Off Photocell (-P)
- Low Temp/Hi Humidity (-LT)

SPECIFICATIONS

- Size: Rectangular, 3.0" x 3.6" x 1.75" (7.62 cm x.9.14 cm x 4.45 cm)
- Sensor Weight: 6 Ounces
- Sensor Color: White
- Mounting: 8 to 10 Feet in Corner or Ceiling using bracket (WV-BR)
- Relative Humidity: 20 to 90% non-condensing
- Operating Temp: 14º to 160º F (-10° to 71° C)
- Storage Temp: -14º to 160º F (-26° to 71° C)
- Operating Voltage: 12-24 VAC/VDC
- UL, CUL, and Title 24 Compliant
- 5 Year Warranty
- Made in U.S.A.

LOW TEMP/HI HUMIDITY(-LT)

- Conformally coated Circuit Board is corrosion resistant from moisture
- Operates down to -4º F(-20º C)

WV-PDT SERIES
& WV-BR (Bracket)
w/ Enhanced Photocell Option!





Classrooms are the ideal application for the *WV-PDT* Dual Technology Wide View Sensor. Installed in the corner of the room along the entrance wall, this inconspicuous sensor provides line of sight PIR detection of small movements up to 40 feet away, and combines overlapping Microphonic™ detection around obstructions. Many classrooms are filled with shelving, projects, or lab benches. Total coverage of the room is always maintained no matter how cluttered the space becomes! The *WV-PDT* is also used in corridors due to its ability to view up to 70 feet for walking motions, or large open storage areas where obstructions may block the PIR's ability to view. For large lecture halls, multiple *WV-PDTs* may be wired together, or along with any other low voltage sensors.

SENSOR OPERATIONS

Sensors with Passive Dual Technology (PDT) first "See" motion using Passive Infrared (PIR) and then engage Microphonics™ to "Hear" sounds that indicate continued occupancy. This patented technology uses Automatic Gain Control (AGC) to dynamically self adapt a sensor to its environment by filtering out constant background noise and detecting only noises typical of human activity. When occupancy is detected, a DC output goes high and can drive up to 200 mA of connected load. The sensor is powered with 12 to 24 VAC/VDC and typically operates with a PP-20 or MP-20 Power Pack; enabling complete 20 Amp circuits to be controlled. An internal timer, factory set at 10 minutes, keeps the lights "On" during brief periods of no activity. Once the lights turn "Off", a 10 second grace period allows for the occupant to voice re-activate the lights back "On" if needed. This timer is selectable at 2.5 minute increments from 30 seconds to 20 minutes, and is reset every time occupancy is re-detected.

DAYLIGHTING CONTROL OPTION (WV-PDT-P)

For spaces with abundant natural light from windows or skylights, this series offers an On/Off Photocell (-P) option. The -P option is ideal for public areas like vestibules, corridors, and restrooms; or spaces like classrooms and private offices. As the daylight levels change in the room, the -P option insures that an adequate light level is maintained according to a programmable set-point value. The -P option provides two modes of operation; one simply inhibits the lights from turning on, while the other has full On/Off control of the lights. For more detailed information on these daylighting control features, see the CM-PC Technical Data Sheet.

INTERNAL LOW VOLTAGE RELAY OPTION (WV-PDT-R)

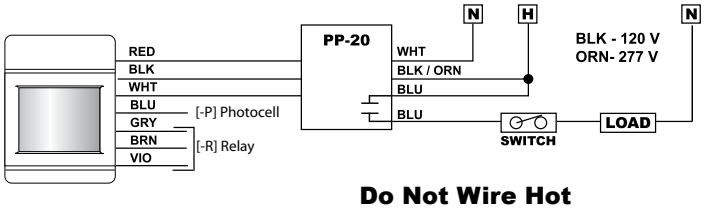
To enable a sensor to interface with a building management system, the -R option provides dry contact closure via a SPDT, 1 Amp, 40 Volt relay. The relay coil is energized and changes state when ALL connected sensors register "Unoccupied". When using multiple sensors, only one sensor per zone needs to have a relay.
Note: Sensor must have power at all times for the relay to function.

CATALOG INFORMATION

MODEL #	DESCRIPTION	TEMPERATURE	OP. VOLTAGE	CURRENT
WV-PDT	Passive Dual Technology Wide View	14° to 160° F	12 to 24 VAC/VDC	3 mA
Add suffix				
-R	SPDT Relay, 1 Amp		12 to 24 VAC/VDC	13 mA
-P	On/Off Photocell		12 to 24 VAC/VDC	3 mA
-RP	Relay & On/Off Photocell		12 to 24 VAC/VDC	13 mA
-LT	Low Temp/High Humidity	-4° to 160° F		
Accessory				
WV-BR	Ceiling Mount Bracket			

WIRING INSTRUCTIONS

Wire lead connections are Class II, 18 to 22 AWG.



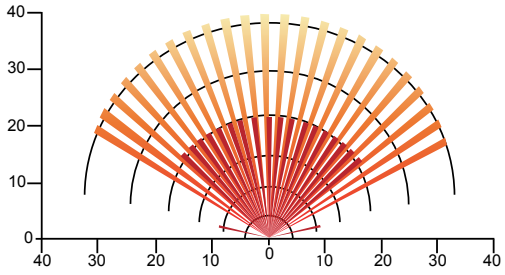
Do Not Wire Hot

INSTALLATION CONSIDERATION

The *WV-PDT's* rear enclosure is beveled so as to be corner mounted at 8 to 10 feet (see tilt settings). Ideally, the sensor should mount, as shown below, in the corner above the entrance door or in the corner along the same wall as the entrance. If the room is large and multiple sensors are needed, mount the second sensor in the opposite corner, however tilt sensor forward to ensure that the PIR collector beams are not viewing out the door. For mounting heights above 10 feet, use the *WV-BR* and mount sensor to angled side to provide an initial 30º lookdown. The PDT line of sensors, unlike any other occupancy sensor, self adjusts to its environment. The Automatic Gain Control (AGC) feature allows the sensor to tune out constant background noise. However, changing noise signals like talking, shuffling of papers, and general human activities are readily detected. Avoid locating the sensor near Wall Clocks that make "Clicking Noises" every minute.



TOP VIEW



STANDARD WV-PDT

RED - 12 to 24 VAC/VDC
BLACK - Common
WHITE - Output (HI DC for Occupancy)

PHOTOCELL OPTION (-P)

BLUE - Photocell output (High: Occupied & Low Light)

Note: Use Blue wire from sensor in place of White wire. For multi-level control, use 2 Power Packs and connect White to primary load and Blue to daylight load.

RELAY OPTION (-R)

GRAY / BROWN - Connected during Occupied state
VIOLET / BROWN - Connected during Unoccupied state

Note: Relay is energized during Unoccupied state

CEILING MOUNT BRACKET (WV-BR)

The *WV-BR* Ceiling Mount Bracket allows the *WV-PDT* to be mounted from the ceiling in rooms where mounting to the wall is not possible.





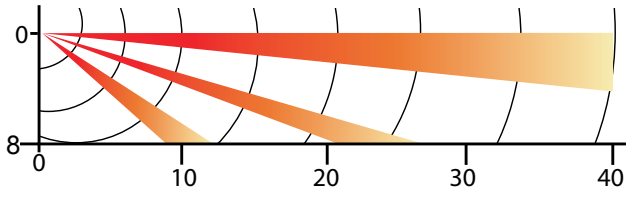
WV-BR

TILT ADJUSTMENT

Mt. Ht.	Position
7' - 8'	Vertical
8' - 9'	Center
9' - 10'	Forward
Above 10'	Use WV-BR



SIDE VIEW



WARRANTY: Sensor Switch, Inc. warrants these products to be free of defects in manufacture and workmanship for a period of sixty months. Sensor Switch, Inc., upon prompt notice of such defect will, at its option, provide a Returned Material Authorization number and a replacement product.

LIMITATIONS AND EXCLUSIONS: This Warranty is in full lieu of all other representation and expressed and implied warranties (including the implied warranties of merchantability and fitness for use) and under no circumstances shall Sensor Switch, Inc. be liable for any incidental or consequential property damages or losses.

sensorswitch

SENSOR SWITCH, INC.
900 Northrop Rd., Wallingford, CT 06492
(203) 265-2842 info@sensorswitch.com
www.sensorswitch.com

revised 06/21/2006
copyright Sensor Switch, Inc. 2006

Ordering information

Model number	Control type
LRF2-OCRB-P-XX	ceiling-mounted occupancy/vacancy sensor, auto-on/auto-off or manual on/auto-off settings
LRF2-VCRB-P-XX[1]	ceiling-mounted vacancy sensor, manual on/auto-off setting only
LRF2-DCRB-WH	ceiling-mounted daylight sensor
LRF2-OWLB-P-WH[2]	180° wall-mounted occupancy/vacancy sensor, auto-on/auto-off or manual on/auto-off settings
LRF2-VWLB-P-WH[1,2]	180° wall-mounted vacancy sensor, manual on/auto-off setting only
LRF2-OKLB-P-WH[2]	90° wall-mounted occupancy/vacancy sensor, auto-on/auto-off or manual on/auto-off settings
LRF2-VKLB-P-WH[1,2]	90° wall-mounted vacancy sensor, manual on/auto-off setting only
LRF2-OHLB-P-WH[2]	hallway occupancy/vacancy sensor, auto-on/auto-off or manual on/auto-off settings
LRF2-VHLB-P-WH[1,2]	hallway vacancy sensor, manual on/auto-off setting only

[1] Vacancy models meet California Title 24 section 119(j) requirements
[2] Available Q2 2010

- Ceiling mount occupancy/vacancy sensor available in the following colors:
  white (WH) black (BL) light almond (LA)

Detection range for fine motion (ceiling-mount occupancy/vacancy sensors)

Ceiling height	Maximum room dimensions for complete floor coverage	Square feet
8 ft (2.4 m)	18 × 18 ft (5.5 × 5.5 m)	324 ft² (30.2 m²)
9 ft (2.7 m)	20 × 20 ft (6.1 × 6.1 m)	400 ft² (37.2 m²)
10 ft (3.0 m)	22 × 22 ft (6.7 × 6.7 m)	484 ft² (44.9 m²)
12 ft (3.7 m)	26 × 26 ft (7.9 × 7.9 m)	676 ft² (62.4 m²)

www.lutron.com
World Headquarters 1.610.282.3800
Technical Support Center 1.800.523.9466 (Available 24/7)
Customer Service 1.888.LUTRON1

LUTRON®

save energy with Lutron™ ®

© 04/2010 Lutron Electronics Co., Inc. | P/N 367-1598 REV C

Lutron energy-saving products

NEW



Ceiling mount occupancy/vacancy sensor (actual size)

NEW Wall mount occupancy/vacancy sensor (actual size)

NEW Ceiling mount daylight sensor (actual size)

Radio Powr Savr™

Wireless sensor product family

LUTRON®

save energy with Lutron™ ®

What is Radio Powr Savr™?

Radio Powr Savr is a family of wireless occupancy/vacancy sensors and daylight sensors that provide convenient light control and are engineered for optimum energy savings and easy installation. Radio Powr Savr wireless sensors save energy by directing compatible Lutron RF dimmers and switches to reduce lighting levels or turn lights off based on room occupancy/vacancy and available daylight.

Saves energy

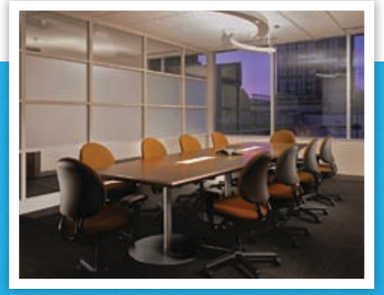
- Occupancy/vacancy sensors turn lights off when room is unoccupied—choose a 1-, 5-, 15- or 30-minute time-out based on needs in the space
- Daylight sensors reduce electric lighting or turn lights off when there is enough available daylight to light the space
- Use sensors with dimmers for additional energy savings

Delivers reliable lighting performance

- Exclusive Lutron XCT™ technology in occupancy/vacancy sensors detects fine motions of room occupants
- Clear Connect™ Radio Frequency (RF) technology ensures reliable, consistent RF performance between devices
- Proportional daylight control in daylight sensor provides accurate daylight harvesting
- 10-year battery life

Installs in minutes

- Sensors require no wiring
- Front-accessible buttons make setup easy
- Sensors have simple test modes to verify ideal locations during installation





The technology

Because lighting is a critical building system, the performance of the light control system must be flawless. Lutron-exclusive technologies make Radio Powr Savr™ sensors the best choice for reliability and performance.

XCT™ technology
XCT, exclusively from Lutron, is a new occupancy-sensing technology with a refined sensitivity to detect subtle movements in a space. By detecting fine motions, like typing or reading, XCT ensures the lights operate when the space is occupied.

Clear Connect™ RF technology
Clear Connect is a proprietary wireless protocol, so interference from other devices is nearly impossible. And because each control is uniquely addressed, the risk of interference from other sensors is eliminated. With Clear Connect, the sensors communicate flawlessly, every time.

Wireless sensors in the Radio Powr Savr family communicate directly with the following Lutron lighting controls:

- Maestro Wireless® dimmers and switches
- GRAFIK Eye® QS light control units with wireless technology
- Energi Savr Node™ with QS sensor module (models available for EcoSystem®, SoftSwitch®, and 0–10 V applications)

Sensors communicate with up to 10 dimmers and switches. Add up to three occupancy/vacancy sensors per dimmer or switch for maximum coverage.

Note:
Radio Powr Savr sensors are part of a system and cannot be used to control a load without a compatible RF dimming or switching device.



Ceiling mount occupancy/ Vacancy sensor:
Diameter: 4.00" (102mm)
Depth: 1.30" (33mm)



Wall mount occupancy/ Vacancy sensor:
Width: 1.80" (46mm)
Height: 4.35" (110mm)
Depth: 1.35" (34mm)



Daylight sensor:
Diameter: 1.60" (41mm)
Depth: 0.70" (17mm)

Catalog Number	
Notes	Type

LSXR FAMILY

FIXTURE MOUNT SENSOR w/ INTERCHANGEABLE LENSES, PIR, LINE VOLTAGE



PRODUCT OVERVIEW

The **LSXR** Family of fixture mount occupancy sensors provides reliable and versatile solutions for commercial and industrial lighting control applications. All **LSXR** Family sensors utilize passive infrared (PIR) detection and feature interchangeable lenses, providing flexibility for multiple mounting height and coverage pattern requirements.

All **LSXR** Family sensors utilize 100% digital Passive Infrared (PIR) detection and power from / switch line voltage. Available options include dual relays, HVOLT powering, and an integrated switching / dimming photocell.

SENSOR OPERATION

The sensor detects changes in the infrared energy given off by occupants as they move within the field-of-view. When occupancy is detected, a self-contained relay switches the connected lighting load on. No initial field calibration or sensitivity adjustments are required. **LSXR** Family sensors are designed to switch both LED and fluorescent lighting loads. Robust relay protection makes **LSXR** units capable of enduring the extreme inrush conditions often encountered with LED loads.

Additionally, **LSXR** sensors utilize patented LampMaximizer technology that allows users to aggressively target energy savings, by using shorter occupancy time delays, while still protecting fluorescent lamp life. A minimum on timer, factory set at 15 minutes, helps preserve lamp life by eliminating all lamp cycles shorter than fluorescent lamp manufacturers' recommendations.

A standard occupancy time delay is also present to ensure lights turn off (once minimum on timer has also elapsed) if no occupancy is detected. This timer is factory set at 10 minutes to promote energy savings, but is adjustable between 30 seconds and 30 minutes. These adjustments may be done through the unit's push-button.

FEATURES

- Four interchangeable lenses - high mount 360º, low mount 360º, high mount aisleway, and small motion 360º
- Integrated mounting bracket drops lens down 3" from chase nipple - no bracket accessory required
- 100% digital PIR detection - provides excellent RF immunity
- No PIR field calibration or sensitivity adjustments required
- Single or dual relay versions - designed with robust protection from the harsh switching requirements of T5 fluorescent and LED loads
- Powers from single or two-phase line connections
- Reversible hot & load wires - eliminates backwards wiring
- Photocell and 0-10 VDC dimming options
- Digital push-button programming - no tools or analog adjustments required
- Non-volatile settings memory
- Convenient test mode - quickens initial walk and/or photocell testing
- Green LED indicator
- LampMaximizer® minimum on timer (15 min) enables usage of shorter occupancy time delays while protecting fluorescent lamp life
- Default 10 minute occupancy time delay

KEY OPTIONS

HIGH/LOW OCCUPANCY OPERATION (HL)

- Provides high/low control of a 0-10V dimmable fixture.
- Lights are reduced to an energy saving minimum dim level after expiration of occupancy time delay.
- If relay is wired, lights will switch off after a second time delay.

SWITCHING PHOTOCELL (P & 2P-P)

- Provides increased energy savings by switching lights off during occupied periods with sufficient daylight contribution from windows or skylights.
- Lights will be switched back on if light level falls below set-point.
- 2P-P version always switches both relays together.
- Optional inhibit mode: Photocell will prevent lights from initially turning on if adequate daylight is available, but will not turn lights off.

DIMMING & SWITCHING PHOTOCELL (ADC)

- Provides maximum energy savings by first dimming down, then switching off, lighting during periods of sufficient daylight contribution from windows or skylights.
- When daylight contribution decreases, lights will be first switched back on at full dim and then raised up as necessary.
- Controls 0-10V dimmable fluorescent ballasts and LED drivers.

COMBINATION DIMMING & SWITCHING PHOTOCELL w/ HIGH/LOW OCCUPANCY OPERATION (ANL)

- Provides maximum energy savings by first dimming down, then switching off, lighting during periods of sufficient daylight contribution from windows or skylights.
- During unoccupied periods without sufficient daylight lights are dropped to low dim setting, insuring minimum light levels are maintained at night.
- Controls 0-10V dimmable fluorescent ballasts and LED drivers.

ALTERNATING OFF RELAYS (2P-AO & 2P-AOP)

- Sequence of operation where both relays close during periods of occupancy, but only one opens during vacancy.
- The relay left closed alternates in order to promote even lamp wear.
- 2P-AOP version also includes switching photocell.

DUAL ZONE SWITCHING PHOTOCELL (2P-DZ)

- Provides dual level photocell control for dual relay versions.

SINGLE POLE SWITCHING PHOTOCELL (2P-SZ)

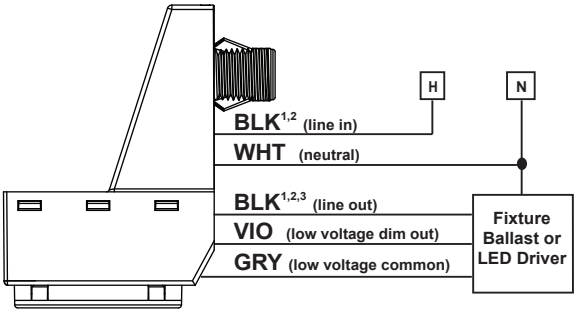
- Occupancy controls one pole only.
- Switching photocell controls other pole.

 ©2015 Acuity Brands Lighting, Inc. All rights reserved 01/06/15

WIRING DIAGRAMS - SINGLE RELAY

WIRING TO SINGLE PHASE POWER (120/277/347 VAC)

BLACK[1,2] - 120/277 VAC Input (RED wire for 347 VAC)
BLACK[1,2,3] - Switched Line Voltage Output to Luminaire (RED wire for 347 VAC)
WHITE - Neutral
VIOLET - Low Voltage Dimming Output (0-10 VDC) } wires present with dimming options only
GRAY - Low Voltage Common }

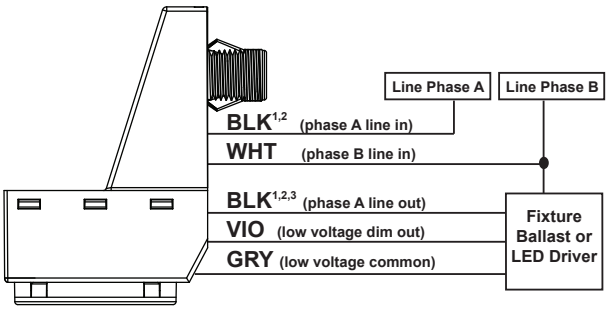


Notes
1. Black wires can be reversed
2. Wire is Red for HVOLT version (required for 347 VAC)
3. Disconnect and cap Black output wire going to driver/ballast if switching fixture is not required.

WIRING TO 2-PHASE POWER (208/240/480 VAC)*

*__Safety Note__: only one line phase is being switched, use in direct fixture mount applications only

BLACK[1,2] - 208/240 VAC Phase A Input (RED wire for 480 VAC)
BLACK[1,2,3] - Switched Line Voltage Output to Luminaire (RED wire for 480 VAC)
WHITE - Phase B of 208/240/480 VAC Input
VIOLET - Low Voltage Dimming Output (0-10 VDC) } wires present with dimming options only
GRAY - Low Voltage Common }



Notes
1. Black wires can be reversed
2. Wire is Red for HVOLT version (required for 480 VAC)
3. Disconnect and cap Black output wire going to driver/ballast if switching fixture is not required.

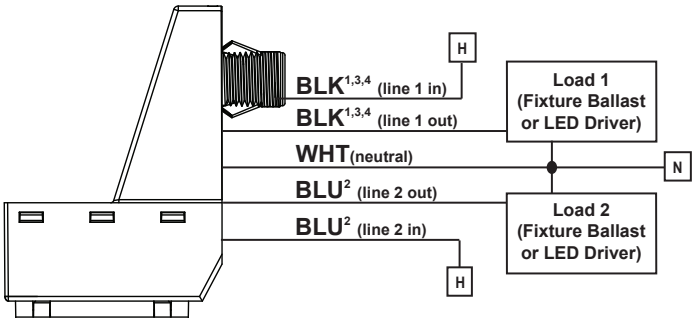
WIRING DIAGRAMS - DUAL RELAY (e.g., LSXR xx 2P)

WIRING FOR 120/277/347

BLACK[1,3,4] - Pole 1: 120/277 VAC Input (RED wire for 347 VAC)
BLACK[1,3,4] - Pole 1: Switched Line Voltage Output to Luminaire (RED wire for 347 VAC)
WHITE - Neutral
BLUE[2] - Pole 2: 120/277/347 VAC Input (must be same phase as pole 1)
BLUE[2] - Pole 2: Switched Line Voltage Output to Luminaire

Operational States for -DZ option

	Occupancy			No Occ.
	Low Daylight	Med. Daylight	High Daylight	
Load 1	On	Off	Off	Off
Load 2	On	On	Off	Off



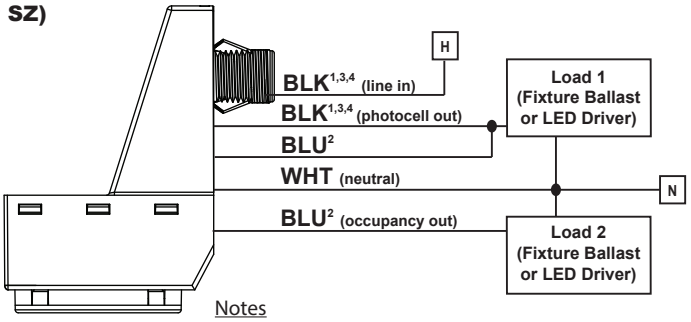
Notes
1. Black wires can be reversed
2. Blue wires can be reversed
3. Wire is Red for 347 VAC Version
4. Red wires can be reversed

WIRING FOR 120/277/347 WITH -SZ OPTION (e.g., LSXR 6 2P SZ)

BLACK[1,3,4] - Pole 1: 120/277 VAC Input (RED wire for 347 VAC)
BLACK[1,3,4] - Pole 1: Switched Line Voltage Output to Luminaire (RED wire for 347 VAC)
WHITE - Neutral
BLUE[2] - Pole 2: 120/277/347 VAC Input (must be same phase as pole 1)
BLUE[2] - Pole 2: Switched Line Voltage Output to Luminaire

Operational States for -SZ option

	Daylight / Occ.	Daylight / No Occ.	No Daylight & Occ.	No Daylight & No Occ.
Load 1	Off	Off	On	On
Load 2	Off	Off	On	Off



Notes
1. Black wires can be reversed
2. Blue wires can be reversed
3. Wire is Red for 347 VAC Version
4. Red wires can be reversed

 ©2015 Acuity Brands Lighting, Inc. All rights reserved 01/06/15

SPECIFICATIONS

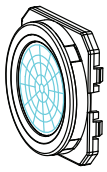
ELECTRICAL SPECS
MAXIMUM LOAD
800 W @ 120 VAC
1000W @ 208 VAC
1200 W @ 240/277 VAC
1500 W @ 347 VAC
2160 W @ 480 VAC
MINIMUM LOAD: None
MOTOR LOAD: 1/4 HP
FREQUENCY: 50/60 Hz
DIMMING LOAD: Sinks < 20 mA;
(~ 40 LED drivers/ballasts @ 0.5 per)
0-10VDC dimmable ballasts or LED drivers only

PHYSICAL SPECS
SIZE (w/ Mounting Flange):
3.75"H x 2.50"W x 4.00"D
(9.5 cm x 6.4 cm x 10.2 cm)
WEIGHT: 6 oz
MOUNTING: 1/2" knockout
(7/8" hole) on fixture
COLOR: White
SILICONE FREE
ROHS COMPLIANT

ENVIRONMENTAL SPECS
OPERATING TEMP
Standard: 14º to 140º F (-10º to 60º C)
LT Option (PIR): -40º to 140º F (-40º to 60º C)
RELATIVE HUMIDITY:
Standard: 20 to 75% non-condensing
LT Option: 20 to 90% non-condensing
(electronics coated for corrosion resistance)

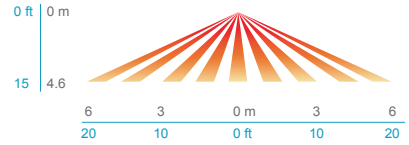
COVERAGE PATTERNS

HIGH MOUNT 360º LENS (#6)

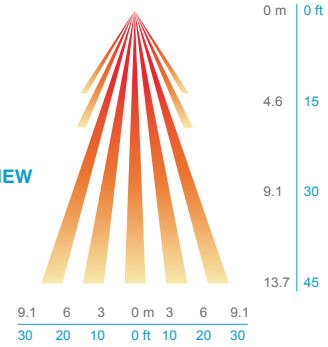


- Best choice for 15 to 45 ft (4.57 to 13.72 m) mounting heights
- 15 to 20 ft (4.57 to 6.10 m) radial coverage overlaps area lit by a typical high bay fixture
- Excellent detection of large motion (e.g. walking) up to a 35 ft (10.76 m) mounting height
- Excellent detection of extra large motion (e.g. forklifts) up to a 45 ft (13.72 m) mounting height

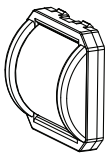
LOW VIEW



HIGH VIEW

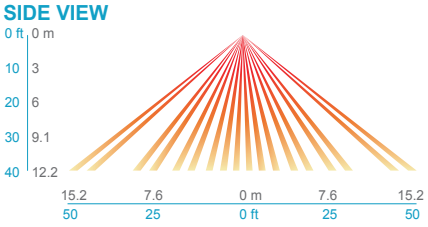


HIGH MOUNT AISLEWAY LENS (#50)

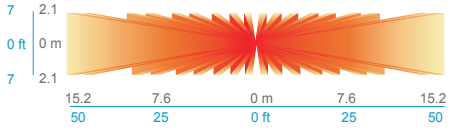


- Provides a bi-directional coverage pattern ideal for warehouse racking
- 1.2x mounting height equals approximate detection range in either direction
- Typical 40 ft (12.19 m) mounting detects 50 ft (15.24 m) in either direction
- Superior aisleway coverage compared to a masked 360º lens

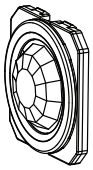
SIDE VIEW



TOP VIEW

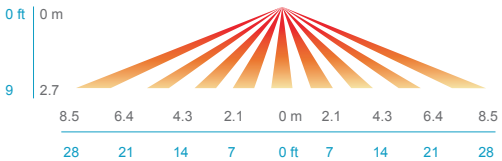


LOW MOUNT 360º LENS (#10)

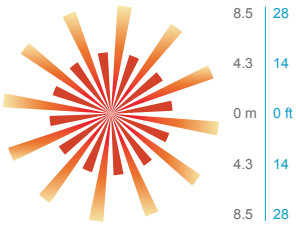


- Best choice for large motion detection (e.g. walking)
- 360º conical shaped pattern
- Provides ~24 ft (7.32 m) radial coverage (~2000 ft²) when mounted at 9 ft (2.74 m)
- 7 to 15 ft (2.13 to 4.57 m) mounting heights provide 16 to 36 ft (4.88 to 10.97 m) radial coverage
- Detection range improves when walking across beams compared to into beams

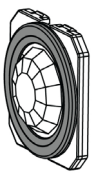
SIDE VIEW



TOP VIEW

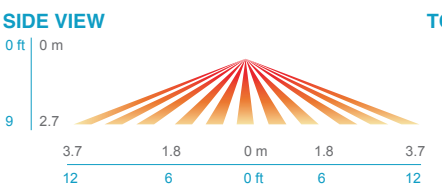


SMALL MOTION 360º LENS (#9)

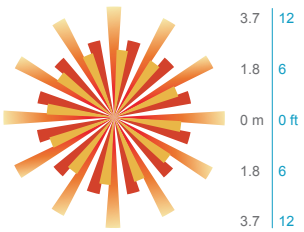


- Best choice for small motion (e.g. hand movements) detection
- 360º conical shaped pattern
- Provides 12 ft (3.66 m) radial coverage (~500 ft²) when mounted to standard 9 ft (2.74 m) ceiling
- 8 to 15 ft (2.44 to 4.57 m) mounting heights provide 10 to 20 ft (3.05 to 6.10 m) radial coverage
- Lens assembly is marked with a gray ring around lens to differentiate versus the #10 lens

SIDE VIEW



TOP VIEW

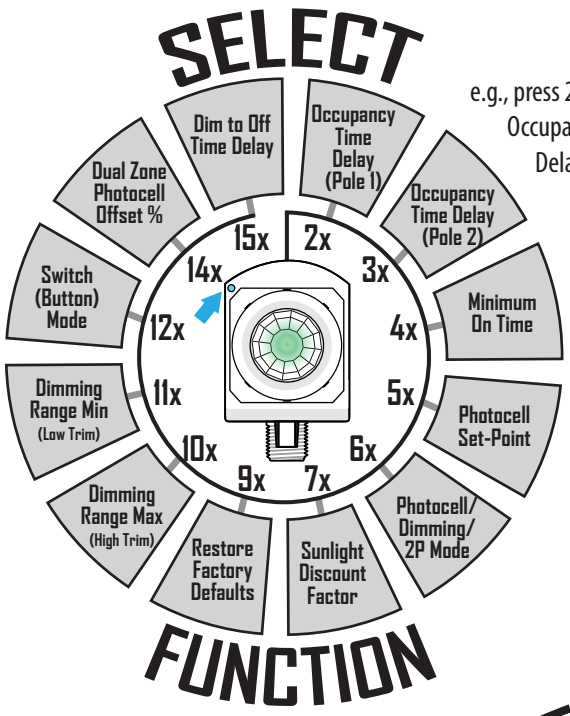


 ©2015 Acuity Brands Lighting, Inc. All rights reserved 01/06/15

PROGRAMMING INSTRUCTIONS

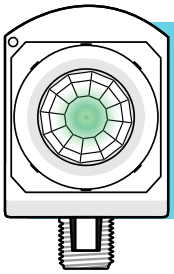
Operational settings can be changed via the push-button sequence outlined below (note the example used is for changing pole 1 occupancy time delay).

1.



e.g., press 2x for Occupancy Time Delay (Pole 1)

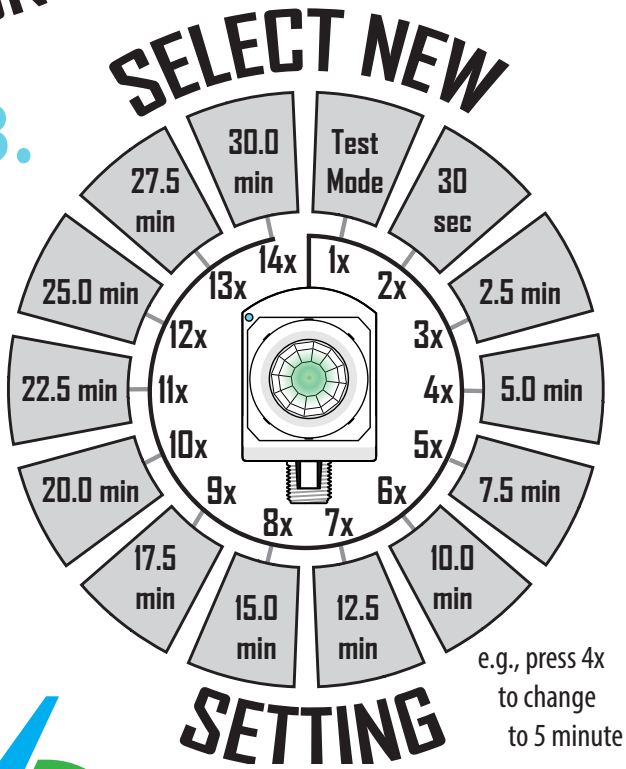
2.



While LED flashes back current setting 3x... go to step 3

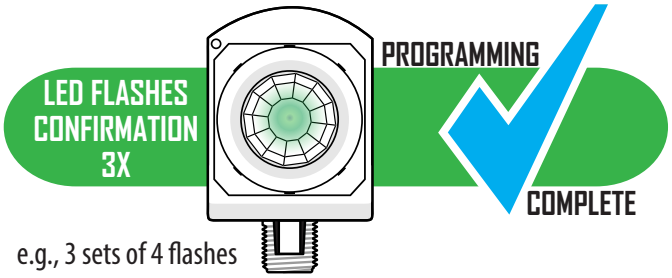
e.g., 6 flashes is default 10 minute time delay

3.



e.g., press 4x to change to 5 minute

4.



e.g., 3 sets of 4 flashes confirms 5 minute setting

 ©2015 Acuity Brands Lighting, Inc. All rights reserved 01/06/15

OPERATIONAL SETTINGS

NOTE: (*) Indicates factory default (unless otherwise marked)

2 = Occupancy Time Delay (Pole 1)

The length of time the sensor will keep the lights controlled by relay 1 on and at full bright after it last detects occupancy, assuming Minimum On Time (function 4) has been met.

1	Test Mode**	**6**	10.0 min*	**11**	22.5 min
2	30 sec	**7**	12.5 min	**12**	25.0 min
3	2.5 min	**8**	15.0 min	**13**	27.5 min
4	5.0 min	**9**	17.5 min	**14**	30.0 min
5	7.5 min	**10**	20.0 min		

For additional time settings, contact technical support at 1.800.PASSIVE

** Standard default unless specified in model number*

***Test mode disables Minimum On Time (Function 4), sets Occupancy Time Delay (Function 2 & 3) to 30 sec, and shortens photocell transition times and dimming rate. Mode will expire after 10 min or if Function 2 is set back to a time delay.*

3 = Occupancy Time Delay (Pole 2)

The length of time the sensor will keep the lights controlled by relay 2 (if present) on after it last detects occupancy, assuming minimum on time (Function 4) has been met.

1	NA	**6**	10.0 min*	**11**	22.5 min
2	30 sec	**7**	12.5 min	**12**	25.0 min
3	2.5 min	**8**	15.0 min	**13**	27.5 min
4	5.0 min	**9**	17.5 min	**14**	30.0 min
5	7.5 min	**10**	20.0 min		

** Standard default unless specified in model number*

4 = Minimum On Time (Lamp Maximizer)

The length of time required for lamps to be on in order to prevent short cycling that reduces fluorescent lamp life. If occupancy time delay expires prior to minimum on time being satisfied, the lamps will remain on until time has been met.

1	0 min**	**3**	30 min	**5**	60 min
2	15 min*	**4**	45 min		

** Standard default, reverts to 0 min if occ. time delay is changed from 10M*
***Default for 5M, 15M, 20M, 30M option versions*

5 = Photocell Set-Point

The target light level (at the sensor) that is to be maintained. Selecting Auto (Setting 1) will initiate on/off cycling procedure where sensor finds close-loop set-point. Not applicable to non-photocell versions.

1	Auto	**4**	2.0 fc	**7**	16.0 fc
2	0.5 fc	**5**	4.0 fc*	**8**	32.0 fc
3	1.0 fc	**6**	8.0 fc	**9**	64.0 fc

6 = Photocell / Dimming / 2-Pole Modes

Single Relay Units with P (Photocell) Option:

1 ***Disabled:*** *Photocell does not affect lights.*

2 ***Full On/Off Ctrl*:*** *Provides increased energy savings by switching lights off during occupied periods with sufficient daylight contribution from windows or skylights. Lights will be switched back on if light level falls below set-point.*

3 ***Inhibit Only Ctrl:*** *Photocell will prevent lights from initially turning on if adequate daylight is available, but will not turn lights off.*

Units with ADC or ANL (Dimming) Options:

1 ***Disabled:*** *Photocell does not affect lights.*

2 ***Automatic Dimming & Switching (-ADC):*** *Enables the sensor during occupied periods to dim lights down and then turn them completely off by opening the relay.*

3 ***Combination Dimming & Switching Photocell w/ High/Low Occ. Operation (-ANL):*** *Provides maximum energy savings by dimming and/or switching off lighting during periods of sufficient daylight contribution from windows or skylights. During unoccupied periods without sufficient daylight lights are dropped to low dim setting, insuring minimum light levels are maintained at night.*

Dual Relay (2P) Units - All Options:

1 *Photocell (if present) is Disabled.*

2 ***Standard Photocell Option (-P):***
Photocell controls both relays together with a single set-point.

3 ***Single Zone (-SZ) Photocell Option:***
Relay 1 controlled by photocell only, relay 2 controlled by occupancy only.

4 ***Dual Zone (-DZ) Photocell Option:***
Relay 1 controlled according to set-point, relay 2 controlled at fixed % higher as specified in Dual Zone Photocell Offset % (Function 14).

5 ***Inhibit Only Ctrl:*** *Photocell will prevent lights from initially turning on if adequate daylight is available, but will not turn lights off. Photocell controls both relays according to set-point.*

6 ***Alternating Off Relays (-AO):*** *Both relays close during periods of occupancy, but only one opens during periods of vacancy. The relay left closed is alternated in order to promote even lamp wear.*

7 ***Alternating Off Relays w/ Photocell (-AOP):*** *Both relays close during periods of occupancy, but only one opens during periods of vacancy or high daylight. The relay left closed is alternated in order to promote even lamp wear.*

7 = Sunlight Discount Factor

Value used to improve the tracking accuracy of a sensor with a photocell during periods of high daylight. Decreasing the value will lower the controlled level of the lights.

1	x/1*	**4**	x/4	**7**	x/7	**10**	x/10
2	x/2	**5**	x/5	**8**	x/8		
3	x/3	**6**	x/6	**9**	x/9		

9 = Restore Factory Defaults

Returns all functions to original settings.

1 Maintain Current* 2 Restore Defaults

10 = Dimming Range Max (High Trim)

The maximum output level of a sensor with dimming. Default is "10 VDC" unless indicated in model number.

1	Off	**4**	3 VDC	**7**	6 VDC	**10**	9 VDC
2	1 VDC	**5**	4 VDC	**8**	7 VDC	**11**	10 VDC*
3	2 VDC	**6**	5 VDC	**9**	8 VDC		

11 = Dimming Range Min (Low Trim)

For sensors with -ADC or -ANL option, this setting is the minimum output level to which the photocell will dim the lights. For lights to turn off from daylight, setting 1 must be selected.

Also, for all sensors with dimming, this setting is the dim level the lights will drop to when the Occupancy Time Delay (Function 2) expires. Note if the relay is wired, lights will still turn completely off after the Dim to Off Occupancy Time Delay (Function 15) expires.

1	Off*	**4**	3 VDC	**7**	6 VDC	**10**	9 VDC
2	1 VDC**	**5**	4 VDC	**8**	7 VDC	**11**	10 VDC
3	2 VDC	**6**	5 VDC	**9**	8 VDC		

**Indicates default unless otherwise specified in model number*
***Indicates default for -HL option unless otherwise specified in model number*

12 = Switch (Button) Mode

When enabled, mode allows user to switch the relay by pressing the push button for test purposes (e.g., in order to test wiring). Note there is a short delay after pushing the button before the relay switches.

1 Disabled* **2** Enabled

14 = Dual Zone Photocell Offset %

Relative value of photocell set-point that is used to control relay 2. Applies only to dual relay (2P) units with the -DZ option.

1	110%	**4**	140%	**7**	170%	**10**	200%
2	120%	**5**	150%*	**8**	180%		
3	130%	**6**	160%	**9**	190%		

15 = Dim to Off Occupancy Time Delay

After the Occupancy Time Delay (Function 2) has expired, this setting specifies the amount of time lights are held at minimum dim (Function 11) before turning off. Setting is only applicable for sensors with -HL and -ADC dimming options.

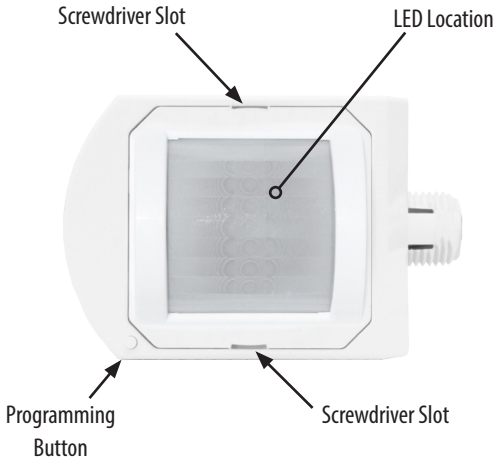
1	0 sec*	**5**	7.5 min	**9**	17.5 min
2	30 sec	**6**	10.0 min	**10**	20.0 min
3	2.5 min**	**7**	12.5 min	**11**	Stays at dim (never off)
4	5.0 min	**8**	15.0 min		

***HL default*

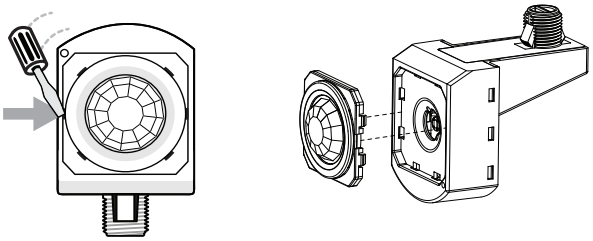
 ©2015 Acuity Brands Lighting, Inc. All rights reserved 01/06/15

INSTALLATION

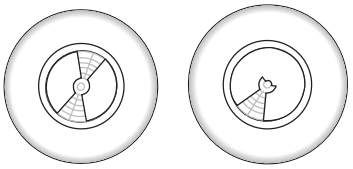
- To mount, push the unit's threaded chase nipple through a 1/2" knockout (7/8" hole) in a fixture.
- A snap lock mechanism on the chase nipple will secure the sensor.
- To interchange lenses, pry out installed lens using a small flat screw driver inserted into one of the slots shown below
- Apply light pressure on lens frame sides to snap in new lens.
- Install lens with the most optimum coverage pattern for a particular space and application
- Masking labels are included with the high bay 360º lens to mask off a portion of its coverage pattern for end-of-aisle, or to trim the side viewing to create a rectangular pattern for center-of-aisle.
- Masking labels are included with the high bay aisle way lens to mask off a portion of its coverage pattern for end-of-aisle applications.



REMOVING LENS

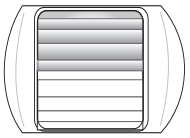


HIGH MOUNT 360º MASKING KIT



Center-of-Aisle End-of-Aisle

HIGH MOUNT AISLEWAY MASKING KIT



End-of-Aisle

COMMON CONFIGURATIONS (see page 7 for full ordering information)

Model #	# of Relays	Photocell	0-10 VDC Dimming	Power	Included Lenses	Notes on Operation
LSXR 610 HL	1	no	yes	120-277 VAC (MVOLT)	High Mount 360º & Low Mount 360º	Occ. - High/Low/Off (if relay is wired) or High/Low (if relay is not wired)
LSXR 610	1	no	no	120-277 VAC (MVOLT)	High Mount 360º & Low Mount 360º	Occ. - On/Off control
LSXR 610 P	1	yes	no	120-277 VAC (MVOLT)	High Mount 360º & Low Mount 360º	Occ. - On/Off control Photocell - On/Off control
LSXR 610 ADC	1	yes	yes	120-277 VAC (MVOLT)	High Mount 360º & Low Mount 360º	Occ. - On/Off (if relay is wired) or ~0V (if relay is not wired) Photocell - Dim to Off (if relay is wired) or ~0V (if relay is not wired)
LSXR 610 ADC 3V J100* (*100 pack option required)	1	yes	yes	120-277 VAC (MVOLT)	High Mount 360º & Low Mount 360º	Occ. - On/Off (if relay is wired) or 3V (if relay is not wired) Photocell - Dimming to 3V
LSXR 610 2P	2	no	no	120/277 VAC	High Mount 360º & Low Mount 360º	Occ. - On/Off control both relays
LSXR 610 2P AO	2	no	no	120/277 VAC	High Mount 360º & Low Mount 360º	Occ. - Both relays closed No Occ. - 1 relay opens (alternates to promote even lamp wear)

 ©2015 Acuity Brands Lighting, Inc. All rights reserved 01/06/15

ORDERING INFORMATION

SINGLE RELAY (example: LSXR 610 ADC HVOLT J100)

LSXR

Series

LSXR Passive Infrared Indoor Occupancy Sensor

Lens Options

Single Lens
- (blank) No Lens
- **6** High Mount 360º
- **10** Low Mount 360º
- **50** High Mount Aisleway
- **9** Small Motion 360º

Multi-Lens
- **610** High & Low Mount 360º
- **650** High Mount 360º & Aisleway
- **3PK** High & Low Mount 360º, & Aisleway
- **4PK** All Lenses

Dimming/Photocell
- **(blank)** None
- **HL** High/Low Occupancy Operation
- **P** Switching Photocell (On/Off)
- **ADC** Dimming & Switching Photocell
- **ANL** Dimming & Switching Photocell with High/Low Occ. Operation (see description on pg.1)

Voltage
- **(blank)** 120-277 VAC (MVOLT)
- **HVOLT** 347-480 VAC

addl. ordering options (*available in 100 packs only)

Max Dim Level*
- **(blank)** 10 VDC
- **9H** 9 VDC
- **8H** 8 VDC
- **7H** 7 VDC

Min Dim Level*
- **(blank)** Min
- **1V** 1 VDC
- **2V** 2 VDC
- **3V** 3 VDC
- **4V** 4 VDC
- **5V** 5 VDC
- **6V** 6 VDC

Lead Length*
- **(blank)** 8"
- **42L** 42"

Temp / Humidity
- **(blank)** None
- **LT** Low Temp

Default Time Delay*
- **(blank)** 10 min (w/ 15 min minimum on time)
- **5M** 5 min (LED only)
- **15M** 15 min
- **20M** 20 min
- **30M** 30 min

Pack Qty
- **(blank)** Single
- **J100** 100-Pack

***option available in 100-pack qtys only (add J100 option)**

DUAL RELAY (example: LSXR 610 2P AO J100)

LSXR

Series

LSXR Passive Infrared Indoor Occupancy Sensor

Lens Options

Single Lens
- (blank) No Lens
- **6** High Mount 360º
- **10** Low Mount 360º
- **50** High Mount Aisleway
- **9** Small Motion 360º

Multi-Lens
- **610** High & Low Mount 360º
- **650** High Mount 360º & Aisleway
- **3PK** High & Low Mount 360º, & Aisleway
- **4PK** All Lenses

2P

Poles

2P Dual Relay

Operating Mode
- **(blank)** None
- **AO** Alternating Off Relays (promotes even lamp wear)
- **AOP** Alternating Off Relays w/ Photocell
- **P** Photocell On/Off - both Poles (single set-point)
- **SZ** Photocell On/Off (Pole 1 only)
- **DZ** Photocell On/Off - both Poles (dual set-point)

Voltage
- **(blank)** 120/277 VAC
- **347** 347 VAC

addl. ordering options (*available in 100 packs only)

Lead Length*
- **(blank)** 8"
- **42L** 42"

Temp / Humidity
- **(blank)** None
- **LT** Low Temp

Default Time Delay*
- **(blank)** 10 min (w/ 15 min minimum on time)
- **5M** 5 min (LED only)
- **15M** 15 min
- **20M** 20 min
- **30M** 30 min

Pack Qty
- **(blank)** Single
- **J100** 100-Pack

***option available in 100-pack qtys only (add J100 option)**

ACCESSORY LENSES (example LENS 50 J100)

LENS

Lens Type
- **6** High Mount 360º
- **10** Low Mount 360º
- **50** High Mount Aisleway
- **9** Small Motion 360º

Job Pack Qty
- (blank) Single
- **J10** 10-Pack
- **J100** 100-Pack

c UL us LISTED

TITLE 20/24
ASSEMBLED in U.S.A.

Sheet#: TS-LSXR-002

AcuityBrands.
Expanding the boundaries of lighting™

WARRANTY

5-year limited warranty.
Full warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx
Note: Specifications subject to change without notice.
Actual performance may differ as a result of end-user environment and application.

 ©2015 Acuity Brands Lighting, Inc. All rights reserved 01/06/2015

sensorswitch

AUTOMATIC DIMMING CONTROL PHOTOCELL SENSOR - CEILING MOUNT, LOW VOLTAGE

TYPICAL APPLICATIONS

- Daylight Harvesting
- Continuous Dimming of a 0-10 VDC Dimmable Ballast

FEATURES

- Automatically Dims/Brightens 0-10 VDC ballasts as daylight changes
- Capable of finding optimum set-point
- Digital Set-Point Control
- Programmable via simple push-button commands
- Dimming sinks up to 20 mA
- Green LED Activity Indicator
- 100 Hr Lamp Burn-in Timer Mode

AVAILABLE OPTIONS

- Dual Zone Control (-DZ)
- Low Temp/Hi Humidity (-LT)

SPECIFICATIONS

- Size: Circular, 4.55" Dia., 1.55" Deep (11.56 cm Dia., 3.94 cm Deep)
- Sensor Weight: 5 Ounces
- Sensor Color: White
- Mounting: Ceiling Tile Surface, Round Fixture or Junction Box
- Relative Humidity: 20 to 90% non-condensing
- Operating Temp: 14º to 160º F (-10° to 71° C)
- Storage Temp: -14º to 160º F (-26° to 71° C)
- 12 to 24 VAC/VDC Oper. Voltage
- UL, CUL, and Title 24 Compliant
- 5 Year Warranty
- Made in U.S.A.

LOW TEMP/HI HUMIDITY(-LT)

- Conformally coated Circuit Board is corrosion resistant from moisture
- Operates down to -40º F(-40º C)

CM-ADC

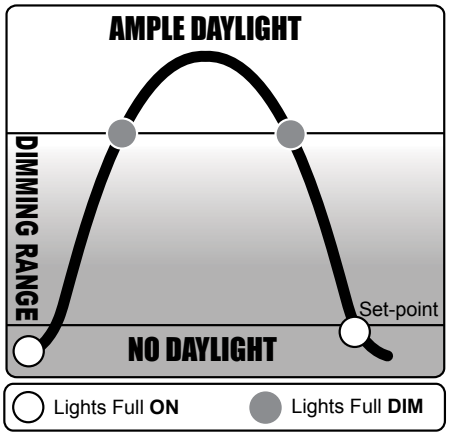
w/ Dual Zone Option!



The *CM-ADC Series* of Automatic Dimming Control sensors provide continuous control of dimmable ballasts for daylight harvesting applications. Ideal for public spaces with windows like vestibules, corridors, or bathrooms; the *CM-ADC* works by monitoring daylight conditions in a room, then controlling a 0-10 VDC dimmable ballast so as to insure that adequate lighting levels are maintained. To add full On/Off switching to the dimming control provided by the *CM-ADC*, see the Technical Data Sheet on the CM-PC-ADC sensor. Additionally with the Dual Zone (-DZ) option, a second customized controlled output is provided. All units are powered by 12 to 24 VAC/VDC.

AUTOMATIC DIMMING CONTROL OPERATION

The sensor controls a 0-10 VDC dimmable ballast to achieve maximum daylight harvesting while maintaining a minimum light level referred to as the "set-point". When no daylight is available, the sensor will allow the dimmable ballast to operate at its full bright level (10 VDC). As daylight increases and begins to contribute to the overall light level of the room, the Automatic Dimming Control (ADC) feature starts dimming the ballast proportionally. At the point when sufficient daylight is present to maintain the set-point without any contribution from the lights, the sensor will hold the ballast at its full dim setting (0 VDC). When daylight levels fall below the set-point again, the Automatic Dimming Control will start reducing the dim level (increasing the brightness) in order to increase the overall light level. Finally, at the point when all daylight contribution is gone, the ballast will again be at its full bright level (10 VDC). With dimming control sensors, the set-point can be easily adjusted after it has been initially programmed (via either the Automatic or Manual process) using the Incremental control feature that steps the brightness setting (voltage) up or down 10% (1 VDC) and adjusts the set-point accordingly.



DUAL ZONE (-DZ) OPTION

Daylight contribution diminishes as the distance from the source (windows) increases. Therefore lights that are different distances from a window should not be controlled from the same photocell sensor output. With the -DZ option, the *CM-ADC* has a second output that can control an additional 0-10 VDC dimmable ballast according to a new set-point that is a selected percentage higher than that of the primary zone's set-point. This makes the -DZ option ideal for classrooms with individually controlled parallel rows of lights.

Model Numbering System: CM-ADC-[DUAL ZONE]-[TEMP/HUMIDITY]

SERIES #	DESCRIPTION	DUAL ZONE	TEMP/HUMIDITY
CM-ADC	Automatic Dimming Control Sensor - Ceiling Mount, Low Voltage	Blank = Single Zone -DZ = Dual Zone	Blank = 14º to 160º F -LT = -40º to 160º F

LIGHT LEVEL SET-POINT

The sensor functions by comparing the amount of daylight available with a defined acceptable lighting level. This threshold, called the “set-point”, is utilized in all daylight harvesting lighting control decisions. The sensor can find its optimum set-point via the **Automatic Set-Point Programming** mode. In this mode, the sensor takes light readings at different dim settings and then sets the minimum light level to be the amount contributed by the artificial lights being controlled. It is assumed that the space is properly lit by design, however, if this is not the case the set-point may be easily adjusted to the occupant’s preference. All modes and settings are entered digitally via a push button sequence. Once programmed, the exact value of the set-point (in foot candles) can be read out from the sensor via a series of LED flashes.

DIGITAL SET-POINT CONTROL

Each sensor contains a microcontroller that enables the user to engage the Automatic Set-Point Programming mode or to manually set / adjust the set-point. The manual process involves calculating and inputting the exact foot-candle value of the desired set-point into the sensor. It is important to note that the set-point is the light level required at the face of the sensor and that this value will be much different than the level required at a work surface. Typically, light levels at the ceiling are 3 to 5 times less than the work surface. For example, if 50 fc is desired at the work surface, the sensor should be set at 10 fc. For best results, measure the levels at both locations using a foot-candle meter before programming the set-point.

WIRING INSTRUCTIONS

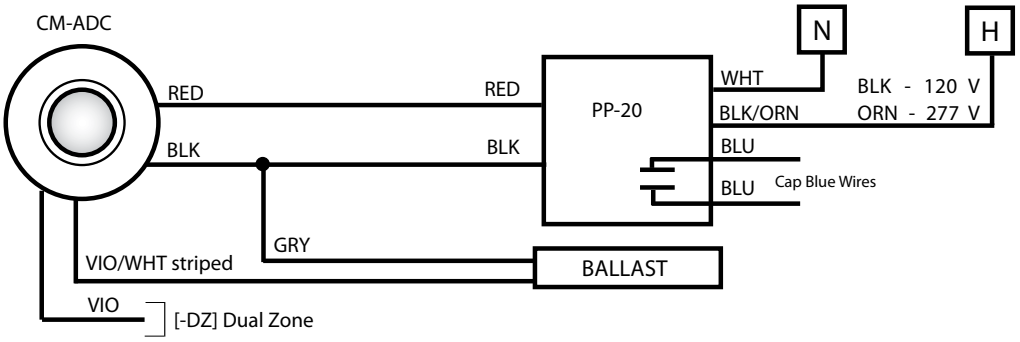
Wire lead connections are Class II, 18 to 22 AWG.

STANDARD CM-ADC

RED - 12 to 24 VAC/VDC
BLACK - Common
VIOLET/WHITE striped - Connect to Violet wire from Zone 1’s 0-10 VDC dimmable ballast. Also connect ballast Gray wire to sensor Black wire.

DUAL ZONE OPTION (-DZ)

Connect the additional solid VIOLET wire to Zone 2’s 0-10 VDC dimmable ballast. Also connect Zone 2 ballast Gray wire to sensor Black wire.



WARRANTY: Sensor Switch, Inc. warrants these products to be free of defects in manufacture and workmanship for a period of sixty months. Sensor Switch, Inc., upon prompt notice of such defect will, at its option, provide a Returned Material Authorization number and a replacement product.
LIMITATIONS AND EXCLUSIONS: This Warranty is in full lieu of all other representation and expressed and implied warranties (including the implied warranties of merchantability and fitness for use) and under no circumstances shall Sensor Switch, Inc. be liable for any incidental or consequential property damages or losses.

SENSOR SWITCH, INC.
900 Northrop Rd., Wallingford, CT 06492
(203) 265-2842 info@sensorswitch.com
www.sensorswitch.com

Revised 6/22/2006
copyright Sensor Switch, Inc. 2006

sensorswitch

ON/OFF PHOTOCELL SENSOR - CEILING MOUNT, LOW VOLTAGE

TYPICAL APPLICATIONS

- Daylight Harvesting
- On/Off Lighting Control

FEATURES

- Full On/Off Switching of Lighting
- Works as Stand Alone Unit or with Occupancy Sensor System
- Capable of finding optimum set-point
- Digital Set-Point Control
- Programmable via simple push-button commands
- Outputs to Power Pack or Lighting Control System via SPDT Relay
- Green LED Activity Indicator
- 100 Hour Lamp Burn-in Timer Mode

AVAILABLE OPTIONS

- Dual Zone Control (-DZ)
- Low Temp/Hi Humidity (-LT)

SPECIFICATIONS

- Size: Circular, 4.55" Dia., 1.55" Deep (11.56 cm Dia., 3.94 cm Deep)
- Sensor Weight: 5 Ounces
- Sensor Color: White
- Mounting: Ceiling Tile Surface, Round Fixture or Junction Box
- Relative Humidity: 20 to 90% non-condensing
- Operating Temp: 14º to 160º F (-10° to 71° C)
- Storage Temp: -14º to 160º F (-26° to 71° C)
- Operating Voltage: 12-24 VAC/VDC
- UL, CUL, and Title 24 Compliant
- 5 Year Warranty
- Made in U.S.A.

LOW TEMP/HI HUMIDITY(-LT)

- Conformally coated Circuit Board is corrosion resistant from moisture
- Operates down to -40º F(-40º C)

CM-PC

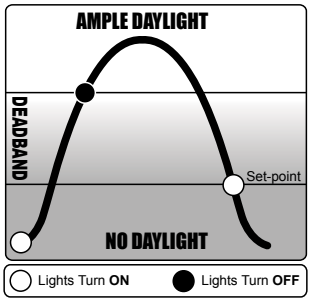
w/ Dual Zone Option!



The *CM-PC* series of On/Off Photocell sensors provide the industry's most intelligent control of lighting for daylight harvesting applications. Ideal for public spaces with windows like vestibules, corridors, or bathrooms; the sensors work by monitoring daylight conditions in a room, then controlling the lighting so as to insure that adequate lighting levels are maintained. The *CM-PC* is used for On/Off lighting control; turning off the lights when sufficient natural light is present and turning them on when additional lighting is necessary. Additionally with the Dual Zone (-DZ) option, a second set of customized control outputs is provided. All *CM-PC* sensors can be used alone or as part of an occupancy sensor system. The sensors are powered with 12 to 24 VAC/VDC and typically operate with a PP-20 or MP-20 Power Pack; enabling complete 20 Amp circuits to be controlled. To add dimming control to the On/Off switching provided by the *CM-PC*, see the Technical Data Sheet on the CM-PC-ADC sensor.

ON/OFF SWITCHING OPERATION

The lights turn "On" when the space's overall light level drops below a programmable threshold called a "set-point". The lights turn "Off" when light is above the set-point plus a 10 to 20% safety factor and deadband. The safety factor will prevent the system from cycling when the light level is very near the set-point. The deadband is the level of light contributed by the artificial lights being controlled. This level is tracked so if the lighting conditions change (for example a lamp burns out) the point at which the lights turn off is adapted accordingly. If the photocell is looking up at skylights and can not view the lights being controlled, there is no deadband and the sensor is said to be working "open loop". There is also an adaptive 5-25 minute delay before the photocell turns the lights off to prevent the system from cycling on a cloudy day; and a 45 second delay before switching from "Off" to "On".



DUAL ZONE (-DZ) OPTION

With the -DZ option, a second low voltage output is provided to control an additional zone of lighting according to one of two operational modes. The default mode, referred to as "Duo" operation, is ideal for A/B switching applications (also called inboard/outboard) as it determines the necessary On/Off combination of the zones in order to maintain adequate lighting. The alternate mode uses a relative set-point for the second zone that is a selected percentage higher than the primary zone's set-point. This mode accounts for the fact that daylight contribution diminishes as the distance from the source (windows) increases. Called "Percentage" operation, this second mode is ideal for classrooms with individually controlled parallel rows of lights. A single shared set-point is used by both modes and can be user programmed or automatically determined by the sensor itself.

Model Numbering System: CM-PC-[DUAL ZONE]-[TEMP/HUMIDITY]

SERIES #	DESCRIPTION	DUAL ZONE	TEMP/HUMIDITY
CM-PC	On/Off Photocell Sensor - Ceiling Mount, Low Voltage	Blank = Single Zone -DZ = Dual Zone	Blank = 14º to 160º F -LT = -40º to 160º F

LIGHT LEVEL SET-POINT

The sensor functions by comparing the amount of daylight available with a defined acceptable lighting level. This threshold, called the set-point, is utilized in all daylight harvesting lighting control decisions. The sensor can find its optimum set-point via the **Automatic Set-Point Programming** mode. In this mode, the sensor sets the minimum light level to be the amount contributed by the artificial lights being controlled. It is assumed that the space is properly lit by design, however, if this is not the case the set-point may be easily adjusted to the occupant's preference. All modes and settings are entered digitally via a push button sequence. Once programmed, the exact value of the set-point (in foot candles) can be read out from the sensor via a series of LED flashes.

DIGITAL SET-POINT CONTROL

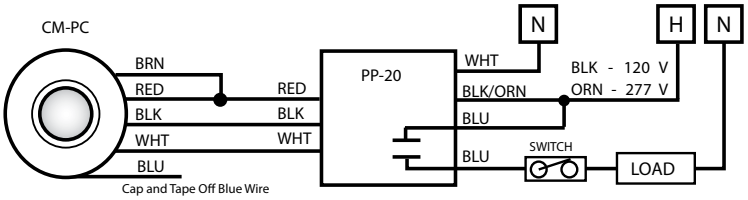
Each sensor contains a microcontroller that enables the user to engage the Automatic Set-Point Programming mode or to manually set / adjust the set-point. The manual process involves calculating and inputting the exact foot-candle value of the desired set-point into the sensor. It is important to note that the set-point is the light level required at the face of the sensor and that this value will be much different than the level required at a work surface. Typically, light levels at the ceiling are 3 to 5 times less than the work surface. For example, if 50 fc is desired at the work surface, the sensor should be set at 10 fc. For best results, measure the levels at both locations using a foot-candle meter before programming the set-point.

WIRING INSTRUCTIONS

Wire lead connections are Class II, 18 to 22 AWG.

STANDARD CM-PC

WHITE - Outputs high VAC/VDC (from Brown wire) when sensor calls for Lights "On" (eg. the room is Dark)
BLUE - Outputs high VAC/VDC (from Brown wire) when sensor calls for Lights "Off" (eg. adequate daylight light is present)
RED - 12 to 24 VAC/VDC
BLACK - Common
BRN - Connect to Low Voltage Control input (Red wire on a Power Pack, White wire on an occupancy sensor)

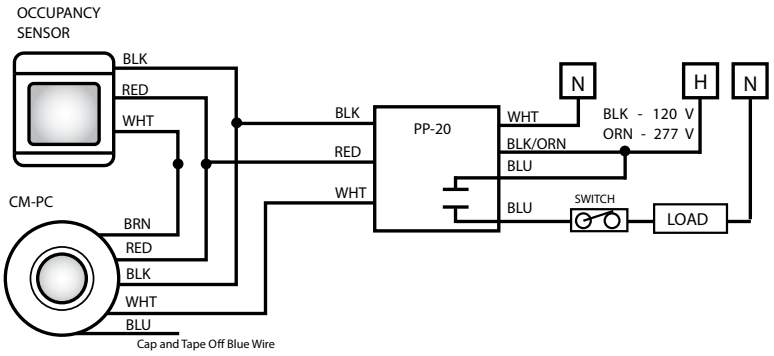


DUAL ZONE OPTION (CM-PC-DZ)

BLUE wire will output high DC when sensor calls for Lights "On" for Zone 2.
(Note: With the -DZ option the SPDT Relay is no longer present and the White wire will output only DC)

WIRING TOGETHER WITH OCCUPANCY SENSORS

Wire upstream occupancy sensor White wire to sensor Brown wire. When the space is unoccupied, the lights stay off regardless of daylight levels. However when occupied, the photocell sensor will control the lights according to daylight level and set-point.



WARRANTY: Sensor Switch, Inc. warrants these products to be free of defects in manufacture and workmanship for a period of sixty months. Sensor Switch, Inc., upon prompt notice of such defect will, at its option, provide a Returned Material Authorization number and a replacement product.
LIMITATIONS AND EXCLUSIONS: This Warranty is in full lieu of all other representation and expressed and implied warranties (including the implied warranties of merchantability and fitness for use) and under no circumstances shall Sensor Switch, Inc. be liable for any incidental or consequential property damages or losses.

sensorswitch

SENSOR SWITCH, INC.
900 Northrop Rd., Wallingford, CT 06492
(203) 265-2842 info@sensorswitch.com
www.sensorswitch.com

Revised 7/10/2006
copyright Sensor Switch, Inc. 2006

TS-400 Digital Time Switch



PROJECT

LOCATION/TYPE

Product Overview

Description

The InteliSwitch TS-400 series digital time switches automatically turn lights off after a preset time. The simple pushbutton operation provides users with convenient time out lighting control without the nuisance of twist timers.

Operation

The TS replaces an existing wall switch. The TS-400 operates between 100 and 300 volts. Pressing the TS's on/off button turns lights on. The lights will remain on for the duration of the time-out setting which is adjustable from 5 minutes to 12 hours. Lights can be turned off before the time-out setting expires by pressing the on/off button. Also, the unit can be reset at any time by holding down the on/off button for 2 seconds. This will bring the timer back to its original time out setting and restart the countdown.

Time Scroll Overrides

The time scroll option allows users to temporarily override the time out setting without adjusting the settings. Time scroll is selected with the calibration button. With time scroll programmed to "UP", lights can be held on longer than the time out period. With time scroll programmed to down "DN", lights can be turned off sooner than the time out period. Pressing the on/off switch for more than 4 seconds causes the timer to scroll in the set direction throughout the possible time out settings.

Applications

The TS is an ideal lighting control choice in equipment rooms, storage areas, and closets.

Features

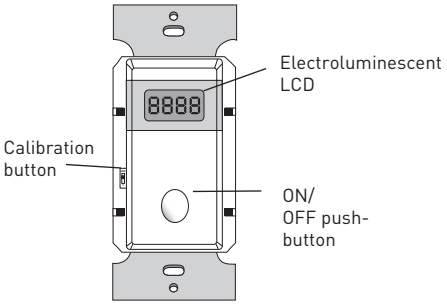
- Time-out settings range from 5 minutes to 12 hours for flexibility in fitting many applications
- Optional flash and beep warnings allow time to reset the switch if someone is present
- Time scroll option provides temporary override of the preset time out period
- Simple reset feature for returning the switch to its original preset time-out setting
- Electroluminescent back-lit LCD shows timer countdown
- Terminal style wiring simplifies installation
- Zero crossing reduces stress on the relay and increases product longevity
- Pushbutton programming gives the TS an easy set up process
- Setting the time-out for 2 hours and time scroll to down allows Title 24 compliance for using override switches
- Compatible with decorator wall plates
- Qualifies for ARRA-funded public works projects

Specifications

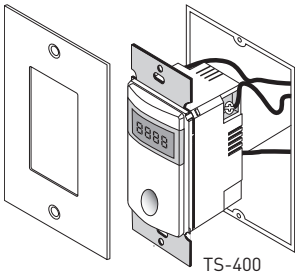
- TS-400: 120/277 VAC; 50/60 Hz
- Time-out adjustments range from 5 minutes to 12 hours (5 minute increments to 1 hour, then 15 minute increments to 12 hours)
- Optional visual warning: flashes lights at 5 minutes and 1 minute prior to time-out
- Optional audible warning: beeps every 5 seconds at 1 minute prior to time-out
- No minimum load requirement
- Compatible with all electronic ballasts, ELV, MLV, LED, and motor loads
- Dimensions: 2.66" x 1.79" x 1.76" (67.5mm x 45.5mm x 44.7mm)
- UL and cUL listed
- Five year warranty

Controls & Installation

Product Controls

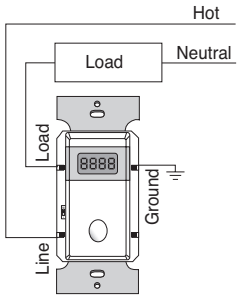


Installation

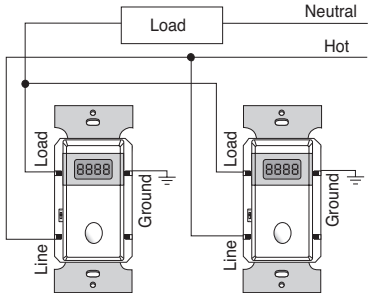


Wiring

TS-400 Single Level Lighting



TS-400 3-Way Lighting



When using a three-way application, lights may be turned on from either switch, but can only be turned off at the switch that turned them on.

Ordering Information

Catalog No.	Color	Voltage	Load Rating
☐ TS-400-W ☐ TS-400-W-U	White	120 VAC; 50/60 Hz, or 277 VAC; 50/60 Hz	0-800 Watt ballast, or 0-1200 Watt ballast
☐ TS-400-I	Ivory		
☐ TS-400-A	Lt. Almond		
☐ TS-400-B	Black		
☐ TS-400-G	Grey		

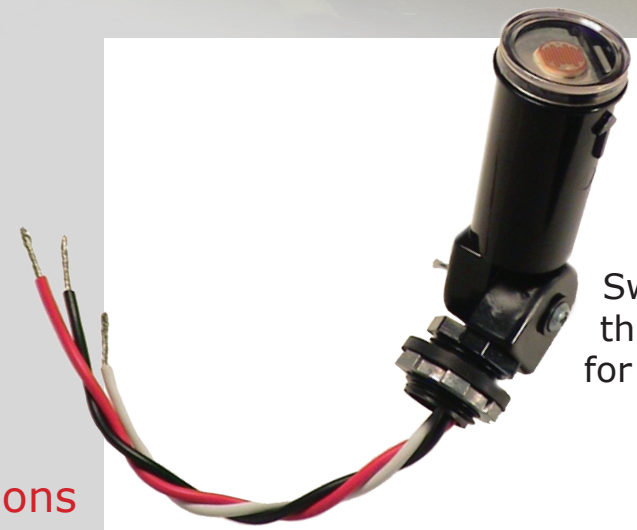
Order wall plate separately.

-U = ARRA compliant. Product produced in the U.S.

RIPLEY LIGHTING CONTROLS

DIVISION OF SOUTHCONN TECHNOLOGIES INC

Wire-In Photocontrol
Pencil Control



Swivel-base design with thumb-screw lock down for precise positioning

Typical Applications

Security Systems

Low Voltage Lighting

Landscaping

Exclusive Features

High Impact Thermoplastic Base

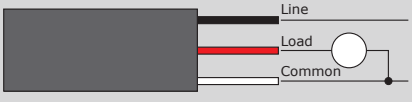
Swivel-base Design

Thumb-screw lock down

Meets or exceeds rigid quality requirements of SouthConn Technologies Inc. and applicable ANSI C136.10, and C136.24 Standards

	7051-48VDC	7051-120V
Nominal Voltage	48 (DC)	120 (AC) 60 Hz
Voltage Range	44—52 (DC) (+/- 10% of rated voltage)	105—135
Fail Mode	On (contacts normally closed)	
Load Rating	1000 Watt Tungsten / 1200 VA Ballast	
Operating Temperature	-40C to +70C (-40F to +158F)	
Photocell	Chemically Coated Cadmium Sulfide	
Dielectric Strength	5000 Volts between current carrying parts and metal surfaces	
Time Delay	up to 2 minutes	
Operating Light Levels	Turn On 2 FC ±1 / Turn Off by 10 FC	
ANSI Color Coded Cover	Black	

For 1/2” NPT Conduit Knock-out Mounting
1/2” Conduit Lock-ring Included
3 #18 AWG Leads



Wiring

Phone: 803-939-4700
Fax: 803-939-4777
E-mail: Sales@RipleyLC.com

www.RipleyLC.com

PS-6100-021
Pencil Control
052714
Rev. 4

ESM 4:
Energy Management System Upgrade/Expansion

ESM Overview

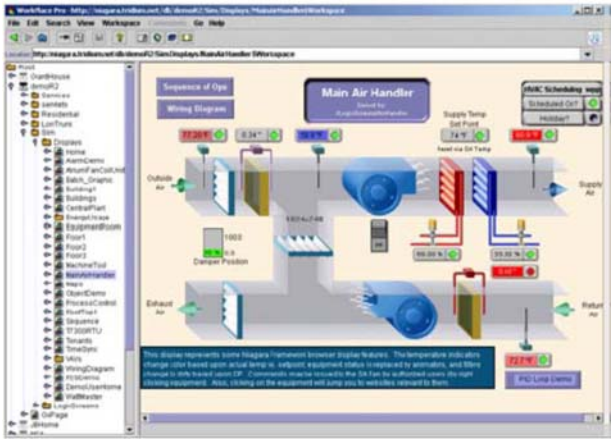


Figure 4.1: Ameresco proposes to expand the existing EMS.

Ameresco proposes to update the existing EMS systems installed in the City Hall, Police Court Building, Dennis Malone Aquatic Center, Beals Senior Center, Main Library, Manross Library, and Youth Services Building. Ameresco will also install new programmable thermostats at the City Hall Annex maintenance garage.

The proposed EMS would be "open protocol" and "interoperable" with other manufacturer's products. This feature would allow products from any vendor to be installed as the system is maintained or expanded in the future. The recommended EMS would be accessible from any Internet-enabled personal computer with web browsing software and would provide reduced energy consumption, increase system reliability and improve occupant comfort for the City. The proposed EMS will provide dynamic systems control and utility consumption reporting capabilities for the entire City.

Under the proposed EMS, Ameresco would install a new open protocol Tridium^{AX} based EMS and new Direct Digital Control (DDC) actuators that would replace existing pneumatic controls for the air handling units and other control valves, as well as exhaust fans and circulator pumps. All existing pneumatic controls will be removed at the City Hall, Police Court building and Manross Library.

ESM Detail

Existing System

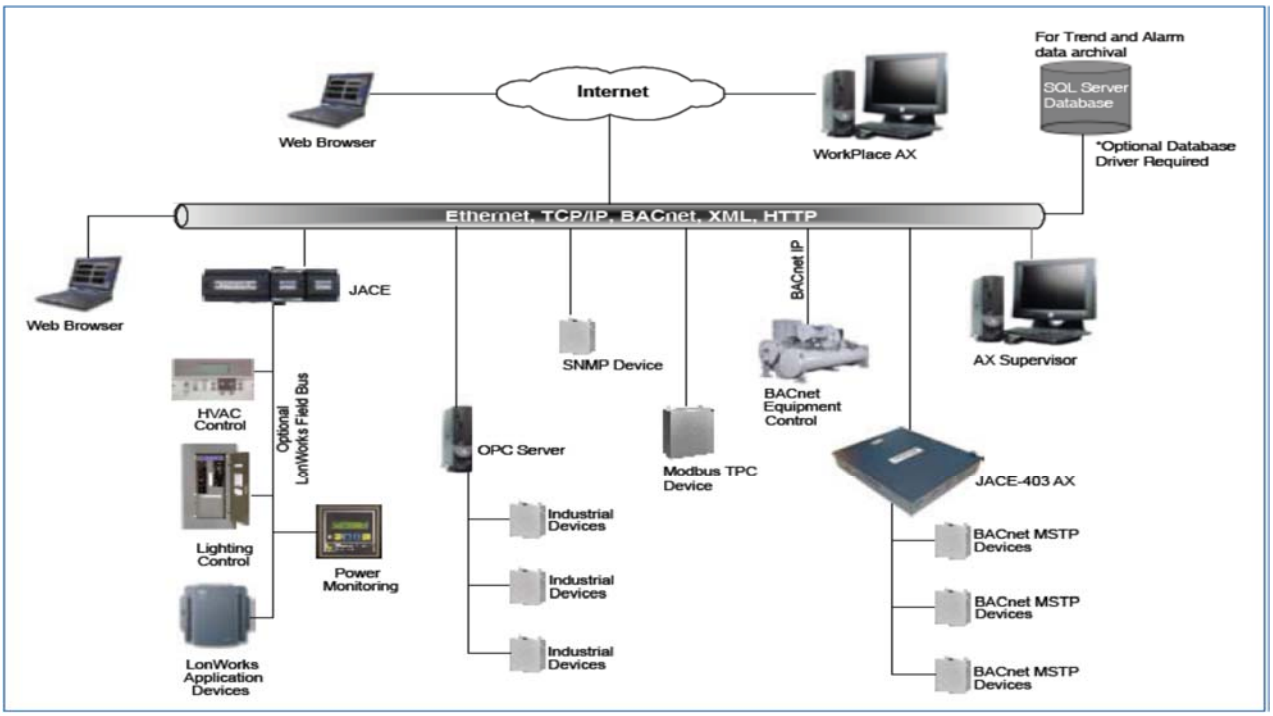
The existing control systems at the City of Bristol are outlined in the table below. The controls in each building consist of a mix of full DDC systems, DDC systems with pneumatic valves/actuators, stand-alone electronic controls such as thermostats with zone valves, and fully pneumatic systems.

"Page content is subject to Confidentiality Restrictions"

Building	Existing Control System Front End	Primary Temperature Control Method
City Hall	Invensys GCM	Barber Colman, Pneumatic
Police Court	Invensys GCM	Barber Colman, Pneumatic
Malone Aquatic Center	JCI Stand-Alone Controls	Standard Tstats
Beals Senior Center	JCI Metasys	JCI Metasys DDC
Main Library	Invensys GCM	Invensys I/A Series
Manross Library	Invensys GCM	Invensys I/A Series, Pneumatic
Youth Services Building	Invensys GCM	Invensys I/A Series, Barber Colman

Proposed System

Ameresco is proposing an "open protocol" energy management system with Tridium's Niagara^{AX} Framework. The open protocol specification will allow the City to connect products from almost any LonWorks™ or BACnet vendor to the proposed system, in addition to other systems based on MODBUS or JCI's N2. Future upgrades and expansions can be competitively bid and will not be limited to the products of any one manufacturer. Ameresco has no commercial alliance with any EMS vendor and considers all applicable products. Ameresco believes the City's interests would be best served with an open protocol EMS architecture.



Typical Tridium ™configuration.

A new Tridium AX server will be installed in the server closet in the IT Department at City Hall to control and monitor the new EMS across all buildings included in this measure. The server will have all the software necessary to program and expand the EMS including all necessary licenses. This server sits on the existing WAN, behind existing firewalls. Access to the server will be secured through password gateways and existing security systems. Communications between the field controllers will take place on a dedicated, non-Ethernet

network. The new EMS will be networked using the City's existing WAN. New control system interface equipment will be connected to the existing communications infrastructure. An Internet interface built into the new EMS will allow an authorized and authenticated operator to access EMS information through standard web browser software from any computer connected to the WAN.

During construction, Ameresco will work with the City to ensure that all buildings necessary are able to communicate on the new Tridium system. At this time we believe this will be possible. Some outlying buildings have Internet service but not City network which would still work. We are not aware of any buildings included for a networked EMS that would have no means for communicating with the EMS

Site	Proposed System Front End	Proposed Temperature Control Method
City Hall	Tridium Niagra AX	Integrate and Reuse existing Barber Colman Controls, Replace existing pneumatic valves and Dampers with electronic equivalents
Police Court	Tridium Niagra AX	Integrate and Reuse existing Barber Colman Controls, Replace existing pneumatic valves with electronic equivalents
Malone Aquatic Center	Tridium Niagra AX	New Schneider TAC I/A Series Controls
Beals Senior Center	Tridium Niagra AX	Integrate and reuse existing JCI Metasys DDC
Main Library	Tridium Niagra AX	Integrate and reuse existing Invensys I/A Series
Manross Library	Tridium Niagra AX	Integrate and reuse existing Invensys I/A Series, Replace existing pneumatic valves and Dampers with electronic equivalents
Youth Services Building	Tridium Niagra AX	Integrate and reuse existing Invensys I/A Series and Barber Colman Controls

City Hall

Integrate Existing DDC EMS

Provide and install a new Open Protocol Web Accessible Direct Digital Control (DDC) System that will integrate the existing Barber Colman and Pneumatic system. A new TAC I/A Series ENC-520 Enterprise Network Controller running the latest version of the Niagara AX framework will replace the existing Invensys GCM front end. The EMS scope of work for this building includes the following:

- Provide and install a new JACE running on the latest version of Tridium's NiagaraAX at the time of construction with all updates provided until the date of acceptance.
- Provide new Supervisory Controller including open license having no expiration (Ameresco OrgId must be added at time of licensing).
- Perform point by point inspection of existing control system including terminal units and provide a report listing any deficiencies.
    - Existing damper actuators, control valves, and other control devices found to be deficient are not to be replaced unless specified in scope of work
    - Provide all category 5e communication wiring from new FX to customer network closet
- Provide programming of all points, graphics and control sequences for each piece of equipment controlled.
- Set up trends and alarms per Ameresco/City's specifications

"Page content is subject to Confidentiality Restrictions"

- **New Points of Control:** The City Hall will receive an additional 60 control points. (See Below)
- **Existing Points of Control to be Integrated:** Existing Barber Colman EMS
- **Existing Points of Control to be Modified:** Implement Space Temperature and Occupancy Schedules, Implement Optimum Start

Pneumatic to DDC Conversion

- Demo and remove the existing pneumatic controls including valve actuators and damper actuators. Where possible existing valves will be retrofit with electronic actuators. In some cases the entire valve may need to be replaced.
- The City Hall will receive an additional 60 control points.
- New system to be based on points list provided by Ameresco
    - Replacement of 32 pneumatic damper actuators and 28 pneumatic hot/chilled water valves with electronic equivalents. The additional equipment to be controlled is listed below.
- Provide and install new control points and integrate existing systems per attached points list
    - **New Points of Control:**
        - Control (23) VAV boxes
        - Control (18) Dual Temp Coil Valves
        - Control (6) Chilled Water Coil Valves
        - Control (4) Chilled Water System Valves

Programmable Thermostats

- Provide and install (2) new touchscreen, Wi-Fi capable, Universal Programmable Thermostats (Honeywell WiFi Focus Pro TH6320WF1005 or similar) with secure maximum setpoint limits to control the existing furnaces that serve the City Hall Annex Garage.
    - Reuse existing control wiring where feasible.
    - Provide programming of all operation schedules per Ameresco/ City's specifications.

Police Court

Provide and Install a new Open Protocol Web Accessible Direct Digital Control (DDC) System that will integrate the existing Barber Colman system. A new TAC I/A Series ENC-520 Enterprise Network Controller running the latest version of the Niagara AX framework will replace the existing Invensys GCM front end. The EMS scope of work for this building includes the following:

- Provide and install a new JACE running on the latest version of Tridium's NiagaraAX at the time of construction with all updates provided until the date of acceptance.
- Provide new Supervisory Controller including open license having no expiration (Ameresco OrgId must be added at time of licensing).
- Perform point by point inspection of existing control system including terminal units and provide a report listing any deficiencies.
    - Existing damper actuators, control valves, and other control devices found to be deficient are not to be replaced unless specified in scope of work
    - Provide all category 5e communication wiring from new FX to customer network closet

"Page content is subject to Confidentiality Restrictions"

- Provide programming of all points, graphics and control sequences for each piece of equipment controlled.
- Set up trends and alarms per Ameresco/City's specifications
- **New Points of Control:** Six (6) additional control points (see below)
- **Existing Points of Control to be Integrated:** Existing Barber Colman EMS
  Existing Points of Control to be Modified: Implement Space Temperature and Occupancy Schedules, Implement Optimum Start

Pneumatic to DDC Conversion

- Demo and remove the existing pneumatic controls including valve actuators. Where possible existing valves will be retrofit with electronic actuators. In some cases the entire valve may need to be replaced.
- The Police Court will receive an additional 6 control points.
- Replacement of 6 pneumatic zone valves located in the boiler room with electronic equivalents.
- Provide and install new control points and integrate existing systems
  - **New Points of Control:**
    - Control (6) zone valves

Dennis Malone Aquatic Center

The Dennis Malone Aquatic Center will receive an Open Protocol Web Accessible Direct Digital Control (DDC) System encompassing approximately 59 new hardware points. New building-level, open-protocol, DDC controllers will be installed and tied into the central EMS. The proposed EMS scope of work for this building includes the following:

- Provide and install a new JACE running on the latest version of Tridium's NiagaraAX at the time of construction with all updates provided until the date of acceptance.
- New JACE to come with open Tridium license having no expiration (Ameresco OrgId must be added at time of licensing).
- Reuse existing damper actuators and control valves.
- Provide all category 5e communication wiring from new Supervisory Controller to customer network closet.
- Provide all communication wiring between all new field controllers and new Supervisory Controller for a complete and operating system.
- Provide programming of all points, graphics and control sequences for each piece of equipment controlled (see attached points list).
- Set up trends and alarms per Ameresco/City's specifications.
- **New Points of Control:**
  - Provide (1) Outdoor Air Temperature/Humidity Sensor
  - Control (1) Hot Water Boiler & (2) Circulators
  - Control (1) Pool Water Boiler & Pump
  - Control (1) Dehumidifying Pool Heater Unit w/ Electric Reheat
  - Control (4) Finn Tube Baseboard Control Valves

"Page content is subject to Confidentiality Restrictions"

- Control (2) Fan Coil units serving the Lobby
- Control (6) Exhaust Fans
- Control (1) Domestic Water Indirect System and Circulating Pump
- Control (1) DX Condensing Unit

Beals Senior Center

The Senior Center currently utilizes a Johnson Controls Metasys control system to control the HVAC equipment in the building. The Senior Center will receive a new Open Protocol Web Accessible Direct Digital Control (DDC) System that will integrate with the existing JCI Metasys system. A new TAC I/A Series ENC-520 Enterprise Network Controller running the latest version of the Niagara AX framework will integrate the existing Metasys NAE front end. The proposed EMS scope of work for this building includes the following:

- Provide and install a new JACE running on the latest version of Tridium's NiagaraAX at the time of construction with all updates provided until the date of acceptance.
- Provide new Supervisory Controller including open license having no expiration (Ameresco OrgId must be added at time of licensing).
- Perform point by point inspection of existing control system including terminal units and provide a report listing any deficiencies.
  - Existing pneumatic damper actuators and control valves are to remain.
  - Existing damper actuators, control valves, and other control devices found to be deficient are not to be replaced unless specified in scope of work
  - Provide all category 5e communication wiring from new FX to customer network closet
- Provide programming of all points, graphics and control sequences for each piece of equipment controlled.
- Set up trends and alarms per Ameresco/City's specifications
- **New Points of Control:** None
- **Existing Points of Control to be Integrated:** Existing JCI EMS
  Existing Points of Control to be Modified: Implement Space Temperature and Occupancy Schedules, Implement Optimum Start

Main Library

The Main Library will receive a new Open Protocol Web Accessible Direct Digital Control (DDC) System that will integrate with the existing Invensys I/A Series. A new TAC I/A Series ENC-520 Enterprise Network Controller running the latest version of the Niagara AX framework will replace the existing Invensys GCM front end. The proposed EMS scope of work for this building includes the following:

- Provide and install a new JACE running on the latest version of Tridium's NiagaraAX at the time of construction with all updates provided until the date of acceptance.
- Provide new Supervisory Controller including open license having no expiration (Ameresco OrgId must be added at time of licensing).

- Perform point by point inspection of existing control system including terminal units and provide a report listing any deficiencies.
    - Existing pneumatic damper actuators and control valves are to remain.
    - Existing damper actuators, control valves, and other control devices found to be deficient are not to be replaced unless specified in scope of work
    - Provide all category 5e communication wiring from new FX to customer network closet
- Provide programming of all points, graphics and control sequences for each piece of equipment controlled.
- Set up trends and alarms per Ameresco/City's specifications
- **New Points of Control:** None
- **Existing Points of Control to be Integrated:** Existing Barber Colman EMS
- **Existing Points of Control to be Modified:** Implement Space Temperature and Occupancy Schedules, Implement Optimum Start

Manross Library

The Manross Library will receive a new Open Protocol Web Accessible Direct Digital Control (DDC) System that will integrate with the existing Invensys I/A Series and Pneumatic system. A new TAC I/A Series ENC-520 Enterprise Network Controller running the latest version of the Niagara AX framework will replace the existing Invensys front end. The proposed EMS scope of work for this building includes the following:

- Provide and install a new JACE running on the latest version of Tridium's NiagaraAX at the time of construction with all updates provided until the date of acceptance.
- Provide new Supervisory Controller including open license having no expiration (Ameresco OrgId must be added at time of licensing).
- Perform point by point inspection of existing control system including terminal units and provide a report listing any deficiencies.
    - Replace existing pneumatic damper actuators and control valves with electronic equivalents
    - Provide all category 5e communication wiring from new FX to customer network closet
- Provide programming of all points, graphics and control sequences for each piece of equipment controlled.
- Set up trends and alarms per Ameresco/City's specifications
- Provide and install new control points and integrate existing systems per attached points list
- The Manross Library will receive an additional 44 control points.
    - **New Points of Control:**
        - Provide (1) Outdoor Air Temperature/Humidity Sensor
        - Control (1) Hot Water Boilers
        - Control (1) Air-Cooled Condensing Unit
        - Control (16) PTAC Units
        - Control (2) Hot Water Baseboard Valves
- **Existing Points of Control to be Integrated:** Existing Barber Colman EMS

"Page content is subject to Confidentiality Restrictions"

- **Existing Points of Control to be Modified:** Implement Space Temperature and Occupancy Schedules, Implement Optimum Start

Youth Services

The Youth Services Building will receive a new Open Protocol Web Accessible Direct Digital Control (DDC) System that will integrate with the existing Invensys I/A Series and Barber Colman system. A new TAC I/A Series Enterprise Network Controller running the latest version of the Niagara AX framework will replace the existing Invensys front end. The proposed EMS scope of work for this building includes the following:

- Provide and install a new JACE running on the latest version of Tridium's NiagaraAX at the time of construction with all updates provided until the date of acceptance.
- Provide new Supervisory Controller including open license having no expiration (Ameresco OrgId must be added at time of licensing).
- Perform point by point inspection of existing control system and provide a report listing any deficiencies.
    - Existing pneumatic damper actuators and control valves are to remain.
    - Existing damper actuators, control valves, and other control devices found to be deficient are not to be replaced unless specified in scope of work
    - Provide all category 5e communication wiring from new FX to customer network closet
- Provide programming of all points, graphics and control sequences for each piece of equipment controlled.
- Set up trends and alarms per Ameresco/City's specifications
- **New Points of Control:** None
- **Existing Points of Control to be Integrated:** Existing Barber Colman EMS
  Existing Points of Control to be Modified: Implement Space Temperature and Occupancy Schedules, Implement Optimum Start

Detailed Scope of Work – General

General

- All vertical communication wiring runs to be in wall where possible or wire mold were necessary
- Horizontal communication wiring runs to be above ceiling where possible
- Horizontal communication wiring to be plenum grade
- Horizontal communication wiring runs to be tie wrap

Expand DDC EMS

- Provide and install one (1) new Tridium AX Supervisor workstation server (with 24" monitor) with open Tridium license having no expiration (Ameresco OrgId must be added at time of licensing), latest version of Windows operating system, latest version of MS Office and all other necessary software required for programming the JACEs, printing reports and alarms and storing trend data

  - New Supervisor to come with open Tridium license having no expiration (Ameresco OrgId must be added at time of licensing)
  - Provide program software
  - New Supervisor to be installed in an existing server closet to be determined by the City
- Move all existing graphics from the existing systems to the new Supervisor workstation
  - Reuse existing graphics where possible and remap points as necessary
  - Create a new, user friendly, floor plan graphic to replace the existing for building navigation
- All new controllers to be LON or BACnet certified
  - Provide and install all required software/hardware required to program the new controllers including indefinite site license. (to be installed on supervisor workstation)
  - Same manufacture and line of LON or BACnet controllers must be used for all new controls

Exclusions

- Proposal is based on all existing DDC controllers, wiring, and end devices that are to be reused properly functioning.
  - We have not carried any allowance to replace existing to be reused controllers.
- Proposal is based on all pneumatic end devices that are to be reused properly functioning (damper actuators, heating valves and bypass valves).
- Proposal is based on any devices that are found in need of repair or replacement during system checkout will be identified. A separate proposal will be created for these corrections.
- Proposal is based on reusing existing temperature wells and if not available/compatible strap-on temperature sensors shall be provided.
- Proposal excludes painting and patching.
- Proposal excludes any asbestos or hazardous material abatement
- Network connections and static IP addresses shall be provided by the City for both the JACE's and connection between the JACE's and AX Server.
- Proposal is based on Ameresco having remote access to these DDC systems during the warranty period.

General Zone and Special Area Event Scheduling

Ameresco proposes to provide operating schedule software for all controlled spaces. For example, during unoccupied periods, areas can be maintained in unoccupied status. This software will permit complicated event scheduling for specifics zones in any building. For example, an "auditorium event" will schedule auditorium air handling units on for the occupied periods only while the remainder of the building is in unoccupied mode.

Optimum Start/Stop of HVAC Equipment

Ameresco proposes to implement optimum start/stop of HVAC Equipment. System energy will be saved if occupied zone temperature is conditioned to its set point as close to the beginning of the occupancy period as possible. For example, if the occupied zone set point is 70°F and one hour is required to "pull the temperature up" to set point from the unoccupied temperature, the start time of HVAC equipment shall be

"Page content is subject to Confidentiality Restrictions"

delayed until one hour before the occupied period. This optimum start time of HVAC equipment is a function of the building characteristics, set points and ambient conditions. The EMS will create a database of measurements for the facility from which an optimum start time will be automatically determined for each day. Similarly, the stop time of HVAC equipment will be determined from this database.

Unoccupied Zone Temperature Reset

Ameresco proposes to fully implement unoccupied zone temperature reset. Zone temperature set points will be varied based on occupancy schedules. Unoccupied zone temperature reset is currently implemented by existing control systems, and will be implemented for existing pneumatic systems. The addition of numerous DDC temperature sensors in all buildings will permit more accurate temperature control. More accurate sensing and control will permit maximum unoccupied reset savings. The following table lists the proposed set points. These set points are proposed for all unoccupied periods.

Building	Occupied Set Point Heating (ºF)	Occupied Set Point Cooling (ºF)	Unoccupied Set Point Heating (ºF)	Unoccupied Set Point Cooling (ºF)
City Hall Annex Bldg	70.0	74.0	55.0	85.0 or off
Police Court	70.0	74.0	55.0	85.0 or off
Malone Aquatic Center	83.0	83.0	83.0	85.0 or off
Beals Senior Center	72.0	74.0	55.0	85.0 or off
Main Library	72.0	74.0	55.0	85.0 or off
Manross Library	70.0	74.0	55.0	85.0 or off
Youth Services Building	68.0	74.0	55.0	85.0 or off

Occupied Scheduling

Ameresco will initially setup the occupancy schedules in the EMS to reflect the major occupancy schedule of the buildings. The HVAC systems will only be operated when the buildings are supposed to be occupied. Other areas of the buildings like offices, conference rooms, gymnasiums and auditoriums can have longer schedules to reflect occupancy outside of the normal schedules; a temporary override will need to be activated to provide after-hours conditioning of various office spaces. The table below lists the proposed time schedules. The vacation schedule will also be initially setup in the system to turn off equipment on vacation days. The City will be responsible for updating the vacation and special days schedule to ensure the systems are not operating when the buildings are not occupied. An optimum start sequence will be programmed to ensure the building is at setpoint for the desired start times. Refer to the optimum start discussion below for more details. The majority of the Police Court building is occupied 24/7, however, the 2nd Floor Court area has HVAC equipment scheduled from 6:00am to 11:00 pm Mon-Friday, this schedule will remain.

Building	Start time (Mon – Fri)	Stop time (Mon – Fri)	Weekends/ Holidays	Period
City Hall	8:00am	8:00pm	Off	Year-round
Police Court Bldg	24/7 Court Area (6am)	24/7 Court Area (11pm)	24/7 Off	Year-round Year-round
Malone Aquatic Center	24/7	24/7	24/7	Year-round
Beals Senior Center	8:00am	5:00pm	Off	Year-round
Main Library	8:30am	8:00pm	Sat 8:30am-5:00pm	Year-round
Manross Library	Mon-Thu 10:00am Fri – 9:00am	Mon-Thu 8:00pm Fri-5:00pm	Sat 9:00am-5:00pm	Year-round

"Page content is subject to Confidentiality Restrictions"

Building	Start time (Mon – Fri)	Stop time (Mon – Fri)	Weekends/ Holidays	Period
Youth Services Building	8:30am	Mon/Wed/Fri 5:00pm Tue/Thu 8:00pm	Off	Year-round

Boiler and Pump Control Sequences

Hot water boilers and pumps will be enabled based on both an operating schedule and an outdoor temperature setpoint. During normal operation the boilers and pumps will only be enabled whenever any of the heating related zones are occupied, i.e., classrooms, gymnasiums, etc., and the outside air temperature is less than or equal to 60° (adjustable). During unoccupied periods the boilers and pumps will be off unless the outside air temperature is less than or equal to 37.5°, at which time the boilers will maintain a lower hot water loop temperature and the pumps will be operated continuously to prevent frozen coils. If the pumps are driven by VFDs then they will be operated at the minimum design flow rate and all hot water coils will be commanded open.

For steam boilers the occupied period operation will be similar to the hot water sequence above. When the unoccupied outside air temperature is less than or equal to 37.5°the boilers will maintain the steam header setpoint.

Fault and Exception Alarming

Ameresco proposes to provide fault or exception alarming for HVAC equipment. Equipment operation status will be proved by sensors operation; a commanded "ON" will result in a proved "ON" or an alarm will be generated. An alarm list will be maintained in a database to provide maintenance information to operators in real time. Operators will save significant time by addressing needs as indicated by the EMS. During non-working hours the EMS will have the capability of paging operators automatically to announce system faults.

>Equipment, Design and Construction Documentation

Equipment will be identified in submittals provided for approval prior to procurement. Documents will be submitted to the facilities department for their review and comment. Upon approval, these will constitute the construction documents. Upon completion of the construction phase, the documents will be revised as needed to reflect "As-Built" conditions and submitted in multiple for record.

>Impact on Facility Operations and Performance

The installation of remotely-accessible energy management systems will improve comfort, reduce energy use and cost, and reduce on-site man-hours by specialized maintenance personnel.

"Page content is subject to Confidentiality Restrictions"

This page is intentionally left blank.

Appendix for ESM 4:
Energy Management System Upgrade/Expansion

I. Energy Savings Calculations

This page intentionally left blank.

City of Bristol, CT	
Energy and Demand Savings Summary	
Measure ID:	**4**
Measure Name:	**Energy Management System Upgrade/Expansion**
Measure Location:	
Engineers:	

Site Name:		**City_Hall**	**Police**	**Aquatic**	**Senior**	**Main_Library**	**Manross_Library**	**Youth**	**Summary**
Item	Units	Savings	Savings	Savings	Savings	Savings	Savings	Savings	
Electricity									
Energy On-Peak	kWh								0
Energy Off-Peak	kWh	68,381	24,542	0	0	0	15,531	0	108,455
Energy Total	kWh	68,381	24,542	0	0	0	15,531	0	108,455
Demand On-Peak, Monthly	kW								0.0
Demand On-Peak, Annual	kW								0.0
Demand Off-Peak, Monthly	kW								0.0
Demand Off-Peak, Annual	kW								0.0
Fossil Fuel									0
Natural Gas (NG)	CCF	0	0	0	6,259	894	851	0	8,004
Liquid Propane Gas (LPG)	Gallons	0	0	0	0	0	0	0	0
Steam	Mlbs	0	0	0	0	0	0	0	0
Fuel Oil, #2	Gallons	429	1,403	0	0	0	0	419	2,252
Fuel Oil, #4	Gallons	0	0	0	0	0	0	0	0
Fuel Oil, #6	Gallons	0	0	0	0	0	0	0	0
Max Daily Demand (Natural Gas)	CCF (Demand)						8		8
Water									0
Water Savings	CF								0
Sewer									0
Sewer Savings	CF								0

City of Bristol, CT
City Hall & Annex
Energy Management System Upgrade/Expansion

TMY-3 Weather Data for Hartford, CT								Existing Occupancy Schedule				Existing Heating/Cooling Schedule				Existing Motor Operating Schedule				Existing				Proposed								Savings		
Amb. Temp Bin deg. F	Ave Temp deg. F	M.C.W.B deg. F	M.C. Enthalpy Btu/lbma	01-08 Hours	09-16 Hours	17-24 Hours	Total Bin Hours	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ. Cool/ Heat Load (MBH)	UnOcc. Cool/ Heat Load (MBH)	Occ Cooling/Heating Energy Consump. (MMBTU)	UnOcc Cooling/Heating Energy Consump. (MMBTU)	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ. Cool/ Heat Load (MBH)	UnOcc. Cool/ Heat Load (MBH)	Occ Cooling/Heating Energy Consump. (MMBTU)	UnOcc Cooling/Heating Energy Consump. (MMBTU)	Cooling Energy Savings (MMBTU)	HVAC Electrical Savings (kWh)	Heating Energy Savings (MMBTU)
A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**Q**	**R**	**S**	**T**	**U**	**V**	**W**	**X**	**Y**	**Z**	**AA**	**AB**	**AC**	**AD**	**AE**	**AF**	**AG**	**AH**	**AI**
Cooling																																		
105 to 110	107.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,445	2,445	0	0	0	0	0	0	2,445	1,301	0	0	0	0	
100 to 105	102.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,201	2,201	0	0	0	0	0	0	2,201	1,170	0	0	0	0	
95 to 100	97.5	75.8	39.4	0	4	0	4	1	0	0	3	1	0	1	2	1	0	1	2	1,956	1,956	1	2	1	0	1	2	1,956	1,040	1	1	1	0	
90 to 95	92.5	74.9	38.7	0	34	9	43	6	4	4	28	11	0	8	24	11	0	8	24	1,712	1,712	13	17	11	0	8	24	1,712	910	13	9	8	0	
85 to 90	87.5	72.8	36.9	0	105	22	127	19	11	13	84	31	0	24	72	31	0	24	72	1,467	1,467	32	42	31	0	24	72	1,467	780	32	23	20	0	
80 to 85	82.5	69.0	33.5	4	247	105	356	53	32	37	234	88	0	66	202	88	0	66	202	1,223	1,223	76	99	88	0	66	202	1,223	650	76	53	46	1,355	
75 to 80	77.5	66.7	31.7	55	243	158	456	68	41	48	300	112	0	85	258	112	0	85	258	978	978	78	102	112	0	85	258	978	520	78	54	48	1,736	
70 to 75	72.5	64.6	30.0	137	208	183	528	79	47	55	347	130	0	98	299	130	0	98	299	734	734	67	88	130	0	98	299	734	390	67	47	41	0	
65 to 70	67.5	61.1	27.5	199	231	248	678	101	61	71	446	167	0	126	384	167	0	126	384	489	489	58	75	167	0	126	384	489	260	58	40	35	0	
60 to 65	62.5	56.0	24.0	306	300	310	916	136	82	95	602	226	0	171	519	226	0	171	519	245	245	39	51	226	0	171	519	245	130	39	27	24	0	
Heating																																		
55 to 60	57.5	51.2	21.1	270	226	289	785	117	70	82	516	194	0	146	445	194	0	146	445	(312)	(42)	0	46	194	0	146	445	(312)	(25)	0	46		0	0
50 to 55	52.5	46.7	18.6	291	186	261	738	110	66	77	485	182	0	138	418	182	0	138	418	(437)	(126)	11	101	182	0	138	418	(437)	(109)	11	92		0	9
45 to 50	47.5	41.8	16.1	210	129	187	526	78	47	55	346	130	0	98	298	130	0	98	298	(562)	(211)	29	119	130	0	98	298	(562)	(194)	29	113		0	6
40 to 45	42.5	38.1	14.4	282	188	155	625	93	56	65	411	154	0	117	354	154	0	117	354	(687)	(295)	60	198	154	0	117	354	(687)	(278)	60	190		0	8
35 to 40	37.5	33.1	12.2	288	296	306	890	132	80	93	585	220	0	166	504	220	0	166	504	(812)	(379)	121	362	220	0	166	504	(812)	(362)	121	351		0	11
30 to 35	32.5	28.5	10.3	252	222	251	725	108	65	76	477	179	0	135	411	179	0	135	411	(937)	(463)	128	360	179	0	135	411	(937)	(446)	128	351		0	9
25 to 30	27.5	24.1	8.6	182	160	177	519	77	46	54	341	128	0	97	294	128	0	97	294	(1,062)	(547)	113	304	128	0	97	294	(1,062)	(531)	113	298		0	6
20 to 25	22.5	20.3	7.2	231	89	177	497	74	44	52	327	123	0	93	282	123	0	93	282	(1,187)	(632)	128	336	123	0	93	282	(1,187)	(615)	128	330		0	6
15 to 20	17.5	15.5	5.6	135	42	57	234	35	21	24	154	58	0	44	133	58	0	44	133	(1,311)	(716)	70	179	58	0	44	133	(1,311)	(699)	70	177		0	3
10 to 15	12.5	10.9	4.1	44	7	24	75	11	7	8	49	18	0	14	43	18	0	14	43	(1,436)	(800)	25	64	18	0	14	43	(1,436)	(783)	25	63		0	1
5 to 10	7.5	6.4	2.7	23	3	1	27	4	2	3	18	7	0	5	15	7	0	5	15	(1,561)	(884)	10	26	7	0	5	15	(1,561)	(867)	10	25		0	0
0 to 5	2.5	2.4	1.5	11	0	0	11	2	1	1	7	3	0	2	6	3	0	2	6	(1,686)	(968)	5	11	3	0	2	6	(1,686)	(952)	5	11		0	0
-5 to 0	(2.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(1,811)	(1,053)	0	0	0	0	0	0	(1,811)	(1,036)	0	0		0	0
-10 to -5	(7.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(1,936)	(1,137)	0	0	0	0	0	0	(1,936)	(1,120)	0	0		0	0
-15 to -10	(12.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(2,061)	(1,221)	0	0	0	0	0	0	(2,061)	(1,204)	0	0		0	0
-20 to -15	(17.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(2,186)	(1,305)	0	0	0	0	0	0	(2,186)	(1,288)	0	0		0	0
-25 to -20	(22.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(2,311)	(1,389)	0	0	0	0	0	0	(2,311)	(1,373)	0	0		0	0
				2,920	2,920	2,920	8,760	1,304	783	913	5,761	2,161	0	1,634	4,965	2,161	0	1,634	4,965			1,062	2,583	2,161	0	1,634	4,965			1,062	2,300	223	3,091	60

Cell Ref.	Comment
A-H	TMY-3 Weather Data for Hartford, CT
I - L	Existing Occupancy hours
M - P	Existing Heating/Cooling hours
Q - T	Existing Motor Operating Hours
U	Occupied Cooling and Heating loads (MBH)
V	Unoccupied Cooling and Heating loads (MBH)
W	Cooling = [col U] x ([col M] + [col O]) ÷ 1,000 ÷ AD45
	Heating = -MIN([col I] + [col K] , [col M] + [col O]) x MIN([col U] + internal gains , 0) + IF([col I] + [col K] > [col M]+[col O] , (([col I] + [col K]) - ([col M] + [col O])) x MIN([col V] + internal gains , 0) , 0) ÷ 1,000 ÷ AD44
X	Cooling = [col R] x ([col J] + [col L]) ÷ 1,000 ÷ AD45
	Heating = -([col N] + [col P]) x MIN([col V] + internal gains , 0) + IF([col I] + [col K] < [col M] + [col O] , (([col M] + [col O]) - ([col I] + [col K])) x MIN([col U] + internal gains , 0)) ÷ 1,000 ÷ AD44
Y - AB	Proposed Operating hours
AC	Proposed Occupied Cooling and Heating Loads:
	Cooling = ([col B] - AC60) ÷ ([col B] - AC55) x [col U]
	Heating = ([col B] - AE60) ÷ ([col B] - AE55) x [col U]
AD	Proposed Unoccupied Cooling and Heating Loads:
	Cooling = ([col B] - AC61) ÷ ([col B] - AC56) x [col V]
	Heating = ([col B] - AE61) ÷ ([col B] - AE56) x [col V] ([col V] is modified to account for reduced kitchen and building ventilation due to EMS)
AE	Cooling = [col AC] x ([col Y] + [col AA]) ÷ 1,000 ÷ AD45
	Heating = -MIN([col I] + [col K] , [col Y] + [col AA]) x MIN([col AC] + internal gains , 0) + IF([col I] + [col K] > [col Y]+[col AA] , (([col I] + [col K]) - ([col Y] + [col AA])) x MIN([col AD] + internal gains , 0) , 0) ÷ 1,000 ÷ AD44
AF	Cooling = [col AD] x ([col Z] + [col AB]) ÷ 1,000 ÷ AD45
	Heating = -([col Z] + [col AB]) x MIN([col AD] + internal gains , 0) + IF([col I] + [col K] < [col Y] + [col AA] , (([col Y] + [col AA]) - ([col I] + [col K])) x MIN([col AC] + internal gains , 0)) ÷ 1,000 ÷ AD44
AG	= ([col W] + [col X]) - ([col AE] + [col AF])
	HVAC Fan and Pump Savings
AH	Cooling =([col Q] + [col S] + ([col R] + [col T]) x AD49) x (AD46 + AD48) - ([col Y] + [col AA] + ([col Z] + [col AB]) x AD49) x (AD46 + AD48)
	Heating =([col Q] + [col S]) x AD46 + IF(B20<35,([col R] + [col T]) x AD49 x AD46, IF(B20>50,0,([col R] + [col T]) x AD49 x AD46)) - ((([col Y] + [col AA]) x AD46 + IF(B20<35,([col Z] + [col AB]) x AD49 x AD46, IF(B20>50,0,([col Z] + [col AB]) x AD49 x AD46)))
AI	= ([col W] + [col X]) - ([col AE] + [col AF])

Assumptions:	Value	Unit	CELL REF	Description
Occupied Area	60,053	SF	**AD43**	
Existing Heating Plant Efficiency	78.0%		**AD44**	
Existing Chiller Efficiency	2.5	COP	**AD45**	
Fan Power	48.0	kW	**AD46**	
Heating Pump Power	7.8	kW	**AD47**	
Cooling Pump Power	19.1	kW	**AD48**	
UnOcc. Fan & Pump Cycling	10.0%		**AD49**	% Operating Hours During UnOcc.
UnOcc. Kitchen Vent. Reduction	0.0%		**AD50**	% CFM Saved
UnOcc. Ventilation Reduction	0.0%		**AD51**	% CFM Saved

Average Existing Space Temperatures					
	Cooling		Heating		Description
Occupied	74.0	**AC55**	70.0	**AE55**	
UnOccupied	74.0	**AC56**	60.0	**AE56**	

Average Proposed Space Temperatures					
	Cooling		Heating		Description
Occupied	74.0	**AC60**	70.0	**AE60**	
UnOccupied	85.0	**AC61**	59.0	**AE61**	

Page content is subject to Confidentiality Restrictions

City of Bristol, CT
Police Court & Parking Garage
Energy Management System Upgrade/Expansion

TMY-3 Weather Data for Hartford, CT								Existing Occupancy Schedule				Existing Heating/Cooling Schedule				Existing Motor Operating Schedule				Existing				Proposed								Savings		
Amb. Temp Bin deg. F	Ave Temp deg. F	M.C.W.B deg. F	M.C. Enthalpy Btu/lbma	01-08 Hours	09-16 Hours	17-24 Hours	Total Bin Hours	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ. Cool/ Heat Load (MBH)	UnOcc. Cool/ Heat Load (MBH)	Occ Cooling/Heating Energy Consump. (MMBTU)	UnOcc Cooling/Heating Energy Consump. (MMBTU)	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ. Cool/ Heat Load (MBH)	UnOcc. Cool/ Heat Load (MBH)	Occ Cooling/Heating Energy Consump. (MMBTU)	UnOcc Cooling/Heating Energy Consump. (MMBTU)	Cooling Energy Savings (MMBTU)	HVAC Electrical Savings (kWh)	Heating Energy Savings (MMBTU)
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
Cooling																																		
105 to 110	107.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,834	2,834	0	0	0	0	0	0	2,834	1,389	0	0	0	0	
100 to 105	102.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,550	2,550	0	0	0	0	0	0	2,550	1,250	0	0	0	0	
95 to 100	97.5	75.8	39.4	0	4	0	4	1	0	3	0	1	0	2	1	1	0	2	1	2,267	2,267	3	1	1	0	2	1	2,267	1,111	3	0	0	0	
90 to 95	92.5	74.9	38.7	0	34	9	43	10	0	33	0	10	0	25	8	13	0	22	8	1,984	1,984	24	5	13	0	22	8	1,984	972	24	3	3	0	
85 to 90	87.5	72.8	36.9	0	105	22	127	30	0	97	0	30	0	73	23	39	0	64	24	1,700	1,700	60	14	39	0	64	24	1,700	833	60	7	7	0	
80 to 85	82.5	69.0	33.5	4	247	105	356	85	0	271	0	85	0	206	66	109	0	181	66	1,417	1,417	140	32	109	0	181	66	1,417	695	140	16	16	442	
75 to 80	77.5	66.7	31.7	55	243	158	456	108	0	348	0	108	0	264	84	140	0	231	84	1,133	1,133	144	33	140	0	231	84	1,133	556	144	16	17	566	
70 to 75	72.5	64.6	30.0	137	208	183	528	125	0	403	0	125	0	305	97	162	0	268	98	850	850	125	28	162	0	268	98	850	417	125	14	14	656	
65 to 70	67.5	61.1	27.5	199	231	248	678	161	0	517	0	161	0	392	125	208	0	344	126	567	567	107	24	208	0	344	126	567	278	107	12	12	0	
60 to 65	62.5	56.0	24.0	306	300	310	916	217	0	699	0	217	0	529	169	282	0	465	170	283	283	72	16	282	0	465	170	283	139	72	8	8	0	
Heating																																		
55 to 60	57.5	51.2	21.1	270	226	289	785	186	0	599	0	186	0	454	145	241	0	398	145	(344)	(216)	131	0	241	0	398	145	(344)	(43)	126	0		0	5
50 to 55	52.5	46.7	18.6	291	186	261	738	175	0	563	0	175	0	427	136	227	0	374	137	(481)	(302)	245	0	227	0	374	137	(481)	(129)	225	0		0	20
45 to 50	47.5	41.8	16.1	210	129	187	526	125	0	401	0	125	0	304	97	162	0	267	97	(619)	(388)	261	0	162	0	267	97	(619)	(216)	239	0		0	22
40 to 45	42.5	38.1	14.4	282	188	155	625	148	0	477	0	148	0	361	115	192	0	317	116	(757)	(474)	412	0	192	0	317	116	(757)	(302)	387	0		0	26
35 to 40	37.5	33.1	12.2	288	296	306	890	211	0	679	0	211	0	514	164	274	0	452	165	(894)	(561)	733	0	274	0	452	165	(894)	(388)	697	0		0	37
30 to 35	32.5	28.5	10.3	252	222	251	725	172	0	553	0	172	0	419	134	223	0	368	134	(1,032)	(647)	716	0	223	0	368	134	(1,032)	(474)	687	0		0	30
25 to 30	27.5	24.1	8.6	182	160	177	519	123	0	396	0	123	0	300	96	160	0	263	96	(1,169)	(733)	598	0	160	0	263	96	(1,169)	(561)	577	0		0	21
20 to 25	22.5	20.3	7.2	231	89	177	497	118	0	379	0	118	0	287	92	153	0	252	92	(1,307)	(819)	654	0	153	0	252	92	(1,307)	(647)	634	0		0	21
15 to 20	17.5	15.5	5.6	135	42	57	234	56	0	178	0	56	0	135	43	72	0	119	43	(1,444)	(906)	347	0	72	0	119	43	(1,444)	(733)	337	0		0	10
10 to 15	12.5	10.9	4.1	44	7	24	75	18	0	57	0	18	0	43	14	23	0	38	14	(1,582)	(992)	123	0	23	0	38	14	(1,582)	(819)	120	0		0	3
5 to 10	7.5	6.4	2.7	23	3	1	27	6	0	21	0	6	0	16	5	8	0	14	5	(1,719)	(1,078)	49	0	8	0	14	5	(1,719)	(906)	48	0		0	1
0 to 5	2.5	2.4	1.5	11	0	0	11	3	0	8	0	3	0	6	2	3	0	6	2	(1,857)	(1,164)	22	0	3	0	6	2	(1,857)	(992)	21	0		0	0
-5 to 0	(2.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(1,994)	(1,251)	0	0	0	0	0	0	(1,994)	(1,078)	0	0		0	0
-10 to -5	(7.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(2,132)	(1,337)	0	0	0	0	0	0	(2,132)	(1,164)	0	0		0	0
-15 to -10	(12.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(2,270)	(1,423)	0	0	0	0	0	0	(2,270)	(1,251)	0	0		0	0
-20 to -15	(17.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(2,407)	(1,509)	0	0	0	0	0	0	(2,407)	(1,337)	0	0		0	0
-25 to -20	(22.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(2,545)	(1,596)	0	0	0	0	0	0	(2,545)	(1,423)	0	0		0	0
				2,920	2,920	2,920	8,760	2,080	0	6,680	0	2,080	0	5,063	1,617	2,694	0	4,445	1,622			4,967	153	2,694	0	4,445	1,622			4,772	75	78	1,664	195

Cell Ref.	Comment
A-H	TMY-3 Weather Data for Hartford, CT
I - L	Existing Occupancy hours
M - P	Existing Heating/Cooling hours
Q - T	Existing Motor Operating Hours
U	Occupied Cooling and Heating loads (MBH)
V	Unoccupied Cooling and Heating loads (MBH)
W	Cooling = [col U] x ([col M] + [col O]) ÷ 1,000 ÷ AD45
	Heating = -MIN([col I] + [col K] , [col M] + [col O]) x MIN([col U] + internal gains , 0) + IF([col I] + [col K] > [col M]+[col O] , (([col I] + [col K]) - ([col M] + [col O])) x MIN([col V] + internal gains , 0) , 0) ÷ 1,000 ÷ AD44
X	Cooling = [col R] x ([col J] + [col L]) ÷ 1,000 ÷ AD45
	Heating = -([col N] + [col P]) x MIN([col V] + internal gains , 0) + IF([col I] + [col K] < [col M] + [col O] , (([col M] + [col O]) - ([col I] + [col K])) x MIN([col U] + internal gains , 0)) ÷ 1,000 ÷ AD44
Y - AB	Proposed Operating hours
AC	Proposed Occupied Cooling and Heating Loads:
	Cooling = ([col B] - AC60) ÷ ([col B] - AC55) x [col U]
	Heating = ([col B] - AE60) ÷ ([col B] - AE55) x [col U]
AD	Proposed Unoccupied Cooling and Heating Loads:
	Cooling = ([col B] - AC61) ÷ ([col B] - AC56) x [col V]
	Heating = ([col B] - AE61) ÷ ([col B] - AE56) x [col V] ([col V] is modified to account for reduced kitchen and building ventilation due to EMS)
AE	Cooling = [col AC] x ([col Y] + [col AA]) ÷ 1,000 ÷ AD45
	Heating = -MIN([col I] + [col K] , [col Y] + [col AA]) x MIN([col AC] + internal gains , 0) + IF([col I] + [col K] > [col Y]+[col AA] , (([col I] + [col K]) - ([col Y] + [col AA])) x MIN([col AD] + internal gains , 0) , 0) ÷ 1,000 ÷ AD44
AF	Cooling = [col AD] x ([col Z] + [col AB]) ÷ 1,000 ÷ AD45
	Heating = -([col Z] + [col AB]) x MIN([col AD] + internal gains , 0) + IF([col I] + [col K] < [col Y] + [col AA] , (([col Y] + [col AA]) - ([col I] + [col K])) x MIN([col AC] + internal gains , 0)) ÷ 1,000 ÷ AD44
AG	= ([col W] + [col X]) - ([col AE] + [col AF])
	HVAC Fan and Pump Savings
AH	Cooling =([col Q] + [col S] + ([col R] + [col T]) x AD49) x (AD46 + AD48) - ([col Y] + [col AA] + ([col Z] + [col AB]) x AD49) x (AD46 + AD48)
	Heating =([col Q] + [col S]) x AD46 + IF(B20<35,([col R] + [col T]) x AD49 x AD46, IF(B20>50,0,([col R] + [col T]) x AD49 x AD46)) - ((([col Y] + [col AA]) x AD46 + IF(B20<35,([col Z] + [col AB]) x AD49 x AD46, IF(B20>50,0,([col Z] + [col AB]) x AD49 x AD46)))
AI	= ([col W] + [col X]) - ([col AE] + [col AF])

Assumptions:	Value	Unit	CELL REF	Description
Occupied Area	83,343	SF	**AD43**	
Existing Heating Plant Efficiency	78.0%		**AD44**	
Existing Chiller Efficiency	2.9	COP	**AD45**	
Fan Power	62.7	kW	**AD46**	
Heating Pump Power	3.8	kW	**AD47**	
Cooling Pump Power	4.4	kW	**AD48**	
UnOcc. Fan & Pump Cycling	10.0%		**AD49**	% Operating Hours During UnOcc.
UnOcc. Kitchen Vent. Reduction	0.0%		**AD50**	% CFM Saved
UnOcc. Ventilation Reduction	0.0%		**AD51**	% CFM Saved

Average Existing Space Temperatures					
	Cooling		Heating		Description
Occupied	72.0	**AC55**	70.0	**AE55**	
UnOccupied	72.0	**AC56**	70.0	**AE56**	

Average Proposed Space Temperatures					
	Cooling		Heating		Description
Occupied	72.0	**AC60**	70.0	**AE60**	
UnOccupied	85.0	**AC61**	60.0	**AE61**	

Page content is subject to Confidentiality Restrictions

City of Bristol, CT
Dennis Malone Aquatic Center
Energy Management System Upgrade/Expansion

TMY-3 Weather Data for Hartford, CT								Existing Occupancy Schedule				Existing Heating/Cooling Schedule				Existing Motor Operating Schedule				Existing				Proposed								Savings		
Amb. Temp Bin deg. F	Ave Temp deg. F	M.C.W.B deg. F	M.C. Enthalpy Btu/lbma	01-08 Hours	09-16 Hours	17-24 Hours	Total Bin Hours	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ. Cool/ Heat Load (MBH)	UnOcc. Cool/ Heat Load (MBH)	Occ Cooling/Heating Energy Consump. (MMBTU)	UnOcc Cooling/Heating Energy Consump. (MMBTU)	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ. Cool/ Heat Load (MBH)	UnOcc. Cool/ Heat Load (MBH)	Occ Cooling/Heating Energy Consump. (MMBTU)	UnOcc Cooling/Heating Energy Consump. (MMBTU)	Cooling Energy Savings (MMBTU)	HVAC Electrical Savings (kWh)	Heating Energy Savings (MMBTU)
A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**Q**	**R**	**S**	**T**	**U**	**V**	**W**	**X**	**Y**	**Z**	**AA**	**AB**	**AC**	**AD**	**AE**	**AF**	**AG**	**AH**	**AI**
Cooling																																		
105 to 110	107.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	27	0	0	0	0	0	0	27	27	0	0	0	0	
100 to 105	102.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	24	0	0	0	0	0	0	24	24	0	0	0	0	
95 to 100	97.5	75.8	39.4	0	4	0	4	1	0	1	2	1	0	3	0	1	0	3	0	22	22	0	0	1	0	3	0	22	22	0	0	0	0	
90 to 95	92.5	74.9	38.7	0	34	9	43	10	0	13	19	10	0	33	0	10	0	33	0	19	19	0	0	10	0	33	0	19	19	0	0	0	0	
85 to 90	87.5	72.8	36.9	0	105	22	127	30	0	39	57	30	0	97	0	30	0	97	0	16	16	1	0	30	0	97	0	16	16	1	0	0	0	
80 to 85	82.5	69.0	33.5	4	247	105	356	85	0	110	161	85	0	271	0	85	0	271	0	14	14	2	0	85	0	271	0	14	14	2	0	0	0	
75 to 80	77.5	66.7	31.7	55	243	158	456	109	0	141	206	109	0	347	0	109	0	347	0	11	11	2	0	109	0	347	0	11	11	2	0	0	0	
70 to 75	72.5	64.6	30.0	137	208	183	528	126	0	163	239	126	0	402	0	126	0	402	0	8	8	2	0	126	0	402	0	8	8	2	0	0	0	
65 to 70	67.5	61.1	27.5	199	231	248	678	162	0	210	307	162	0	516	0	162	0	516	0	5	5	2	0	162	0	516	0	5	5	2	0	0	0	
60 to 65	62.5	56.0	24.0	306	300	310	916	218	0	283	414	218	0	698	0	218	0	698	0	3	3	1	0	218	0	698	0	3	3	1	0	0	0	
Heating																																		
55 to 60	57.5	51.2	21.1	270	226	289	785	187	0	243	355	187	0	598	0	187	0	598	0	(327)	(204)	145	153	187	0	598	0	(327)	(204)	145	153		0	0
50 to 55	52.5	46.7	18.6	291	186	261	738	176	0	228	334	176	0	562	0	176	0	562	0	(392)	(243)	171	173	176	0	562	0	(392)	(243)	171	173		0	0
45 to 50	47.5	41.8	16.1	210	129	187	526	125	0	163	238	125	0	401	0	125	0	401	0	(456)	(283)	147	144	125	0	401	0	(456)	(283)	147	144		0	0
40 to 45	42.5	38.1	14.4	282	188	155	625	149	0	193	283	149	0	476	0	149	0	476	0	(520)	(323)	205	196	149	0	476	0	(520)	(323)	205	196		0	0
35 to 40	37.5	33.1	12.2	288	296	306	890	212	0	275	403	212	0	678	0	212	0	678	0	(584)	(363)	334	314	212	0	678	0	(584)	(363)	334	314		0	0
30 to 35	32.5	28.5	10.3	252	222	251	725	173	0	224	328	173	0	552	0	173	0	552	0	(648)	(403)	306	284	173	0	552	0	(648)	(403)	306	284		0	0
25 to 30	27.5	24.1	8.6	182	160	177	519	124	0	161	235	124	0	395	0	124	0	395	0	(713)	(443)	244	224	124	0	395	0	(713)	(443)	244	224		0	0
20 to 25	22.5	20.3	7.2	231	89	177	497	118	0	154	225	118	0	379	0	118	0	379	0	(777)	(483)	257	234	118	0	379	0	(777)	(483)	257	234		0	0
15 to 20	17.5	15.5	5.6	135	42	57	234	56	0	72	106	56	0	178	0	56	0	178	0	(841)	(523)	132	119	56	0	178	0	(841)	(523)	132	119		0	0
10 to 15	12.5	10.9	4.1	44	7	24	75	18	0	23	34	18	0	57	0	18	0	57	0	(905)	(563)	46	41	18	0	57	0	(905)	(563)	46	41		0	0
5 to 10	7.5	6.4	2.7	23	3	1	27	6	0	8	12	6	0	21	0	6	0	21	0	(970)	(603)	18	16	6	0	21	0	(970)	(603)	18	16		0	0
0 to 5	2.5	2.4	1.5	11	0	0	11	3	0	3	5	3	0	8	0	3	0	8	0	(1,034)	(643)	8	7	3	0	8	0	(1,034)	(643)	8	7		0	0
-5 to 0	(2.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(1,098)	(682)	0	0	0	0	0	0	(1,098)	(682)	0	0		0	0
-10 to -5	(7.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(1,162)	(722)	0	0	0	0	0	0	(1,162)	(722)	0	0		0	0
-15 to -10	(12.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(1,226)	(762)	0	0	0	0	0	0	(1,226)	(762)	0	0		0	0
-20 to -15	(17.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(1,291)	(802)	0	0	0	0	0	0	(1,291)	(802)	0	0		0	0
-25 to -20	(22.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(1,355)	(842)	0	0	0	0	0	0	(1,355)	(842)	0	0		0	0
				2,920	2,920	2,920	8,760	2,087	0	2,710	3,963	2,087	0	6,673	0	2,087	0	6,673	0			2,023	1,905	2,087	0	6,673	0			2,023	1,905	0	0	0

Cell Ref.	Comment
A-H	TMY-3 Weather Data for Hartford, CT
I - L	Existing Occupancy hours
M - P	Existing Heating/Cooling hours
Q - T	Existing Motor Operating Hours
U	Occupied Cooling and Heating loads (MBH)
V	Unoccupied Cooling and Heating loads (MBH)
W	Cooling = [col U] x ([col M] + [col O]) ÷ 1,000 ÷ AD45
	Heating = -MIN([col I] + [col K] , [col M] + [col O]) x MIN([col U] + internal gains , 0) + IF([col I] + [col K] > [col M]+[col O] , (([col I] + [col K]) - ([col M] + [col O])) x MIN([col V] + internal gains , 0) , 0) ÷ 1,000 ÷ AD44
X	Cooling = [col R] x ([col J] + [col L]) ÷ 1,000 ÷ AD45
	Heating = -([col N] + [col P]) x MIN([col V] + internal gains , 0) + IF([col I] + [col K] < [col M] + [col O] , (([col M] + [col O]) - ([col I] + [col K])) x MIN([col U] + internal gains , 0)) ÷ 1,000 ÷ AD44
Y - AB	Proposed Operating hours
AC	Proposed Occupied Cooling and Heating Loads:
	Cooling = ([col B] - AC60) ÷ ([col B] - AC55) x [col U]
	Heating = ([col B] - AE60) ÷ ([col B] - AE55) x [col U]
AD	Proposed Unoccupied Cooling and Heating Loads:
	Cooling = ([col B] - AC61) ÷ ([col B] - AC56) x [col V]
	Heating = ([col B] - AE61) ÷ ([col B] - AE56) x [col V] ([col V] is modified to account for reduced kitchen and building ventilation due to EMS)
AE	Cooling = [col AC] x ([col Y] + [col AA]) ÷ 1,000 ÷ AD45
	Heating = -MIN([col I] + [col K] , [col Y] + [col AA]) x MIN([col AC] + internal gains , 0) + IF([col I] + [col K] > [col Y]+[col AA] , (([col I] + [col K]) - ([col Y] + [col AA])) x MIN([col AD] + internal gains , 0) , 0) ÷ 1,000 ÷ AD44
AF	Cooling = [col AD] x ([col Z] + [col AB]) ÷ 1,000 ÷ AD45
	Heating = -([col Z] + [col AB]) x MIN([col AD] + internal gains , 0) + IF([col I] + [col K] < [col Y] + [col AA] , (([col Y] + [col AA]) - ([col I] + [col K])) x MIN([col AC] + internal gains , 0)) ÷ 1,000 ÷ AD44
AG	= ([col W] + [col X]) - ([col AE] + [col AF])
	HVAC Fan and Pump Savings
AH	Cooling =([col Q] + [col S] + ([col R] + [col T]) x AD49) x (AD46 + AD48) - ([col Y] + [col AA] + ([col Z] + [col AB]) x AD49) x (AD46 + AD48)
	Heating =([col Q] + [col S]) x AD46 + IF(B20<35,([col R] + [col T]) x AD49 x AD46, IF(B20>50,0,([col R] + [col T]) x AD49 x AD46)) - ((([col Y] + [col AA]) x AD46 + IF(B20<35,([col Z] + [col AB]) x AD49 x AD46, IF(B20>50,0,([col Z] + [col AB]) x AD49 x AD46)))
AI	= ([col W] + [col X]) - ([col AE] + [col AF])

Assumptions:	Value	Unit	CELL	Description
			REF	
Occupied Area	14,484	SF	**AD43**	
Existing Heating Plant Efficiency	74.0%		**AD44**	
Existing Chiller Efficiency	2.3	COP	**AD45**	
Fan Power	5.9	kW	**AD46**	
Heating Pump Power	3.2	kW	**AD47**	
Cooling Pump Power	0.0	kW	**AD48**	
UnOcc. Fan & Pump Cycling	10.0%		**AD49**	% Operating Hours During UnOcc.
UnOcc. Kitchen Vent. Reduction	0.0%		**AD50**	% CFM Saved
UnOcc. Ventilation Reduction	0.0%		**AD51**	% CFM Saved

Average Existing Space Temperatures					
	Cooling		Heating		**Description**
Occupied	83.0	**AC55**	83.0	**AE55**	
UnOccupied	83.0	**AC56**	83.0	**AE56**	

Average Proposed Space Temperatures					
	Cooling		Heating		**Description**
Occupied	83.0	**AC60**	83.0	**AE60**	
UnOccupied	83.0	**AC61**	83.0	**AE61**	

Existing	Max Daily Demand	216.275 Therms	0%
Savings	Max Daily Demand	0.0	

Page content is subject to Confidentiality Restrictions

City of Bristol, CT
Beals Senior Center
Energy Management System Upgrade/Expansion

TMY-3 Weather Data for Hartford, CT								Existing Occupancy Schedule				Existing Heating/Cooling Schedule				Existing Motor Operating Schedule				Existing				Proposed								Savings		
Amb. Temp Bin deg. F	Ave Temp deg. F	M.C.W.B deg. F	M.C. Enthalpy Btu/lbma	01-08 Hours	09-16 Hours	17-24 Hours	Total Bin Hours	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ. Cool/ Heat Load (MBH)	UnOcc. Cool/ Heat Load (MBH)	Occ Cooling/Heating Energy Consump. (MMBTU)	UnOcc Cooling/Heating Energy Consump. (MMBTU)	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ. Cool/ Heat Load (MBH)	UnOcc. Cool/ Heat Load (MBH)	Occ Cooling/Heating Energy Consump. (MMBTU)	UnOcc Cooling/Heating Energy Consump. (MMBTU)	Cooling Energy Savings (MMBTU)	HVAC Electrical Savings (kWh)	Heating Energy Savings (MMBTU)
A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**Q**	**R**	**S**	**T**	**U**	**V**	**W**	**X**	**Y**	**Z**	**AA**	**AB**	**AC**	**AD**	**AE**	**AF**	**AG**	**AH**	**AI**
Cooling																																		
105 to 110	107.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,490	730	0	0	0	0	0	0	1,490	730	0	0	0	0	
100 to 105	102.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,341	657	0	0	0	0	0	0	1,341	657	0	0	0	0	
95 to 100	97.5	75.8	39.4	0	4	0	4	1	0	0	3	0	1	1	2	0	1	1	2	1,192	584	1	1	0	1	1	2	1,192	584	1	1	0	0	
90 to 95	92.5	74.9	38.7	0	34	9	43	6	4	5	28	1	8	13	21	1	8	13	21	1,043	511	5	5	1	8	13	21	1,043	511	5	5	0	0	
85 to 90	87.5	72.8	36.9	0	105	22	127	19	11	15	82	4	23	38	63	4	23	38	63	894	438	13	13	4	23	38	63	894	438	13	13	0	0	
80 to 85	82.5	69.0	33.5	4	247	105	356	53	32	42	229	10	63	107	176	10	63	107	176	745	365	30	30	10	63	107	176	745	365	30	30	0	0	
75 to 80	77.5	66.7	31.7	55	243	158	456	68	41	54	293	13	81	137	225	13	81	137	225	596	292	30	31	13	81	137	225	596	292	30	31	0	0	
70 to 75	72.5	64.6	30.0	137	208	183	528	79	47	63	339	15	94	159	260	15	94	159	260	447	219	26	26	15	94	159	260	447	219	26	26	0	0	
65 to 70	67.5	61.1	27.5	199	231	248	678	101	61	81	436	19	121	204	334	19	121	204	334	298	146	23	23	19	121	204	334	298	146	23	23	0	0	
60 to 65	62.5	56.0	24.0	306	300	310	916	136	82	109	589	26	163	275	452	26	163	275	452	149	73	15	15	26	163	275	452	149	73	15	15	0	0	
Heating																																		
55 to 60	57.5	51.2	21.1	270	226	289	785	117	70	93	505	22	140	236	387	22	140	236	387	(380)	(113)	53	82	22	140	236	387	(380)	0	53	21		0	61
50 to 55	52.5	46.7	18.6	291	186	261	738	110	66	88	474	21	132	222	364	21	132	222	364	(511)	(179)	82	125	21	132	222	364	(511)	(33)	82	37		0	88
45 to 50	47.5	41.8	16.1	210	129	187	526	78	47	63	338	15	94	158	259	15	94	158	259	(642)	(245)	81	122	15	94	158	259	(642)	(99)	81	60		0	63
40 to 45	42.5	38.1	14.4	282	188	155	625	93	56	74	402	18	111	188	308	18	111	188	308	(773)	(311)	123	185	18	111	188	308	(773)	(166)	123	111		0	75
35 to 40	37.5	33.1	12.2	288	296	306	890	132	80	106	572	25	159	268	439	25	159	268	439	(904)	(377)	213	321	25	159	268	439	(904)	(232)	213	215		0	106
30 to 35	32.5	28.5	10.3	252	222	251	725	108	65	86	466	20	129	218	357	20	129	218	357	(1,035)	(444)	204	308	20	129	218	357	(1,035)	(298)	204	221		0	86
25 to 30	27.5	24.1	8.6	182	160	177	519	77	46	62	334	15	92	156	256	15	92	156	256	(1,166)	(510)	169	254	15	92	156	256	(1,166)	(364)	169	192		0	62
20 to 25	22.5	20.3	7.2	231	89	177	497	74	44	59	319	14	89	149	245	14	89	149	245	(1,297)	(576)	183	275	14	89	149	245	(1,297)	(430)	183	215		0	59
15 to 20	17.5	15.5	5.6	135	42	57	234	35	21	28	150	7	42	70	115	7	42	70	115	(1,428)	(642)	96	144	7	42	70	115	(1,428)	(497)	96	116		0	28
10 to 15	12.5	10.9	4.1	44	7	24	75	11	7	9	48	2	13	23	37	2	13	23	37	(1,559)	(708)	34	51	2	13	23	37	(1,559)	(563)	34	42		0	9
5 to 10	7.5	6.4	2.7	23	3	1	27	4	2	3	17	1	5	8	13	1	5	8	13	(1,690)	(775)	13	20	1	5	8	13	(1,690)	(629)	13	17		0	3
0 to 5	2.5	2.4	1.5	11	0	0	11	2	1	1	7	0	2	3	5	0	2	3	5	(1,821)	(841)	6	9	0	2	3	5	(1,821)	(695)	6	8		0	1
-5 to 0	(2.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(1,952)	(907)	0	0	0	0	0	0	(1,952)	(761)	0	0		0	0
-10 to -5	(7.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(2,083)	(973)	0	0	0	0	0	0	(2,083)	(828)	0	0		0	0
-15 to -10	(12.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(2,214)	(1,039)	0	0	0	0	0	0	(2,214)	(894)	0	0		0	0
-20 to -15	(17.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(2,345)	(1,106)	0	0	0	0	0	0	(2,345)	(960)	0	0		0	0
-25 to -20	(22.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(2,476)	(1,172)	0	0	0	0	0	0	(2,476)	(1,026)	0	0		0	0
				2,920	2,920	2,920	8,760	1,304	783	1,043	5,631	247	1,561	2,633	4,319	247	1,561	2,633	4,319			1,399	2,040	247	1,561	2,633	4,319			1,399	1,398	0	0	642

Cell Ref.	Comment
A-H	TMY-3 Weather Data for Hartford, CT
I - L	Existing Occupancy hours
M - P	Existing Heating/Cooling hours
Q - T	Existing Motor Operating Hours
U	Occupied Cooling and Heating loads (MBH)
V	Unoccupied Cooling and Heating loads (MBH)
W	Cooling = [col U] x ([col M] + [col O]) ÷ 1,000 ÷ AD45
	Heating = -MIN([col I] + [col K] , [col M] + [col O]) x MIN([col U] + internal gains , 0) + IF([col I] + [col K] > [col M]+[col O] , (([col I] + [col K]) - ([col M] + [col O])) x MIN([col V] + internal gains , 0) , 0) ÷ 1,000 ÷ AD44
X	Cooling = [col R] x ([col J] + [col L]) ÷ 1,000 ÷ AD45
	Heating = -([col N] + [col P]) x MIN([col V] + internal gains , 0) + IF([col I] + [col K] < [col M] + [col O] , (([col M] + [col O]) - ([col I] + [col K])) x MIN([col U] + internal gains , 0)) ÷ 1,000 ÷ AD44
Y - AB	Proposed Operating hours
AC	Proposed Occupied Cooling and Heating Loads:
	Cooling = ([col B] - AC60) ÷ ([col B] - AC55) x [col U]
	Heating = ([col B] - AE60) ÷ ([col B] - AE55) x [col U]
AD	Proposed Unoccupied Cooling and Heating Loads:
	Cooling = ([col B] - AC61) ÷ ([col B] - AC56) x [col V]
	Heating = ([col B] - AE61) ÷ ([col B] - AE56) x [col V] ([col V] is modified to account for reduced kitchen and building ventilation due to EMS)
AE	Cooling = [col AC] x ([col Y] + [col AA]) ÷ 1,000 ÷ AD45
	Heating = -MIN([col I] + [col K] , [col Y] + [col AA]) x MIN([col AC] + internal gains , 0) + IF([col I] + [col K] > [col Y]+[col AA] , (([col I] + [col K]) - ([col Y] + [col AA])) x MIN([col AD] + internal gains , 0) , 0) ÷ 1,000 ÷ AD44
AF	Cooling = [col AD] x ([col Z] + [col AB]) ÷ 1,000 ÷ AD45
	Heating = -([col Z] + [col AB]) x MIN([col AD] + internal gains , 0) + IF([col I] + [col K] < [col Y] + [col AA] , (([col Y] + [col AA]) - ([col I] + [col K])) x MIN([col AC] + internal gains , 0)) ÷ 1,000 ÷ AD44
AG	= ([col W] + [col X]) - ([col AE] + [col AF])
	HVAC Fan and Pump Savings
AH	Cooling =([col Q] + [col S] + ([col R] + [col T]) x AD49) x (AD46 + AD48) - ([col Y] + [col AA] + ([col Z] + [col AB]) x AD49) x (AD46 + AD48)
	Heating =([col Q] + [col S]) x AD46 + IF(B20<35,([col R] + [col T]) x AD49 x AD46, IF(B20>50,0,([col R] + [col T]) x AD49 x AD46)) - ((([col Y] + [col AA]) x AD46 + IF(B20<35,([col Z] + [col AB]) x AD49 x AD46, IF(B20>50,0,([col Z] + [col AB]) x AD49 x AD46)))
AI	= ([col W] + [col X]) - ([col AE] + [col AF])

Assumptions:	Value	Unit	CELL REF	Description
Occupied Area	55,866	SF	**AD43**	
Existing Heating Plant Efficiency	82.0%		**AD44**	
Existing Chiller Efficiency	2.9	COP	**AD45**	
Fan Power	32.7	kW	**AD46**	
Heating Pump Power	11.1	kW	**AD47**	
Cooling Pump Power	14.8	kW	**AD48**	
UnOcc. Fan & Pump Cycling	10.0%		**AD49**	% Operating Hours During UnOcc.
UnOcc. Kitchen Vent. Reduction	0.0%		**AD50**	% CFM Saved
UnOcc. Ventilation Reduction	0.0%		**AD51**	% CFM Saved

Average Existing Space Temperatures					
	Cooling		Heating		Description
Occupied	72.0	**AC55**	72.0	**AE55**	
UnOccupied	85.0	**AC56**	66.0	**AE56**	

Average Proposed Space Temperatures					
	Cooling		Heating		Description
Occupied	72.0	**AC60**	72.0	**AE60**	
UnOccupied	85.0	**AC61**	55.0	**AE61**	

Page content is subject to Confidentiality Restrictions

City of Bristol, CT
Main Library
Energy Management System Upgrade/Expansion

TMY-3 Weather Data for Hartford, CT								Existing Occupancy Schedule				Existing Heating/Cooling Schedule				Existing Motor Operating Schedule				Existing				Proposed								Savings		
Amb. Temp Bin deg. F	Ave Temp deg. F	M.C.W.B deg. F	M.C. Enthalpy Btu/lbma	01-08 Hours	09-16 Hours	17-24 Hours	Total Bin Hours	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ. Cool/ Heat Load (MBH)	UnOcc. Cool/ Heat Load (MBH)	Occ Cooling/Heating Energy Consump. (MMBTU)	UnOcc Cooling/Heating Energy Consump. (MMBTU)	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ. Cool/ Heat Load (MBH)	UnOcc. Cool/ Heat Load (MBH)	Occ Cooling/Heating Energy Consump. (MMBTU)	UnOcc Cooling/Heating Energy Consump. (MMBTU)	Cooling Energy Savings (MMBTU)	HVAC Electrical Savings (kWh)	Heating Energy Savings (MMBTU)
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
Cooling																																		
105 to 110	107.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,768	867	0	0	0	0	0	0	1,768	867	0	0	0	0	
100 to 105	102.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,591	780	0	0	0	0	0	0	1,591	780	0	0	0	0	
95 to 100	97.5	75.8	39.4	0	4	0	4	1	0	0	2	1	0	1	2	1	0	1	2	1,414	693	1	0	1	0	1	2	1,414	693	1	0	0	0	
90 to 95	92.5	74.9	38.7	0	34	9	43	12	0	5	26	11	0	15	17	11	0	15	17	1,238	607	10	3	11	0	15	17	1,238	607	10	3	0	0	
85 to 90	87.5	72.8	36.9	0	105	22	127	35	0	15	77	33	0	44	50	33	0	44	50	1,061	520	24	8	33	0	44	50	1,061	520	24	8	0	0	
80 to 85	82.5	69.0	33.5	4	247	105	356	97	0	43	216	92	0	124	140	92	0	124	140	884	433	57	18	92	0	124	140	884	433	57	18	0	0	
75 to 80	77.5	66.7	31.7	55	243	158	456	125	0	55	277	118	0	159	179	118	0	159	179	707	347	58	18	118	0	159	179	707	347	58	18	0	0	
70 to 75	72.5	64.6	30.0	137	208	183	528	144	0	63	321	137	0	184	207	137	0	184	207	530	260	51	16	137	0	184	207	530	260	51	16	0	0	
65 to 70	67.5	61.1	27.5	199	231	248	678	185	0	81	412	176	0	236	266	176	0	236	266	354	173	43	14	176	0	236	266	354	173	43	14	0	0	
60 to 65	62.5	56.0	24.0	306	300	310	916	250	0	110	556	238	0	319	359	238	0	319	359	177	87	29	9	238	0	319	359	177	87	29	9	0	0	
Heating																																		
55 to 60	57.5	51.2	21.1	270	226	289	785	215	0	94	477	204	0	274	308	204	0	274	308	(164)	(53)	0	36	204	0	274	308	(164)	(18)	0	28		0	9
50 to 55	52.5	46.7	18.6	291	186	261	738	202	0	88	448	191	0	257	289	191	0	257	289	(222)	(89)	0	58	191	0	257	289	(222)	(53)	0	45		0	13
45 to 50	47.5	41.8	16.1	210	129	187	526	144	0	63	319	136	0	183	206	136	0	183	206	(281)	(125)	0	58	136	0	183	206	(281)	(89)	0	49		0	9
40 to 45	42.5	38.1	14.4	282	188	155	625	171	0	75	379	162	0	218	245	162	0	218	245	(340)	(160)	12	90	162	0	218	245	(340)	(125)	12	79		0	11
35 to 40	37.5	33.1	12.2	288	296	306	890	243	0	106	540	231	0	310	349	231	0	310	349	(400)	(196)	42	157	231	0	310	349	(400)	(160)	42	142		0	15
30 to 35	32.5	28.5	10.3	252	222	251	725	198	0	87	440	188	0	253	284	188	0	253	284	(461)	(232)	55	152	188	0	253	284	(461)	(196)	55	139		0	12
25 to 30	27.5	24.1	8.6	182	160	177	519	142	0	62	315	135	0	181	203	135	0	181	203	(523)	(267)	55	126	135	0	181	203	(523)	(232)	55	117		0	9
20 to 25	22.5	20.3	7.2	231	89	177	497	136	0	59	302	129	0	173	195	129	0	173	195	(585)	(303)	68	137	129	0	173	195	(585)	(267)	68	129		0	8
15 to 20	17.5	15.5	5.6	135	42	57	234	64	0	28	142	61	0	82	92	61	0	82	92	(648)	(339)	39	72	61	0	82	92	(648)	(303)	39	68		0	4
10 to 15	12.5	10.9	4.1	44	7	24	75	20	0	9	46	19	0	26	29	19	0	26	29	(712)	(374)	15	26	19	0	26	29	(712)	(339)	15	24		0	1
5 to 10	7.5	6.4	2.7	23	3	1	27	7	0	3	16	7	0	9	11	7	0	9	11	(777)	(410)	6	10	7	0	9	11	(777)	(374)	6	10		0	0
0 to 5	2.5	2.4	1.5	11	0	0	11	3	0	1	7	3	0	4	4	3	0	4	4	(842)	(445)	3	5	3	0	4	4	(842)	(410)	3	4		0	0
-5 to 0	(2.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(903)	(481)	0	0	0	0	0	0	(903)	(445)	0	0		0	0
-10 to -5	(7.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(964)	(517)	0	0	0	0	0	0	(964)	(481)	0	0		0	0
-15 to -10	(12.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(1,024)	(552)	0	0	0	0	0	0	(1,024)	(517)	0	0		0	0
-20 to -15	(17.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(1,085)	(588)	0	0	0	0	0	0	(1,085)	(552)	0	0		0	0
-25 to -20	(22.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(1,145)	(624)	0	0	0	0	0	0	(1,145)	(588)	0	0		0	0
				2,920	2,920	2,920	8,760	2,394	0	1,047	5,319	2,273	0	3,054	3,434	2,273	0	3,054	3,434			567	1,013	2,273	0	3,054	3,434			567	922	0	0	92

Cell Ref.	Comment
A-H	TMY-3 Weather Data for Hartford, CT
I - L	Existing Occupancy hours
M - P	Existing Heating/Cooling hours
Q - T	Existing Motor Operating Hours
U	Occupied Cooling and Heating loads (MBH)
V	Unoccupied Cooling and Heating loads (MBH)
W	Cooling = [col U] x ([col M] + [col O]) ÷ 1,000 ÷ AD45
	Heating = -MIN([col I] + [col K] , [col M] + [col O]) x MIN([col U] + internal gains , 0) + IF([col I] + [col K] > [col M]+[col O] , (([col I] + [col K]) - ([col M] + [col O])) x MIN([col V] + internal gains , 0) , 0) ÷ 1,000 ÷ AD44
X	Cooling = [col R] x ([col J] + [col L]) ÷ 1,000 ÷ AD45
	Heating = -([col N] + [col P]) x MIN([col V] + internal gains , 0) + IF([col I] + [col K] < [col M] + [col O] , (([col M] + [col O]) - ([col I] + [col K])) x MIN([col U] + internal gains , 0)) ÷ 1,000 ÷ AD44
Y - AB	Proposed Operating hours
AC	Proposed Occupied Cooling and Heating Loads:
	Cooling = ([col B] - AC60) ÷ ([col B] - AC55) x [col U]
	Heating = ([col B] - AE60) ÷ ([col B] - AE55) x [col U]
AD	Proposed Unoccupied Cooling and Heating Loads:
	Cooling = ([col B] - AC61) ÷ ([col B] - AC56) x [col V]
	Heating = ([col B] - AE61) ÷ ([col B] - AE56) x [col V] ([col V] is modified to account for reduced kitchen and building ventilation due to EMS)
AE	Cooling = [col AC] x ([col Y] + [col AA]) ÷ 1,000 ÷ AD45
	Heating = -MIN([col I] + [col K] , [col Y] + [col AA]) x MIN([col AC] + internal gains , 0) + IF([col I] + [col K] > [col Y]+[col AA] , (([col I] + [col K]) - ([col Y] + [col AA])) x MIN([col AD] + internal gains , 0) , 0) ÷ 1,000 ÷ AD44
AF	Cooling = [col AD] x ([col Z] + [col AB]) ÷ 1,000 ÷ AD45
	Heating = -([col Z] + [col AB]) x MIN([col AD] + internal gains , 0) + IF([col I] + [col K] < [col Y] + [col AA] , (([col Y] + [col AA]) - ([col I] + [col K])) x MIN([col AC] + internal gains , 0)) ÷ 1,000 ÷ AD44
AG	= ([col W] + [col X]) - ([col AE] + [col AF])
	HVAC Fan and Pump Savings
AH	Cooling =([col Q] + [col S] + ([col R] + [col T]) x AD49) x (AD46 + AD48) - ([col Y] + [col AA] + ([col Z] + [col AB]) x AD49) x (AD46 + AD48)
	Heating =([col Q] + [col S]) x AD46 + IF(B20<35,([col R] + [col T]) x AD49 x AD46, IF(B20>50,0,([col R] + [col T]) x AD49 x AD46)) - ((([col Y] + [col AA]) x AD46 + IF(B20<35,([col Z] + [col AB]) x AD49 x AD46, IF(B20>50,0,([col Z] + [col AB]) x AD49 x AD46)))
AI	= ([col W] + [col X]) - ([col AE] + [col AF])

Assumptions:	Value	Unit	CELL REF	Description
Occupied Area	55,468	SF	**AD43**	
Existing Heating Plant Efficiency	82.0%		**AD44**	
Existing Chiller Efficiency	3.4	COP	**AD45**	
Fan Power	29.8	kW	**AD46**	
Heating Pump Power	8.1	kW	**AD47**	
Cooling Pump Power	16.9	kW	**AD48**	
UnOcc. Fan & Pump Cycling	10.0%		**AD49**	% Operating Hours During UnOcc.
UnOcc. Kitchen Vent. Reduction	0.0%		**AD50**	% CFM Saved
UnOcc. Ventilation Reduction	0.0%		**AD51**	% CFM Saved

Average Existing Space Temperatures					
	Cooling		Heating		Description
Occupied	72.0	**AC55**	72.0	**AE55**	
UnOccupied	85.0	**AC56**	65.0	**AE56**	

Average Proposed Space Temperatures					
	Cooling		Heating		Description
Occupied	72.0	**AC60**	72.0	**AE60**	
UnOccupied	85.0	**AC61**	60.0	**AE61**	

Page content is subject to Confidentiality Restrictions

City of Bristol, CT
Manross Library
Energy Management System Upgrade/Expansion

TMY-3 Weather Data for Hartford, CT								Existing Occupancy Schedule				Existing Heating/Cooling Schedule				Existing Motor Operating Schedule				Existing				Proposed								Savings		
Amb. Temp Bin deg. F	Ave Temp deg. F	M.C.W.B deg. F	M.C. Enthalpy Btu/lbma	01-08 Hours	09-16 Hours	17-24 Hours	Total Bin Hours	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ. Cool/ Heat Load (MBH)	UnOcc. Cool/ Heat Load (MBH)	Occ Cooling/Heating Energy Consump. (MMBTU)	UnOcc Cooling/Heating Energy Consump. (MMBTU)	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ. Cool/ Heat Load (MBH)	UnOcc. Cool/ Heat Load (MBH)	Occ Cooling/Heating Energy Consump. (MMBTU)	UnOcc Cooling/Heating Energy Consump. (MMBTU)	Cooling Energy Savings (MMBTU)	HVAC Electrical Savings (kWh)	Heating Energy Savings (MMBTU)
A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**Q**	**R**	**S**	**T**	**U**	**V**	**W**	**X**	**Y**	**Z**	**AA**	**AB**	**AC**	**AD**	**AE**	**AF**	**AG**	**AH**	**AI**
Cooling																																		
105 to 110	107.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	235	115	0	0	0	0	0	0	235	115	0	0	0	0	
100 to 105	102.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	212	104	0	0	0	0	0	0	212	104	0	0	0	0	
95 to 100	97.5	75.8	39.4	0	4	0	4	1	0	0	3	1	0	2	1	1	0	2	1	188	92	0	0	1	0	1	2	188	92	0	0	0	6	
90 to 95	92.5	74.9	38.7	0	34	9	43	10	0	4	29	10	0	17	15	10	0	17	15	165	81	2	0	10	0	10	23	165	81	1	1	0	63	
85 to 90	87.5	72.8	36.9	0	105	22	127	30	0	12	85	30	0	51	45	30	0	51	45	141	69	4	1	30	0	30	67	141	69	3	2	1	185	
80 to 85	82.5	69.0	33.5	4	247	105	356	85	0	34	237	85	0	144	127	85	0	144	127	118	58	9	3	85	0	85	186	118	58	7	4	1	576	
75 to 80	77.5	66.7	31.7	55	243	158	456	109	0	43	304	109	0	184	163	109	0	184	163	94	46	9	3	109	0	108	239	94	46	7	4	1	738	
70 to 75	72.5	64.6	30.0	137	208	183	528	126	0	50	352	126	0	214	189	126	0	214	189	71	35	8	2	126	0	126	277	71	35	6	3	1	855	
65 to 70	67.5	61.1	27.5	199	231	248	678	162	0	64	452	162	0	274	242	162	0	274	242	47	23	7	2	162	0	161	355	47	23	5	3	1	1,098	
60 to 65	62.5	56.0	24.0	306	300	310	916	218	0	87	611	218	0	371	327	218	0	371	327	24	12	5	1	218	0	218	480	24	12	3	2	1	1,483	
Heating																																		
55 to 60	57.5	51.2	21.1	270	226	289	785	187	0	75	523	187	0	318	280	187	0	318	280	(56)	(47)	0	31	187	0	187	411	(56)	(32)	0	22		1,349	10
50 to 55	52.5	46.7	18.6	291	186	261	738	176	0	70	492	176	0	299	264	176	0	299	264	(79)	(65)	7	43	176	0	176	387	(79)	(50)	7	33		1,269	10
45 to 50	47.5	41.8	16.1	210	129	187	526	125	0	50	351	125	0	213	188	125	0	213	188	(101)	(84)	10	40	125	0	125	276	(101)	(69)	10	32		814	7
40 to 45	42.5	38.1	14.4	282	188	155	625	149	0	59	417	149	0	253	223	149	0	253	223	(124)	(102)	19	58	149	0	149	327	(124)	(88)	19	49		967	9
35 to 40	37.5	33.1	12.2	288	296	306	890	212	0	85	593	212	0	360	318	212	0	360	318	(146)	(121)	35	99	212	0	212	466	(146)	(106)	35	85		1,377	14
30 to 35	32.5	28.5	10.3	252	222	251	725	173	0	69	483	173	0	293	259	173	0	293	259	(169)	(140)	36	94	173	0	173	380	(169)	(125)	36	82		1,056	12
25 to 30	27.5	24.1	8.6	182	160	177	519	124	0	49	346	124	0	210	185	124	0	210	185	(191)	(158)	31	76	124	0	123	272	(191)	(143)	31	67		756	9
20 to 25	22.5	20.3	7.2	231	89	177	497	118	0	47	331	118	0	201	178	118	0	201	178	(214)	(177)	34	82	118	0	118	260	(214)	(162)	34	73		724	9
15 to 20	17.5	15.5	5.6	135	42	57	234	56	0	22	156	56	0	95	84	56	0	95	84	(236)	(196)	19	43	56	0	56	123	(236)	(181)	19	38		341	4
10 to 15	12.5	10.9	4.1	44	7	24	75	18	0	7	50	18	0	30	27	18	0	30	27	(258)	(214)	7	15	18	0	18	39	(258)	(199)	7	14		109	1
5 to 10	7.5	6.4	2.7	23	3	1	27	6	0	3	18	6	0	11	10	6	0	11	10	(281)	(233)	3	6	6	0	6	14	(281)	(218)	3	5		39	1
0 to 5	2.5	2.4	1.5	11	0	0	11	3	0	1	7	3	0	4	4	3	0	4	4	(303)	(251)	1	3	3	0	3	6	(303)	(236)	1	2		16	0
-5 to 0	(2.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(326)	(270)	0	0	0	0	0	0	(326)	(255)	0	0		0	0
-10 to -5	(7.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(348)	(289)	0	0	0	0	0	0	(348)	(274)	0	0		0	0
-15 to -10	(12.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(371)	(307)	0	0	0	0	0	0	(371)	(292)	0	0		0	0
-20 to -15	(17.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(393)	(326)	0	0	0	0	0	0	(393)	(311)	0	0		0	0
-25 to -20	(22.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(416)	(345)	0	0	0	0	0	0	(416)	(330)	0	0		0	0
				2,920	2,920	2,920	8,760	2,087	0	833	5,840	2,087	0	3,544	3,129	2,087	0	3,544	3,129			246	602	2,087	0	2,084	4,589			235	521	6	13,822	87

Cell Ref.	Comment
A-H	TMY-3 Weather Data for Hartford, CT
I - L	Existing Occupancy hours
M - P	Existing Heating/Cooling hours
Q - T	Existing Motor Operating Hours
U	Occupied Cooling and Heating loads (MBH)
V	Unoccupied Cooling and Heating loads (MBH)
W	Cooling = [col U] x ([col M] + [col O]) ÷ 1,000 ÷ AD45
	Heating = -MIN([col I] + [col K] , [col M] + [col O]) x MIN([col U] + internal gains , 0) + IF([col I] + [col K] > [col M]+[col O] , (([col I] + [col K]) - ([col M] + [col O])) x MIN([col V] + internal gains , 0) , 0) ÷ 1,000 ÷ AD44
X	Cooling = [col R] x ([col J] + [col L]) ÷ 1,000 ÷ AD45
	Heating = -([col N] + [col P]) x MIN([col V] + internal gains , 0) + IF([col I] + [col K] < [col M] + [col O] , (([col M] + [col O]) - ([col I] + [col K])) x MIN([col U] + internal gains , 0)) ÷ 1,000 ÷ AD44
Y - AB	Proposed Operating hours
AC	Proposed Occupied Cooling and Heating Loads:
	Cooling = ([col B] - AC60) ÷ ([col B] - AC55) x [col U]
	Heating = ([col B] - AE60) ÷ ([col B] - AE55) x [col U]
AD	Proposed Unoccupied Cooling and Heating Loads:
	Cooling = ([col B] - AC61) ÷ ([col B] - AC56) x [col V]
	Heating = ([col B] - AE61) ÷ ([col B] - AE56) x [col V] ([col V] is modified to account for reduced kitchen and building ventilation due to EMS)
AE	Cooling = [col AC] x ([col Y] + [col AA]) ÷ 1,000 ÷ AD45
	Heating = -MIN([col I] + [col K] , [col Y] + [col AA]) x MIN([col AC] + internal gains , 0) + IF([col I] + [col K] > [col Y]+[col AA] , (([col I] + [col K]) - ([col Y] + [col AA])) x MIN([col AD] + internal gains , 0) , 0) ÷ 1,000 ÷ AD44
AF	Cooling = [col AD] x ([col Z] + [col AB]) ÷ 1,000 ÷ AD45
	Heating = -([col Z] + [col AB]) x MIN([col AD] + internal gains , 0) + IF([col I] + [col K] < [col Y] + [col AA] , (([col Y] + [col AA]) - ([col I] + [col K])) x MIN([col AC] + internal gains , 0)) ÷ 1,000 ÷ AD44
AG	= ([col W] + [col X]) - ([col AE] + [col AF])
	HVAC Fan and Pump Savings
AH	Cooling =([col Q] + [col S] + ([col R] + [col T]) x AD49) x (AD46 + AD48) - ([col Y] + [col AA] + ([col Z] + [col AB]) x AD49) x (AD46 + AD48)
	Heating =([col Q] + [col S]) x AD46 + IF(B20<35,([col R] + [col T]) x AD49 x AD46, IF(B20>50,0,([col R] + [col T]) x AD49 x AD46)) - ((([col Y] + [col AA]) x AD46 + IF(B20<35,([col Z] + [col AB]) x AD49 x AD46, IF(B20>50,0,([col Z] + [col AB]) x AD49 x AD46)))
AI	= ([col W] + [col X]) - ([col AE] + [col AF])

Assumptions:	Value	Unit	CELL REF	Description
Occupied Area	17,237	SF	**AD43**	
Existing Heating Plant Efficiency	76.0%		**AD44**	
Existing Chiller Efficiency	2.9	COP	**AD45**	
Fan Power	9.7	kW	**AD46**	
Heating Pump Power	0.6	kW	**AD47**	
Cooling Pump Power	0.0	kW	**AD48**	
UnOcc. Fan & Pump Cycling	10.0%		**AD49**	% Operating Hours During UnOcc.
UnOcc. Kitchen Vent. Reduction	0.0%		**AD50**	% CFM Saved
UnOcc. Ventilation Reduction	0.0%		**AD51**	% CFM Saved

Average Existing Space Temperatures					
	Cooling		Heating		**Description**
Occupied	72.0	**AC55**	70.0	**AE55**	
UnOccupied	85.0	**AC56**	70.0	**AE56**	

Average Proposed Space Temperatures					
	Cooling		Heating		**Description**
Occupied	72.0	**AC60**	70.0	**AE60**	
UnOccupied	85.0	**AC61**	66.0	**AE61**	

Existing	Max Daily Demand	82 Therms	10%
Savings	Max Daily Demand	8.4	

Page content is subject to Confidentiality Restrictions

City of Bristol, CT
Youth Services Building
Energy Management System Upgrade/Expansion

TMY-3 Weather Data for Hartford, CT								Existing Occupancy Schedule				Existing Heating/Cooling Schedule				Existing Motor Operating Schedule				Existing				Proposed								Savings		
Amb. Temp Bin deg. F	Ave Temp deg. F	M.C.W.B deg. F	M.C. Enthalpy Btu/lbma	01-08 Hours	09-16 Hours	17-24 Hours	Total Bin Hours	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ. Cool/ Heat Load (MBH)	UnOcc. Cool/ Heat Load (MBH)	Occ Cooling/Heating Energy Consump. (MMBTU)	UnOcc Cooling/Heating Energy Consump. (MMBTU)	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ. Cool/ Heat Load (MBH)	UnOcc. Cool/ Heat Load (MBH)	Occ Cooling/Heating Energy Consump. (MMBTU)	UnOcc Cooling/Heating Energy Consump. (MMBTU)	Cooling Energy Savings (MMBTU)	HVAC Electrical Savings (kWh)	Heating Energy Savings (MMBTU)
A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**Q**	**R**	**S**	**T**	**U**	**V**	**W**	**X**	**Y**	**Z**	**AA**	**AB**	**AC**	**AD**	**AE**	**AF**	**AG**	**AH**	**AI**
Cooling																																		
105 to 110	107.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	214	114	0	0	0	0	0	0	214	114	0	0	0	0	
100 to 105	102.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	192	102	0	0	0	0	0	0	192	102	0	0	0	0	
95 to 100	97.5	75.8	39.4	0	4	0	4	1	0	0	3	1	0	1	2	1	0	1	2	171	91	0	0	1	0	1	2	171	91	0	0	0	0	
90 to 95	92.5	74.9	38.7	0	34	9	43	10	0	2	31	10	0	7	26	10	0	7	26	150	80	1	1	10	0	7	26	150	80	1	1	0	0	
85 to 90	87.5	72.8	36.9	0	105	22	127	30	0	6	90	30	0	20	77	30	0	20	77	128	68	2	1	30	0	20	77	128	68	2	1	0	0	
80 to 85	82.5	69.0	33.5	4	247	105	356	85	0	18	253	85	0	55	216	85	0	55	216	107	57	4	3	85	0	55	216	107	57	4	3	0	0	
75 to 80	77.5	66.7	31.7	55	243	158	456	109	0	23	324	109	0	71	277	109	0	71	277	85	45	4	4	109	0	71	277	85	45	4	4	0	0	
70 to 75	72.5	64.6	30.0	137	208	183	528	126	0	27	376	126	0	82	320	126	0	82	320	64	34	4	3	126	0	82	320	64	34	4	3	0	0	
65 to 70	67.5	61.1	27.5	199	231	248	678	162	0	34	482	162	0	105	411	162	0	105	411	43	23	3	3	162	0	105	411	43	23	3	3	0	0	
60 to 65	62.5	56.0	24.0	306	300	310	916	218	0	46	652	218	0	142	556	218	0	142	556	21	11	2	2	218	0	142	556	21	11	2	2	0	0	
Heating																																		
55 to 60	57.5	51.2	21.1	270	226	289	785	187	0	40	558	187	0	122	476	187	0	122	476	(35)	(9)	3	7	187	0	122	476	(35)	0	3	3		0	4
50 to 55	52.5	46.7	18.6	291	186	261	738	176	0	37	525	176	0	115	448	176	0	115	448	(51)	(19)	7	15	176	0	115	448	(51)	(5)	7	6		0	8
45 to 50	47.5	41.8	16.1	210	129	187	526	125	0	27	374	125	0	82	319	125	0	82	319	(67)	(29)	8	16	125	0	82	319	(67)	(15)	8	10		0	6
40 to 45	42.5	38.1	14.4	282	188	155	625	149	0	32	445	149	0	97	379	149	0	97	379	(84)	(39)	14	25	149	0	97	379	(84)	(25)	14	18		0	7
35 to 40	37.5	33.1	12.2	288	296	306	890	212	0	45	633	212	0	138	540	212	0	138	540	(100)	(49)	25	45	212	0	138	540	(100)	(35)	25	35		0	10
30 to 35	32.5	28.5	10.3	252	222	251	725	173	0	37	516	173	0	113	440	173	0	113	440	(117)	(59)	25	44	173	0	113	440	(117)	(45)	25	36		0	8
25 to 30	27.5	24.1	8.6	182	160	177	519	124	0	26	369	124	0	81	315	124	0	81	315	(133)	(69)	21	37	124	0	81	315	(133)	(55)	21	31		0	6
20 to 25	22.5	20.3	7.2	231	89	177	497	118	0	25	354	118	0	77	301	118	0	77	301	(150)	(79)	23	40	118	0	77	301	(150)	(65)	23	35		0	6
15 to 20	17.5	15.5	5.6	135	42	57	234	56	0	12	166	56	0	36	142	56	0	36	142	(166)	(89)	12	21	56	0	36	142	(166)	(75)	12	19		0	3
10 to 15	12.5	10.9	4.1	44	7	24	75	18	0	4	53	18	0	12	45	18	0	12	45	(182)	(99)	4	8	18	0	12	45	(182)	(85)	4	7		0	1
5 to 10	7.5	6.4	2.7	23	3	1	27	6	0	1	19	6	0	4	16	6	0	4	16	(199)	(109)	2	3	6	0	4	16	(199)	(95)	2	3		0	0
0 to 5	2.5	2.4	1.5	11	0	0	11	3	0	1	8	3	0	2	7	3	0	2	7	(215)	(119)	1	1	3	0	2	7	(215)	(105)	1	1		0	0
-5 to 0	(2.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(232)	(128)	0	0	0	0	0	0	(232)	(115)	0	0		0	0
-10 to -5	(7.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(248)	(138)	0	0	0	0	0	0	(248)	(124)	0	0		0	0
-15 to -10	(12.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(265)	(148)	0	0	0	0	0	0	(265)	(134)	0	0		0	0
-20 to -15	(17.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(281)	(158)	0	0	0	0	0	0	(281)	(144)	0	0		0	0
-25 to -20	(22.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(298)	(168)	0	0	0	0	0	0	(298)	(154)	0	0		0	0
				2,920	2,920	2,920	8,760	2,087	0	442	6,231	2,087	0	1,360	5,313	2,087	0	1,360	5,313			166	279	2,087	0	1,360	5,313			166	220	0	0	58

Cell Ref.	Comment
A-H	TMY-3 Weather Data for Hartford, CT
I - L	Existing Occupancy hours
M - P	Existing Heating/Cooling hours
Q - T	Existing Motor Operating Hours
U	Occupied Cooling and Heating loads (MBH)
V	Unoccupied Cooling and Heating loads (MBH)
W	Cooling = [col U] x ([col M] + [col O]) ÷ 1,000 ÷ AD45
	Heating = -MIN([col I] + [col K] , [col M] + [col O]) x MIN([col U] + internal gains , 0) + IF([col I] + [col K] > [col M]+[col O] , (([col I] + [col K]) - ([col M] + [col O])) x MIN([col V] + internal gains , 0) , 0) ÷ 1,000 ÷ AD44
X	Cooling = [col R] x ([col J] + [col L]) ÷ 1,000 ÷ AD45
	Heating = -([col N] + [col P]) x MIN([col V] + internal gains , 0) + IF([col I] + [col K] < [col M] + [col O] , (([col M] + [col O]) - ([col I] + [col K])) x MIN([col U] + internal gains , 0)) ÷ 1,000 ÷ AD44
Y - AB	Proposed Operating hours
AC	Proposed Occupied Cooling and Heating Loads:
	Cooling = ([col B] - AC60) ÷ ([col B] - AC55) x [col U]
	Heating = ([col B] - AE60) ÷ ([col B] - AE55) x [col U]
AD	Proposed Unoccupied Cooling and Heating Loads:
	Cooling = ([col B] - AC61) ÷ ([col B] - AC56) x [col V]
	Heating = ([col B] - AE61) ÷ ([col B] - AE56) x [col V] ([col V] is modified to account for reduced kitchen and building ventilation due to EMS)
AE	Cooling = [col AC] x ([col Y] + [col AA]) ÷ 1,000 ÷ AD45
	Heating = -MIN([col I] + [col K] , [col Y] + [col AA]) x MIN([col AC] + internal gains , 0) + IF([col I] + [col K] > [col Y]+[col AA] , (([col I] + [col K]) - ([col Y] + [col AA])) x MIN([col AD] + internal gains , 0) , 0) ÷ 1,000 ÷ AD44
AF	Cooling = [col AD] x ([col Z] + [col AB]) ÷ 1,000 ÷ AD45
	Heating = -([col Z] + [col AB]) x MIN([col AD] + internal gains , 0) + IF([col I] + [col K] < [col Y] + [col AA] , (([col Y] + [col AA]) - ([col I] + [col K])) x MIN([col AC] + internal gains , 0)) ÷ 1,000 ÷ AD44
AG	= ([col W] + [col X]) - ([col AE] + [col AF])
	HVAC Fan and Pump Savings
AH	Cooling =([col Q] + [col S] + ([col R] + [col T]) x AD49) x (AD46 + AD48) - ([col Y] + [col AA] + ([col Z] + [col AB]) x AD49) x (AD46 + AD48)
	Heating =([col Q] + [col S]) x AD46 + IF(B20<35,([col R] + [col T]) x AD49 x AD46, IF(B20>50,0,([col R] + [col T]) x AD49 x AD46)) - ((([col Y] + [col AA]) x AD46 + IF(B20<35,([col Z] + [col AB]) x AD49 x AD46, IF(B20>50,0,([col Z] + [col AB]) x AD49 x AD46)))
AI	= ([col W] + [col X]) - ([col AE] + [col AF])

Assumptions:	Value	Unit	CELL REF	Description
Occupied Area	12,816	SF	**AD43**	
Existing Heating Plant Efficiency	76.0%		**AD44**	
Existing Chiller Efficiency	3.5	COP	**AD45**	
Fan Power	1.7	kW	**AD46**	
Heating Pump Power	0.2	kW	**AD47**	
Cooling Pump Power	0.0	kW	**AD48**	
UnOcc. Fan & Pump Cycling	10.0%		**AD49**	% Operating Hours During UnOcc.
UnOcc. Kitchen Vent. Reduction	0.0%		**AD50**	% CFM Saved
UnOcc. Ventilation Reduction	0.0%		**AD51**	% CFM Saved

Average Existing Space Temperatures					
	Cooling		Heating		Description
Occupied	74.0	**AC55**	68.0	**AE55**	
UnOccupied	85.0	**AC56**	62.0	**AE56**	

Average Proposed Space Temperatures					
	Cooling		Heating		Description
Occupied	74.0	**AC60**	68.0	**AE60**	
UnOccupied	85.0	**AC61**	55.0	**AE61**	

Page content is subject to Confidentiality Restrictions

Appendix for ESM 4:
Energy Management System Upgrade/Expansion

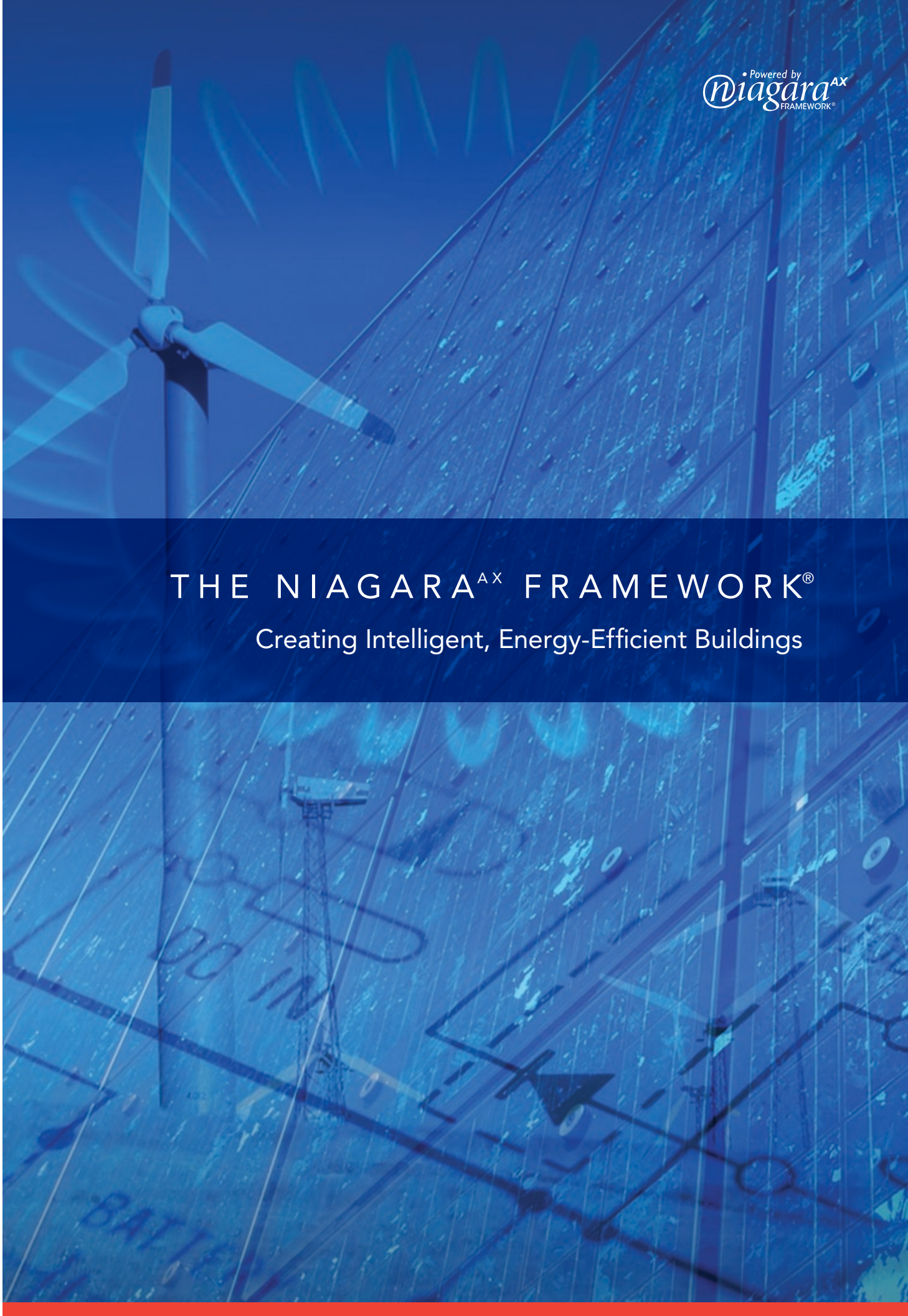
II. Manufacturer Specification Sheets

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

TRIDIUM®

Powered by Niagara AX FRAMEWORK®



THE NIAGARA AX FRAMEWORK®

Creating Intelligent, Energy-Efficient Buildings



Commercial and industrial buildings use about 40% of the energy consumed in the United States and 72% of the nation's electricity. Buildings and facilities account for 80% of all electric expenditures.

THE NIAGARA^{AX} FRAMEWORK®

Intelligent Energy Management Technology for Managing, Controlling and Reducing Energy Costs.

Energy costs represent huge expenses for any organization. As energy use and costs continue to increase in this challenging environment, so does the responsibility of building owners and managers to address energy efficiency and energy conservation within their organization. Controlling energy costs and environmentally sound energy use is paramount today.

Smart energy management solutions control and manage energy-consuming systems in facilities such as HVAC, lighting, etc. In addition, these solutions also ensure these systems operate properly and are optimized for maximum performance and energy efficiency that result in lower energy bills.

Perhaps no other technology has had as profound an impact on smart energy solutions and making buildings more energy efficient than the Internet. At the forefront, driving this technology is the Niagara^{AX} Framework.®

Built on an open architecture, the Niagara^{AX} Framework merges multi-vendor automation systems and real-time integration into a single, extensible platform that monitors, manages and controls the power consumption of all building systems, drives energy efficiency and reduces energy costs. Niagara^{AX} takes into account all critical areas that form the subsystems that make a building function including lighting, heating, ventilation and air-conditioning (HVAC), security and energy management. It allows devices to share information with each other and streamlines them into a common system where management can control and monitor the buildings' operations. Niagara^{AX} is ideal for both small and large organizations as well as campuses and geographically dispersed enterprises.

In addition to integrating energy consuming devices and systems, Niagara^{AX} also includes energy management verification tools that allow users to implement the most efficient and sustained energy strategies.

The technology also enables you to collect information and benchmark buildings to expose operational inefficiencies and facilitate solutions. From a green building perspective, Niagara^{AX} allows you to capitalize on accurate and concise intelligence relating to the energy performance of a building in order to achieve lower energy consumption, enhanced efficiencies and lower carbon emissions.

Today, there are over 140,000 instances of Niagara^{AX} operating in more than 43 countries worldwide in office buildings, manufacturing plants, mission-critical facilities, hospitals, educational and government campuses, military bases, hotels, retail stores and airports.



Buildings are an integral part of our nation's new energy system. From being a consumer of energy to being the facility that houses much of our energy systems, it will be difficult to uncouple building systems from the rest of the future of smart energy solutions.



Niagara^{AX} Creates Better Buildings — by integrating today's diverse building systems such as environmental controls, security, lighting, energy, fire and life safety. The Niagara^{AX} Framework is creating better buildings — ones that are smarter, use less energy, are more efficient, have lower operating costs, are safer and contribute to a sustainable environment.

Niagara[AX] allows buildings to automatically recognize when employees arrive, by the swipe of an access card, and turn on the lights and environmental controls in only the selected and occupied part of the building. Doing so can contribute to a savings of up to 15% in the energy bill.



Real-World Applications

Retail

Upscale Retailer

An upscale retailer with multiple locations and regional offices is using a Niagara[AX]-based energy management system for controlling costs; monitoring fuel usage and sub-metered loads for high energy use equipment; and receiving energy savings from more efficient operation of the store's equipment and limiting usage during peak rate periods. Within 24 months, they've experienced more than $8 million in energy savings.

Convergence Retailer

By using energy data generated by Niagara[AX] to determine future equipment selection and store design as well as shaping loads to reduce power costs, a major convergence retailer with 550 locations is reducing energy usage and receiving cost savings of 10 – 12%.

Education

K-12

A 10,000-acre K-12 school system had three classroom buildings, 109 student homes, a performing arts center and more with their own controls and devices, and no central monitoring or system. By uniting the campus through a Niagara[AX]-based energy management system, monitoring and control became much more efficient and the school system reduced its annual utility spend by over 25%.

University

A leading university with outdated HVAC equipment in many of its buildings was very limited in its ability to monitor and manage energy usage. Through a Niagara[AX]-based energy management system, the university integrated cost-effective control upgrades into one system, achieved the Web-based management it desired, and lowered its monthly utility costs by 20%.

Office Buildings

Using Niagara[AX], a multi-site, multi-location, national financial institution gained savings of 10-15% — translating to millions of dollars annually — within one year. Energy consumption and Greenhouse Gas Emissions have decreased by 11% and maintenance costs have been cut by 12%. In addition, the institution is enjoying reduced service calls, fewer truck rolls and an increase in performance of HVAC and lighting systems.

Manufacturing

Aerospace

A large aerospace company not only wished to reduce energy costs in its production facility, but also had specific needs for managing flexible lighting zones for a safe working environment. The chosen Niagara[AX]-based energy management system provided Web-based control for managing lighting and environmental schedules as well as load shedding during peak periods. The result was reduced electric consumption by 20% during peak usage and 50% on weekends.

Pharmaceutical

Integration of multiple systems and meters through a single Web-based interface was a requirement for a large pharmaceutical company, as was a tool for shedding loads and verifying reductions. Through the updated Niagara[AX]-based energy-management system, the company integrated legacy systems with new BACnet® systems for real-time control from any onsite Web browser. The company can now shed a 1.5 MW load within 30 minutes and has measurement and verification tools in place to better manage and control energy use.

Government

Managers of government buildings are receiving real-time energy and operational data and sending commands to and from different devices so they can take immediate action — managing energy consumption and reducing costs — from anywhere. They are reducing energy costs by an average of 15% per building.

TRIDIUM®

About Tridium, Inc.

Tridium is the global leader in application software frameworks, automation infrastructure technology and device-to-enterprise integration solutions. Our technologies extend connectivity, integration and interoperability to the millions of devices deployed in the market today.

The Niagara^{AX} Framework® is the leading software platform that integrates diverse systems and devices, regardless of manufacturer or communication protocol, into a unified platform that can be easily managed and controlled in real time over the Internet using a standard browser.

Today, there are over 140,000 instances of Niagara^{AX} operating in 43 countries in applications that include: energy and sustainability management, intelligent building automation, M2M, telecommunications, security automation, lighting control, home automation, convergence retailing and smart facilities management. Niagara^{AX}-based solutions make buildings better — ones that use less energy, have lower operating costs, are safer, contribute to sustainable environments and deliver significant ROI.

The Sedona Framework™ is a software platform for developing, deploying, integrating and managing pervasive device applications at the lowest level. The Sedona Framework distributes decision-making control and manageability to any device and brings intelligence and connectivity to the network edge and back.

Powered by niagara^{AX} FRAMEWORK®

www.tridium.com

JACE, AX Supervisor, and Niagara^{AX} Framework are trademarks of Tridium, Inc. All specifications subject to change without notice or liability to provide changes to prior purchasers. Information and specifications published here are current as of the date of publication of this document. Tridium, Inc., reserves the right to change or modify specifications without prior notice. The latest product specifications can be found by contacting our corporate headquarters, Richmond, Virginia. Products or features contained herein may be covered by one or more U.S. or foreign patents.

BRO-T-EN-052009

TAC I/A Series

Building Automation System

Intelligent Building Automation Solutions



Make the most of your energy

Schneider Electric

TAC I/A Series: Open....interoperable...scalable...extensible



The TAC I/A Series® Building Automation System is Intelligent Automation for every type and size facility. Delivering an open interoperable solution through the power of the Internet, the I/A Series provides full access and control of your building from anywhere in the world. Only I/A Series is:

Open and Interoperable

I/A Series fully supports LON®, BACnet™, OPC®, and Modbus®, and is powered by the Niagara Framework®.

- Internet browser support. Thin client Internet Explorer™ and Netscape™ supported for unlimited users.
- Control and monitoring. Complete day-to-day access or system management and/or monitoring.
- Data collection. Real time, historical, and dynamic creation for custom requirements.
- Alarm management. Sophisticated alarm processing and routing including e-mail, paging, and cell phone capability.
- Scheduling. Graphical calendar, event, and holiday scheduling available across platforms.
- Reporting. Dynamic creation of custom reports with simplified cataloging as masters.
- Database Change Recording. Audit Trail functionality provides for full details on who has accessed the system, when, and what activities occurred.
- Database Programming. Complete access to all supported platforms.
- Security. Password protection and security using standard Java authentication and encryption techniques.

Web Powered

The I/A Series is designed from the ground up as a Java based web enabled product family. Thin client, pure browser access for any size project.

Full Range of Control Solutions

The MicroNet series of controllers offers the most complete line of fully programmable, open protocol controllers.

Innovative Design

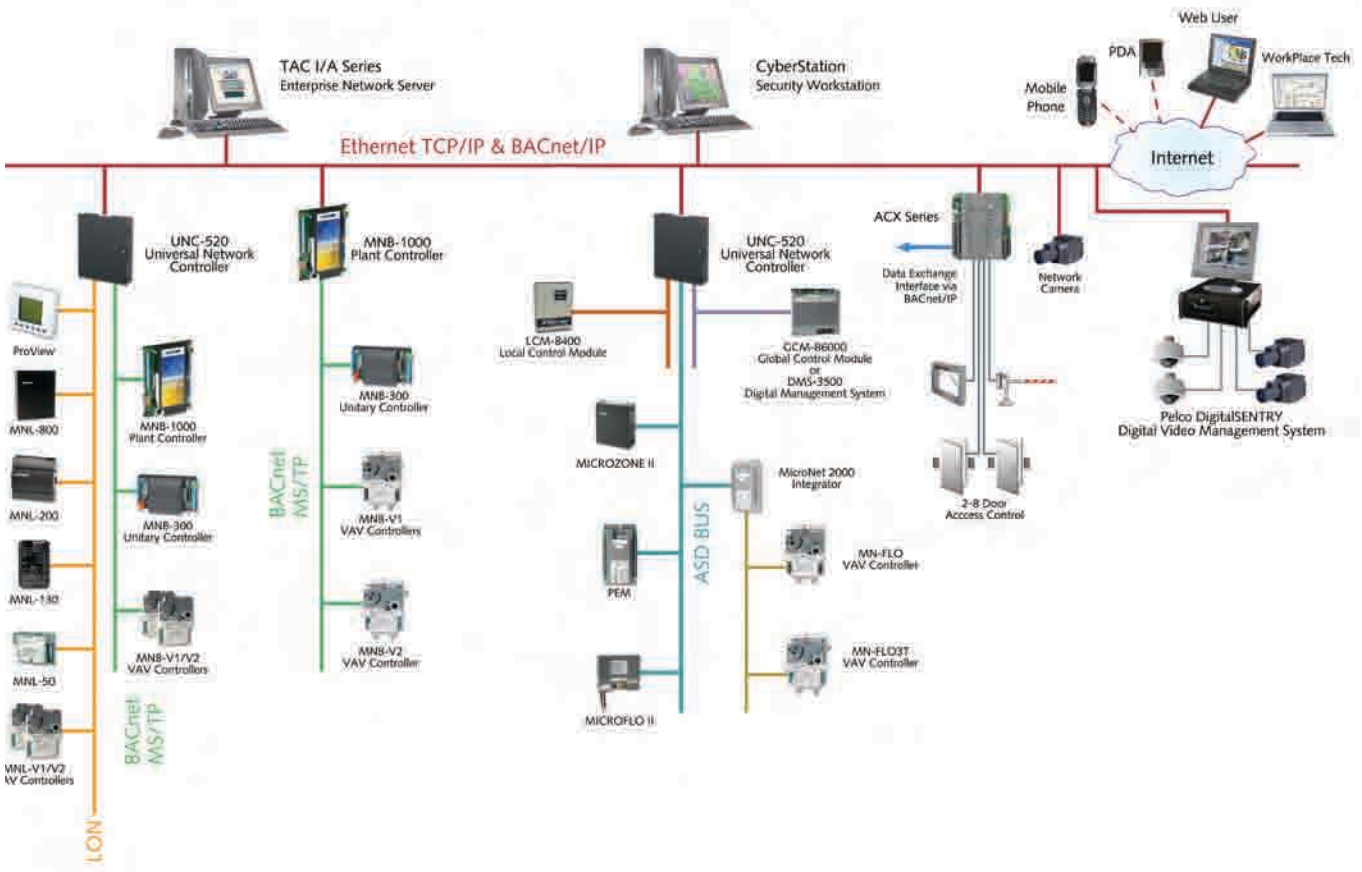
Industry leading family of intelligent temperature and humidity sensors—the S-Link series.

Investment Protection

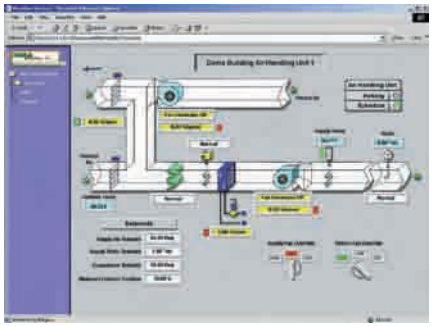
Brings the Internet to NETWORK 8000™ and DMS™ building automation systems.

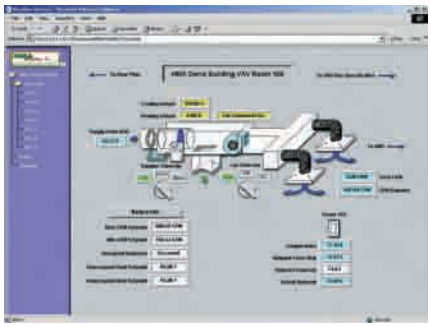
TAC I/A Series guarantees compliance today, with the standards of tomorrow. From sensor to boardroom, and everywhere in between, the I/A Series can satisfy all of your enterprise control requirements well into the future.

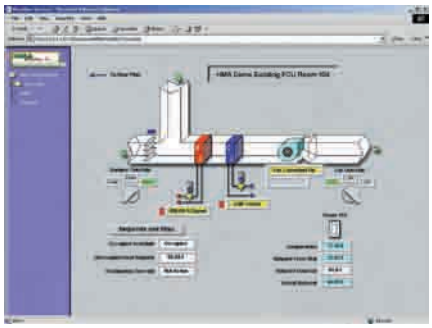
Integrated TAC I/A Series® Architecture



Access & Control Anywhere in the World







Schneider Electric

1354 Clifford Avenue
Loves Park, IL 61111
Phone: + 1 888 444 1311
www.schneider-electric.com/buildings

On October 1st, 2009, TAC became the Buildings Business of its parent company Schneider Electric. This document reflects the visual identity of Schneider Electric, however there remains references to TAC as a corporate brand in the body copy. As each document is updated, the body copy will be changed to reflect appropriate corporate brand changes. All brand names, trademarks and registered trademarks are the property of their respective owners.

© 2006-2009 Schneider Electric. All rights reserved.

F-27372-8

October 2009 mh

Wi-Fi FocusPRO®

Honeywell



Reliable Connection and Added Value in One Powerful Thermostat

Wi-Fi FocusPRO®

THE MOST VALUABLE THERMOSTAT ON YOUR TRUCK…



The perfect blend of reliable design and attractive pricing makes the Honeywell Wi-Fi FocusPRO® an outstanding value. You can offer your customers the performance and ease of use that have made FocusPRO so popular, with the wireless connectivity expected in today's "connected" world.



The Wi-Fi FocusPRO works seamlessly with Honeywell's My Total Connect Comfort Services. Your customers will enjoy being able to monitor and control their home's comfort settings from anywhere at anytime. You'll be giving them the power of connection and maximized comfort while also optimizing your profitability.

EASY INSTALLATION AND SETUP

The Wi-Fi FocusPRO installs just like standard FocusPRO models, so you'll breeze through the familiar installation. After that, it's just a simple matter of a few easy steps to set up the remote access for use with a computer, smartphone or tablet.[1] All the homeowner needs is access to their home network, and a computer or device with access to mytotalconnectcomfort.com. The connection is quick and easy.



[1]Free apps are available for Apple iPhone, iPad and iPod and Android devices. Check www.mytotalconnect.com for more mobile applications coming soon.

For assistance with the Wi-Fi enrollment or total connect registration, please view the following videos:
http://youtu.be/3IGiRfWJA6c | **http://youtu.be/mc9eevhs-Qg**

PACKED WITH FEATURES.

Including Built-In Wi-Fi

ENERGY SAVINGS
Program to save up to 33% on annual heating and cooling costs.[2]

PRECISE COMFORT CONTROL (+/-1º F)
Maintains consistent comfort to the highest level of accuracy.

GET CONNECTED
Connect to the home's existing wireless system.

REMOTE ACCESS
Easily manage your energy usage by remotely adjusting your thermostat while you're away.

LARGE, CLEAR BACKLIT DIGITAL DISPLAY
Easy to read in various lighting conditions.

UNIVERSAL APPLICATION
Works on all system types up to 3H/2C Heat Pump and 2H/2C Conventional.

REMOTE CONTROL
Convenience, comfort and control from anywhere through web, tablet or smartphone access.

REAL-TIME CLOCK
Keeps time during power failure and automatically updates for daylight savings.

7-DAY PROGRAMMABLE OR NON-PROGRAMMABLE

5-YEAR WARRANTY

[2]When used as directed, programmable thermostats can save up to 33% on annual heating and cooling costs. Savings may vary depending on geographic region and usage.

DON'T JUST CONNECT. TOTAL CONNECT.

Once your customers are registered to Honeywell's My Total Connect Comfort, they'll have a world of comfort control at their fingertips like never before. They'll be able to customize their system and alert settings, download free mobile apps and more at the Total Connect web portal.

Just as the Wi-Fi FocusPRO delivers a reliable Wi-Fi connection, Total Connect delivers a wide range of reliable services from any connected device. Your customers will be able to:

- View and change their HVAC system settings (Heat, Cool, Off, Auto, Fan, EM Heat)
- View and set the temperature
- Access multiple thermostats if the system is zoned
- Access multiple locations if more than one system is connected
- Receive temperature alerts via e-mail or app
- Get automatic upgrades as new features are available
- Schedule remotely via the web



Built on the same platform as the #1 residential thermostat, FocusPRO gets connected. Millions of homes today are equipped with Wi-Fi enabled devices touching every corner of a homeowner's life on a daily basis. This translates into a great upsell opportunity for you. Conscientious homeowners who want a simple way to remotely monitor and help manage their energy costs will have peace of mind with this Wi-Fi thermostat offering from Honeywell. And, they will have you to thank.

Wi-Fi FocusPRO®

CONNECTED THERMOSTAT VALUE AND RELIABILITY



Part Number	Stages
TH6320WF1005/U	Up to 3H/2C Heat Pump and 2H/2C Conventional

For assistance with the Wi-Fi enrollment or total connect registration, please view the following videos:

http://youtu.be/3lGiRfWJA6c

http://youtu.be/mc9eevhs-Qg

Learn More
Call **1-800-468-1502**
email **info@honeywell.com**
or visit **www.forwardthinking.honeywell.com**

Automation and Control Solutions
In the U.S:
Honeywell
1985 Douglas Drive North
Golden Valley, MN 55422

In Canada:
Honeywell Limited
35 Dynamic Drive
Toronto, Ontario M1V 4Z9
www.honeywell.com

Follow us on Twitter:
@honeywellcpro
twitter

YouTube:
@honeywellcpro
YouTube

FROST & SULLIVAN
2011 BEST PRACTICES AWARD
U.S. HOMEOWNERS' CHOICE AWARD: OVERALL BEST BRAND OF PROGRAMMABLE THERMOSTATS

energy AWARE

Honeywell

50-1821 PM
January 2013
© 2013 Honeywell International Inc.

tekmar® Submittal
Boiler Control 263

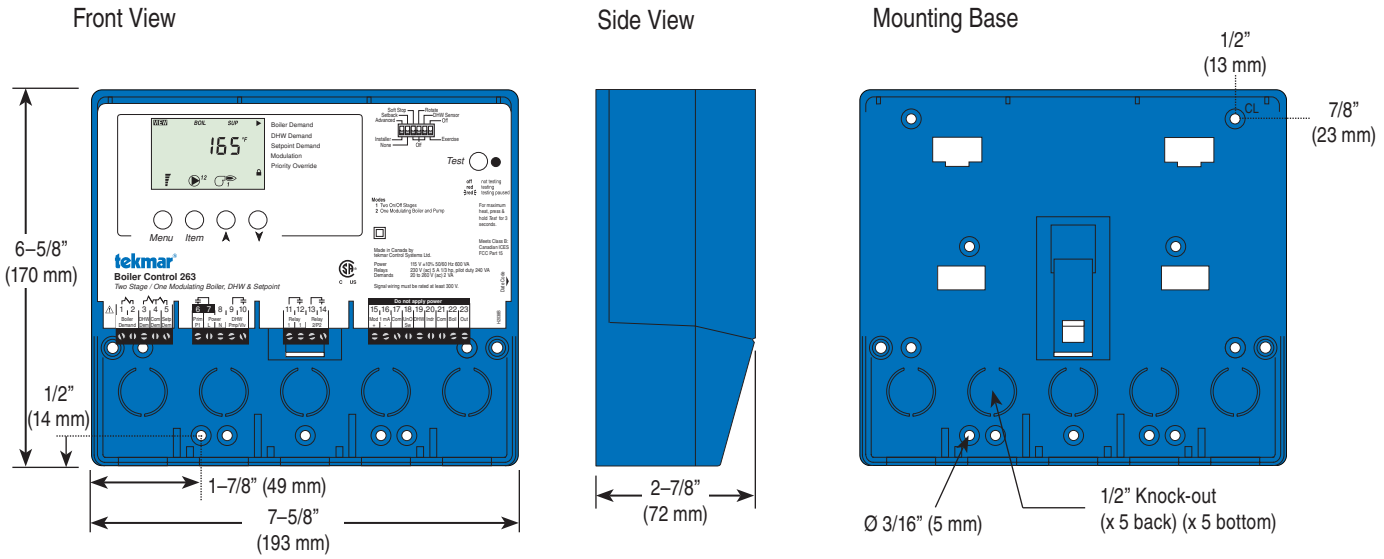


Multi-Staging

C 263
01/11
Replaces: New

Job _____ Designer _____ Contact _____

The Boiler Control 263 is designed to stage multiple boilers or operate a modulating boiler using Outdoor Temperature Reset. It can be used in applications ranging from a single zone of baseboard, multiple baseboard and fan coil zones, to dedicated Domestic Hot Water heating in commercial buildings. This control regulates a single heating water temperature through Outdoor Temperature Reset, setpoint, and DHW target control. It is capable of controlling (stage and rotate) up to 2 on/off boilers, a single 2 stage boiler, or 1 modulating boiler as well as the system pump.



Specifications

Boiler Control 263 *Two Stage / One Modulating Boiler, DHW & Setpoint*	
Literature	D263, A263, D001, D070
Control	Microprocessor control. This is not a safety (limit) control
Packaged weight	3.3 lb. (1550 g)
Dimensions	6-5/8" H x 7-9/16" W x 2-13/16" D (170 x 193 x 72 mm)
Enclosure	Blue PVC plastic, NEMA type 1
Approvals	CSA C US, meets Class B: ICES & FCC Part 15
Ambient conditions	Indoor use only, 32 to 122°F (0 to 50°C), RH ≤90% Non-condensing, Altitude <6560 ft. (2000 m), Installation Category II, Pollution Degree 2
Power supply	115 V (ac) ±10%, 50/60 Hz, 600 VA
Relay capacity	230 V (ac) 5 A, 1/3 hp, pilot duty 240 VA
Modulation output	0-20 mA / 4-20 mA (up to 1000 Ω load)
Demands	20 to 260 V (ac) 2 VA
Sensors	NTC thermistor, 10 kΩ @ 77°F (25°C ±0.2°C) ß=3892
–Included	Outdoor Sensor 070 and Universal Sensor 082, 500 Ω Resistor
–Optional	tekmar type #: 033, 071, 076, 077, 078, 082, 084
Warranty	Limited 3 Year (See D263 for full warranty)

Energy Saving Features

- Outdoor Temperature Reset
- Setback input for energy savings
- Warm Weather Shut Down
- Automatic Boiler Differential

Additional Features

- 1 modulating or 2 stage boiler control
- Pump and valve exercising
- DHW pump or valve operation
- Optional DHW priority
- Quick Setup for easy installation and programming of control
- User comfort adjustment to increase or decrease building space temperature
- Advanced settings to fine-tune building requirements
- Powered boiler pump output
- Test sequence to ensure proper component operation
- 115 V (ac) power supply

SPECIAL REQUIREMENTS

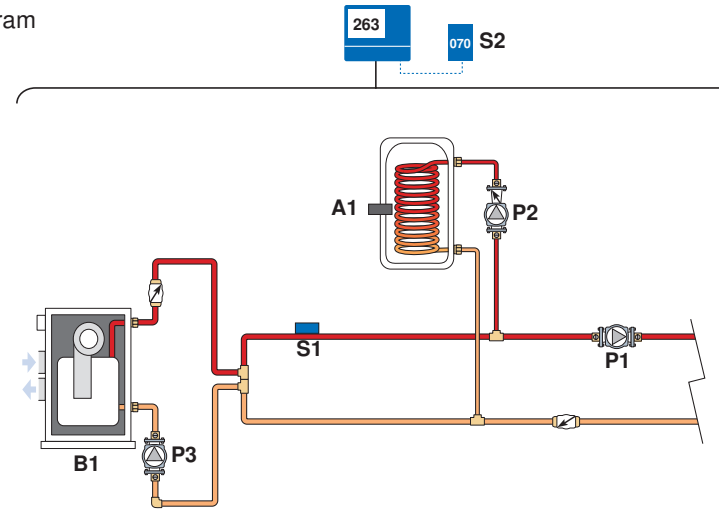
N / A

© 2011 tekmar® C 263 - 01/11

Sample Application Drawing

Below is a sample application drawing for this product. This application may include other tekmar products that are required for installation. More sample applications can be found at www.tekmarcontrols.com.

Sample Mechanical diagram

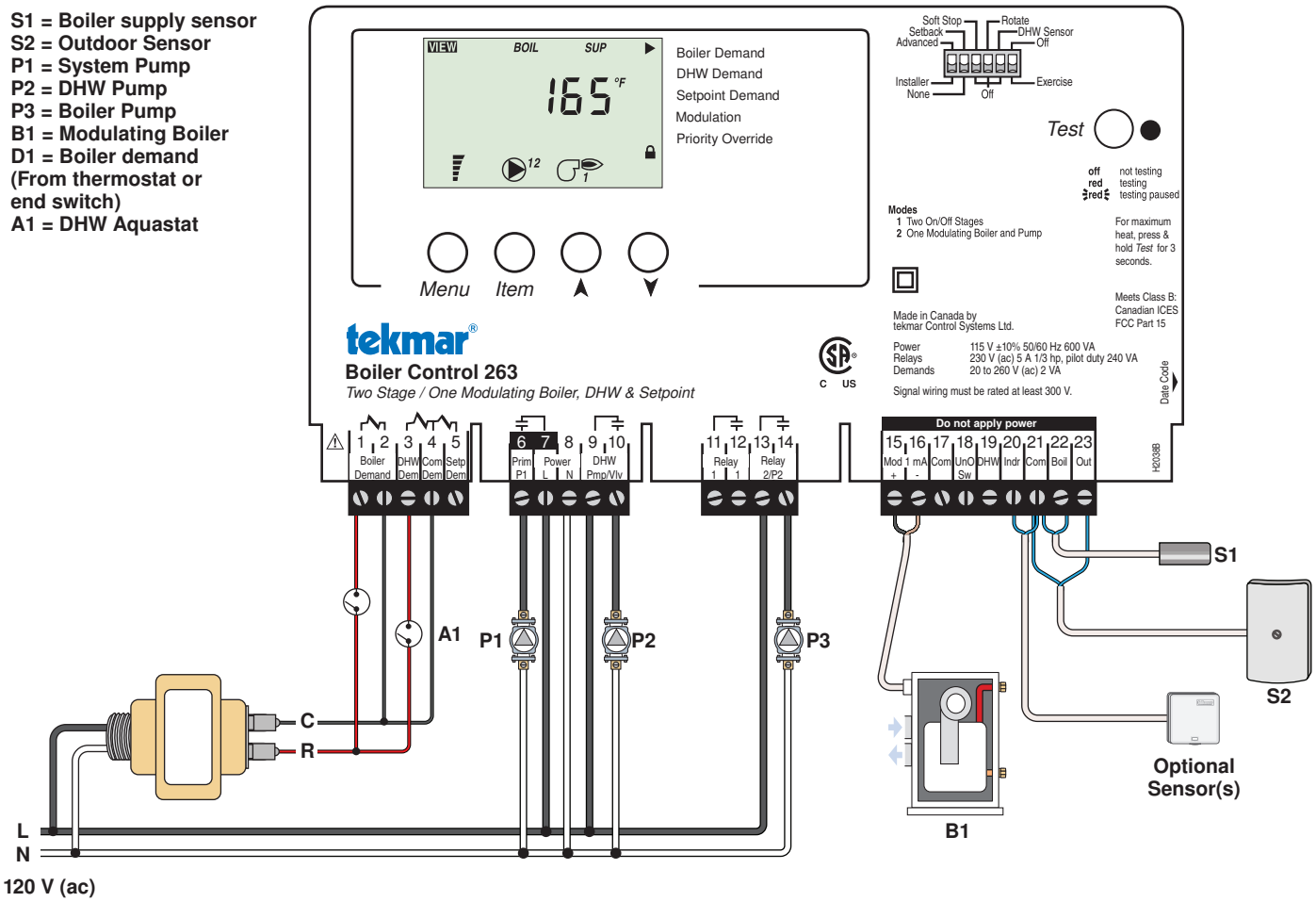


For zoning solutions by tekmar visit www.tekmarcontrols.com

Sample Electrical diagram

Legend:

S1 = Boiler supply sensor
S2 = Outdoor Sensor
P1 = System Pump
P2 = DHW Pump
P3 = Boiler Pump
B1 = Modulating Boiler
D1 = Boiler demand (From thermostat or end switch)
A1 = DHW Aquastat



tekmar Control Systems

tekmar Control Systems Ltd., Canada, tekmar Control Systems, Inc., U.S.A. **Head Office: 5100 Silver Star Road, Vernon, B.C. Canada V1B 3K4, 250-545-7749, Fax. 250-545-0650 Web Site: www.tekmarcontrols.com**

Product design, software and literature are Copyright © 2011 by: tekmar Control Systems Ltd. and tekmar Control Systems, Inc.

All specifications are subject to change without notice.
Printed in Canada. C263 - 01/11.

Appendix for ESM 4:
Energy Management System Upgrade/Expansion

III. Points List

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

City of Bristol, CT
Dennis Malone Aquatic Center

AMERESCO

| | | | Hardware | | | | | | | | | | | | | | | | | | | | Software | | | | | | | | | | | | | | | | | | |

Point Description	Total Points	Unit Multiplier	Hardware: Outputs: Digital: Relay	Contactor	Solenoid	0	Analog: P/E	E/P	Speed Reference	0-10 V dc or 4-20 ma	Inputs: Digital: Current Switch	Pressure	Dry Contact	Flame Fail	Flow switch	CO2 Sensor	Analog: Temperature	Humidity	Pressure	Flow Rate	0	Software: Alarms: Digital: Start/Stop	High Pressure	High Temperature	Analog		Applications: Control Programs: Occupancy Schedule Start/Stop	Optimized Start/Stop	0	Unoccupied Zone Temperature Control	0	Air Economizer	Demand Ventilation Rate Control	Lead/Lag	Reset Schedule based on O.A.T.	Boiler Optimization	0	Chiller Optimization	Trends: OPERATING HOURS	FLOW TOTALIZATION
Outside Air Conditions	1	1															1																						
Hot Water Boiler		1																																	X				
Enable/Disable	1	1	1																			1																	
Status	1	1									1											1																	
Flame Fail	1	1												1																									
High Fire	1	1									1																												
Low Fire	1	1									1																												
PTAC (Unit Vent)		16																																					
Start/Stop	16	16		16																																			
Status	16	16									16																												
Finn Tube Baseboard		2																																					
2-Way Hot Water Valve	2	2								2																	X												
Space Temperature	2	2															2																						
Condensing Unit		1																																					
On/Off	1	1	1																			1						X										X		
Status	1	1									1											1																		
Totals	**44**	**64**	**2**	**16**	**0**	**0**	**0**	**0**	**0**	**2**	**20**	**0**	**0**	**1**	**0**	**0**	**3**	**0**	**0**	**0**	**0**																		

Page content is subject to Confidentiality Restrictions

ESM 6:
Demand Control Ventilation

ESM Overview



Figure 6.1: DCV controls are being proposed at a number of high density spaces like the Eastern High Gym.

Ameresco identified energy saving opportunities in a number of the School and City buildings through the installation of demand control ventilation (DCV) controls. DCV controls modulate the amount of outdoor air supplied to a space to maintain a required ventilation rate (CFM/person) based on the actual occupancy at that time. This strategy saves energy by reducing the amount of outdoor air that is conditioned during low occupancy periods. The sixteen (16) AHU's identified for this measure are listed in the table below. New CO_2 sensors will be installed in the appropriate return air ductwork for each unit. All outdoor air damper actuators will be tested for proper operation (modulating). New CO_2 sensors will monitor CO_2 levels in the spaces and control ventilation rates for each occupied space according to ASHRAE Standard 62 requirements. The sensors will be wired back to existing AHU controllers. The existing controls will be modified and programmed to control the outdoor air dampers via CO_2 levels. The new sensors will have the capability to override the outdoor air dampers based on a CO_2 control algorithm.

New variable frequency drives (VFDs) will be installed on a number of supply and exhaust fans. The new VFDs will provide electrical energy savings and permit ventilation flowrates to be varied based on the occupancy and control set points.

Ameresco proposes to reduce ventilation flow rates during periods of low occupancy. Flowrate overrides will occur as needed to maintain zone temperature set points. The system will be controlled by the EMS.

ESM Detail

Existing System

Ameresco identified sixteen (16) air-handling units (AHUs) at the School and City buildings that can be upgraded with DCV controls. All spaces have a high occupant density that varies throughout the day and all spaces are supplied with a large volume of air.

"Page content is subject to Confidentiality Restrictions"

Building	Unit	Serves	Total Supply CFM	Total Min OA CFM	Total Fan Motor HP
Central High School	AC-1	Auditorium	20,000	6,600	15.0
Central High School	HV-12,13,14,15	Gymnasium	30,000	9,900	12.0
Eastern High School	AHU-1,2,3	Old Gymnasium	26,400	6,600	9.0
Chippens Hill Middle School	RTU-6,7,8	Gymnasium	40,500	6,075	30.0
South Side Elementary	HV-1,2	Gymnasium	18,000	2,700	15.0
South Side Elementary	HV-3	Cafeteria	9,000	1,350	7.5
City Hall	AHU-4	Council Chambers	5,000	1,000	3.0
Police Court	HVAC-4	Courts #1,2, Jury Rm	8,000	1,500	10.0

Proposed System

Ameresco proposes to install demand control ventilation (DCV) on the sixteen (16) AHUs listed in the table above. For all AHU's serving a single zone, the CO_2 sensors will be located in the return air ductwork, and all outdoor air damper actuators will be tested for proper operation (modulating). New CO_2 sensors will be installed to monitor CO_2 levels in the spaces and control ventilation rates for each occupied space according to ASHRAE Standard 62 requirements. The sensors will be wired back to existing AHU controllers. The existing controls will be modified and programmed to control the outdoor air dampers via CO_2 levels. The new sensors will have the capability to override the outdoor air dampers based on CO_2 control algorithm.

Bristol Central High School

Scope of Work:

- Add Demand Control Ventilation (DCV) to control the outside air damper for the following units:
  - AC-1- (Auditorium)
  - HV-12 - (Gym)
  - HV-13 - (Gym)
  - HV-14 - (Gym)
  - HV-15 - (Gym)
- Provide and install a CO_2 Sensor in the return ductwork, for each unit; each sensor will control the outside air damper for the unit associated with that space.
- Provide all necessary programming to integrate into the existing control system.
- Provide new controls and graphics to enable demand control ventilation operation
- Provide and install five (5) new CO_2 sensors to control ventilation air
  - Wall mount unless otherwise specified
- Provide and install VFDs on the four (4) existing exhaust fans serving the Gym
  - Install on wall next to unit
  - Provide with LON interface card and integrate to new EMS
  - Provide with electronic bypass
  - Provide and install all power and control wiring
  - Install one (1) new static pressure sensor in the gym
  - VFDs will be modulated in stages to maintain static pressure in the space

"Page content is subject to Confidentiality Restrictions"

Fan No.	HP
EF-102	2
EF-103	2
EF-104	2
EF-105	2

Bristol Eastern High School

Scope of Work:

- Add Demand Control Ventilation (DCV) to control the outside air damper for the following units:
  - AHU-1- (Old Gym)
  - AHU-2- (Old Gym)
  - AHU-3- (Old Gym)
- Provide and install a CO_2 Sensor in the return ductwork, for each unit; each sensor will control the outside air damper for the unit associated with that space.
- Provide all necessary programming to integrate into the existing control system.
- Provide new controls and graphics to enable demand control ventilation operation

Chippens Hill Middle School

Scope of Work:

- Add Demand Control Ventilation (DCV) to control the outside air damper for the following units:
  - RTU-6- (Gym)
  - RTU-7- (Gym)
  - RTU-8- (Gym)
- Provide and install a CO_2 Sensor in the return ductwork, for each unit; each sensor will control the outside air damper for the unit associated with that space.
- Provide all necessary programming to integrate into the existing control system.
- Provide new controls and graphics to enable demand control ventilation operation

South Side Elementary

Scope of Work:

- Add stand-alone Demand Control Ventilation (DCV) and air-side economizer control to the existing pneumatic outside air dampers for the following units:
  - HV-1- (Gym)
  - HV-2- (Gym)
  - HV-3- (Cafe)
- Provide and install new outdoor air sensor
- Provide and install a CO_2 Sensor in the return ductwork, for each unit; each sensor will control the outside air damper for the unit associated with that space.
- Provide new stand-alone controller for each unit including P-I transducers and programming to enable demand control ventilation and air-side economizer operation.

"Page content is subject to Confidentiality Restrictions"

City Hall

Scope of Work:

- Provide new controls and graphics to enable demand control ventilation operation
- Provide and install one (1) new CO_2 sensor to control ventilation air
  - Wall mount unless otherwise specified

Fan No.	Serves	Quantity of CO sensors
AHU-4	Council Chambers	1

  - Provide and install VFDs for the existing unit
    - Install on wall next to unit
    - Provide with LON interface card and integrate to new EMS
    - Provide with electronic bypass
    - Provide and install one (1) new duct static pressure sensor in supply ducting.
    - Provide and install all power and control wiring

Fan No.	HP
AHU-4 Supply	3

Police Court Building

Scope of Work:

- Add Demand Control Ventilation (DCV) to control the outside air damper for the following unit:
  - **HVAC-4** – Serving Court #1, Court #2, and Jury Assembly Room
- Provide and install three (3) CO_2 Sensor on the walls of each space; the space registering the highest CO2 will control the outside air damper for the unit.
- Provide all necessary programming to integrate into the existing control system.
- Provide new controls and graphics to enable demand control ventilation operation

>Equipment, Design and Construction Documentation

Equipment will be identified in submittals provided for approval prior to procurement. Documents will be submitted to the facilities department for their review and comment. Upon approval, these will constitute the construction documents. Upon completion of the construction phase, the documents will be revised as needed to reflect "As-Built" conditions and submitted in multiple for record.

>Impact on Facility Operations and Performance

The new DCV controls will reduce the over-ventilation of high volume spaces by providing the required amount of air based on actual occupancy. This strategy will save energy by reducing the amount of outdoor air that is conditioned during low occupancy periods.

Appendix for ESM 6: Demand Control Ventilation

I. Energy Savings Calculations

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

City of Bristol, CT	
Energy and Demand Savings Summary	
Measure ID:	**6**
Measure Name:	**Demand Control Ventilation**
Measure Location:	
Engineers:	

Site Name:		**Central_High**	**Eastern_High**	**Chippens**	**South_Side**	**City_Hall**	**Police**	**Summary**
Item	Units	Savings	Savings	Savings	Savings	Savings	Savings	
Electricity								
Energy On-Peak	kWh	36,046	19,873	21,451	9,251	10,454	3,596	100,672
Energy Off-Peak	kWh							0
Energy Total	kWh	36,046	19,873	21,451	9,251	10,454	3,596	100,672
Demand On-Peak, Monthly	kW							0.0
Demand On-Peak, Annual	kW							0.0
Demand Off-Peak, Monthly	kW							0.0
Demand Off-Peak, Annual	kW							0.0
Fossil Fuel								0
Natural Gas (NG)	CCF		1,279	723	921			2,922
Liquid Propane Gas (LPG)	Gallons							0
Steam	Mlbs							0
Fuel Oil, #2	Gallons	912				447	762	2,122
Fuel Oil, #4	Gallons							0
Fuel Oil, #6	Gallons							0
Max Daily Demand (Natural Gas)	CCF (Demand)							0
Water								0
Water Savings	CF							0
Sewer								0
Sewer Savings	CF							0

City of Bristol, CT
Bristol Central High School
Energy Management System Upgrade/Expansion

TMY-3 Weather Data for Hartford, CT								Existing Occupancy Schedule				Existing Heating/Cooling Schedule				Existing Motor Operating Schedule				Existing				Proposed								Savings		
Amb. Temp Bin deg. F	Ave Temp deg. F	M.C.W.B deg. F	M.C. Enthalpy Btu/lbma	01-08 Hours	09-16 Hours	17-24 Hours	Total Bin Hours	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ. Cool/ Heat Load (MBH)	UnOcc. Cool/ Heat Load (MBH)	Occ Cooling/Heating Energy Consump. (MMBTU)	UnOcc Cooling/Heating Energy Consump. (MMBTU)	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ. Cool/ Heat Load (MBH)	UnOcc. Cool/ Heat Load (MBH)	Occ Cooling/Heating Energy Consump. (MMBTU)	UnOcc Cooling/Heating Energy Consump. (MMBTU)	Cooling Energy Savings (MMBTU)	HVAC Electrical Savings (kWh)	Heating Energy Savings (MMBTU)
A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**Q**	**R**	**S**	**T**	**U**	**V**	**W**	**X**	**Y**	**Z**	**AA**	**AB**	**AC**	**AD**	**AE**	**AF**	**AG**	**AH**	**AI**
Cooling																																		
105 to 110	107.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,439	2,361	0	0	0	0	0	0	4,439	2,361	0	0	0	0	
100 to 105	102.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,995	2,125	0	0	0	0	0	0	4,508	2,638	0	0	0	0	
95 to 100	97.5	75.8	39.4	0	4	0	4	0	1	0	3	0	1	1	2	0	1	1	2	3,551	1,889	1	2	0	1	1	2	3,223	1,560	1	1	0	4	
90 to 95	92.5	74.9	38.7	0	34	9	43	2	8	5	28	4	6	7	26	4	6	7	26	3,107	1,653	11	16	4	6	7	26	2,794	1,339	10	13	4	44	
85 to 90	87.5	72.8	36.9	0	105	22	127	6	24	14	82	11	19	22	75	11	19	22	75	2,664	1,417	27	41	11	19	22	75	2,389	1,143	24	33	11	130	
80 to 85	82.5	69.0	33.5	4	247	105	356	18	67	40	231	32	52	60	211	32	52	60	211	2,220	1,181	63	95	32	52	60	211	2,017	978	57	79	22	284	
75 to 80	77.5	66.7	31.7	55	243	158	456	23	86	52	295	41	67	77	270	41	67	77	270	1,776	945	64	97	41	67	77	270	1,612	781	58	80	23	364	
70 to 75	72.5	64.6	30.0	137	208	183	528	27	99	60	342	48	77	90	313	48	77	90	313	1,332	708	56	84	48	77	90	313	1,203	580	50	69	21	421	
65 to 70	67.5	61.1	27.5	199	231	248	678	35	127	77	439	61	99	115	402	61	99	115	402	888	472	48	72	61	99	115	402	814	399	44	61	15	541	
60 to 65	62.5	56.0	24.0	306	300	310	916	47	172	103	594	83	134	156	543	83	134	156	543	444	236	32	49	83	134	156	543	444	236	32	49	0	730	
Heating																																		
55 to 60	57.5	51.2	21.1	270	226	289	785	40	148	89	509	71	115	133	466	71	115	133	466	(1,317)	(123)	0	114	71	115	133	466	(1,289)	(123)	0	111		626	3
50 to 55	52.5	46.7	18.6	291	186	261	738	38	139	83	478	67	108	125	438	67	108	125	438	(1,780)	(368)	65	312	67	108	125	438	(1,741)	(368)	59	308		589	10
45 to 50	47.5	41.8	16.1	210	129	187	526	27	99	59	341	48	77	89	312	48	77	89	312	(2,250)	(613)	98	375	48	77	89	312	(2,200)	(613)	93	372		539	9
40 to 45	42.5	38.1	14.4	282	188	155	625	32	117	71	405	56	92	106	371	56	92	106	371	(2,727)	(859)	180	628	56	92	106	371	(2,666)	(859)	172	623		640	13
35 to 40	37.5	33.1	12.2	288	296	306	890	46	167	101	577	80	131	151	528	80	131	151	528	(3,211)	(1,104)	347	1,154	80	131	151	528	(3,138)	(1,104)	333	1,146		912	22
30 to 35	32.5	28.5	10.3	252	222	251	725	37	136	82	470	66	106	123	430	66	106	123	430	(3,703)	(1,349)	357	1,153	66	106	123	430	(3,618)	(1,349)	344	1,145		743	21
25 to 30	27.5	24.1	8.6	182	160	177	519	27	98	59	336	47	76	88	308	47	76	88	308	(4,203)	(1,595)	310	978	47	76	88	308	(4,105)	(1,595)	300	972		532	17
20 to 25	22.5	20.3	7.2	231	89	177	497	25	93	56	322	45	73	84	295	45	73	84	295	(4,710)	(1,840)	350	1,083	45	73	84	295	(4,599)	(1,840)	339	1,076		509	18
15 to 20	17.5	15.5	5.6	135	42	57	234	12	44	26	152	21	34	40	139	21	34	40	139	(5,224)	(2,085)	190	579	21	34	40	139	(5,099)	(2,085)	184	576		240	10
10 to 15	12.5	10.9	4.1	44	7	24	75	4	14	8	49	7	11	13	44	7	11	13	44	(5,745)	(2,331)	69	208	7	11	13	44	(5,607)	(2,331)	67	207		77	3
5 to 10	7.5	6.4	2.7	23	3	1	27	1	5	3	17	2	4	5	16	2	4	5	16	(6,274)	(2,576)	28	83	2	4	5	16	(6,121)	(2,576)	27	82		28	1
0 to 5	2.5	2.4	1.5	11	0	0	11	1	2	1	7	1	2	2	7	1	2	2	7	(6,811)	(2,821)	13	37	1	2	2	7	(6,643)	(2,821)	12	37		11	1
-5 to 0	(2.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(7,299)	(3,067)	0	0	0	0	0	0	(7,119)	(3,067)	0	0		0	0
-10 to -5	(7.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(7,788)	(3,312)	0	0	0	0	0	0	(7,595)	(3,312)	0	0		0	0
-15 to -10	(12.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(8,276)	(3,557)	0	0	0	0	0	0	(8,072)	(3,557)	0	0		0	0
-20 to -15	(17.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(8,765)	(3,803)	0	0	0	0	0	0	(8,548)	(3,803)	0	0		0	0
-25 to -20	(22.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(9,253)	(4,048)	0	0	0	0	0	0	(9,025)	(4,048)	0	0		0	0
				2,920	2,920	2,920	8,760	448	1,646	989	5,676	791	1,285	1,487	5,196	791	1,285	1,487	5,196			2,310	7,160	791	1,285	1,487	5,196			2,207	7,041	96	7,962	126

Cell Ref.	Comment
A-H	TMY-3 Weather Data for Hartford, CT
I - L	Existing Occupancy hours
M - P	Existing Heating/Cooling hours
Q - T	Existing Motor Operating Hours
U	Occupied Cooling and Heating loads (MBH)
V	Unoccupied Cooling and Heating loads (MBH)
W	Cooling = [col U] x ([col M] + [col O]) ÷ 1,000 ÷ AD45
	Heating = -MIN([col I] + [col K] , [col M] + [col O]) x MIN([col U] + internal gains , 0) + IF([col I] + [col K] > [col M]+[col O] , (([col I] + [col K]) - ([col M] + [col O])) x MIN([col V] + internal gains , 0) , 0) ÷ 1,000 ÷ AD44
X	Cooling = [col R] x ([col J] + [col L]) ÷ 1,000 ÷ AD45
	Heating = -([col N] + [col P]) x MIN([col V] + internal gains , 0) + IF([col I] + [col K] < [col M] + [col O] , (([col M] + [col O]) - ([col I] + [col K])) x MIN([col U] + internal gains , 0)) ÷ 1,000 ÷ AD44
Y - AB	Proposed Operating hours
AC	Proposed Occupied Cooling and Heating Loads:
	Cooling = ([col B] - AC61) ÷ ([col B] - AC56) x [col U]
	Heating = ([col B] - AE61) ÷ ([col B] - AE56) x [col U]
AD	Proposed Unoccupied Cooling and Heating Loads:
	Cooling = ([col B] - AC62) ÷ ([col B] - AC57) x [col V]
	Heating = ([col B] - AE62) ÷ ([col B] - AE57) x [col V] ([col V] is modified to account for reduced kitchen and building ventilation due to EMS)
AE	Cooling = [col AC] x ([col Y] + [col AA]) ÷ 1,000 ÷ AD45
	Heating = -MIN([col I] + [col K] , [col Y] + [col AA]) x MIN([col AC] + internal gains , 0) + IF([col I] + [col K] > [col Y]+[col AA] , (([col I] + [col K]) - ([col Y] + [col AA])) x MIN([col AD] + internal gains , 0) , 0) ÷ 1,000 ÷ AD44
AF	Cooling = [col AD] x ([col Z] + [col AB]) ÷ 1,000 ÷ AD45
	Heating = -([col Z] + [col AB]) x MIN([col AD] + internal gains , 0) + IF([col I] + [col K] < [col Y] + [col AA] , (([col Y] + [col AA]) - ([col I] + [col K])) x MIN([col AC] + internal gains , 0)) ÷ 1,000 ÷ AD44
AG	= ([col W] + [col X]) - ([col AE] + [col AF])
	HVAC Fan and Pump Savings
AH	Cooling =([col Q] + [col S] + ([col R] + [col T]) x AD49) x (AD46 + AD48) - ([col Y] + [col AA] + ([col Z] + [col AB]) x AD49) x (AD46 + AD48)
	Heating =([col Q] + [col S]) x AD46 + IF(B20<35,([col R] + [col T]) x AD49 x AD46, IF(B20>50,0,([col R] + [col T]) x AD49 x AD46)) - ((([col Y] + [col AA]) x AD46 + IF(B20<35,([col Z] + [col AB]) x AD49 x AD46, IF(B20>50,0,([col Z] + [col AB]) x AD49 x AD46)))
AI	= ([col W] + [col X]) - ([col AE] + [col AF])

Assumptions:	Value	Unit	CELL REF	Description
Occupied Area	217,027	SF	**AD43**	
Existing Heating Plant Efficiency	78.0%		**AD44**	HW
Existing Chiller Efficiency	3.3	COP	**AD45**	
Fan Power	16.1	kW	**AD46**	AC-1, HV-12,13,14,15
Heating Pump Power	0.0	kW	**AD47**	
Cooling Pump Power	0.0	kW	**AD48**	
UnOcc. Fan & Pump Cycling	10.0%		**AD49**	% Operating Hours During UnOcc.
UnOcc. Kitchen Vent. Reduction	0.0%		**AD50**	% CFM Saved
UnOcc. Ventilation Reduction	0.0%		**AD51**	% CFM Saved
Occ. Ventilation Reduction	6.0%		**AD52**	% CFM Saved due to DCV

Average Existing Space Temperatures					
	Cooling		Heating		Description
Occupied	74.0	**AC56**	72.2	**AE56**	
UnOccupied	85.0	**AC57**	60.0	**AE57**	

Average Proposed Space Temperatures					
	Cooling		Heating		Description
Occupied	74.0	**AC61**	72.2	**AE61**	
UnOccupied	85.0	**AC62**	60.0	**AE62**	

Page content is subject to Confidentiality Restrictions

City of Bristol, CT
Bristol Eastern High School
Energy Management System Upgrade/Expansion

TMY-3 Weather Data for Hartford, CT								Existing Occupancy Schedule				Existing Heating/Cooling Schedule				Existing Motor Operating Schedule				Existing				Proposed								Savings		
Amb. Temp Bin deg. F	Ave Temp deg. F	M.C.W.B deg. F	M.C. Enthalpy Btu/lbma	01-08 Hours	09-16 Hours	17-24 Hours	Total Bin Hours	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ. Cool/ Heat Load (MBH)	UnOcc. Cool/ Heat Load (MBH)	Occ Cooling/Heating Energy Consump. (MMBTU)	UnOcc Cooling/Heating Energy Consump. (MMBTU)	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ. Cool/ Heat Load (MBH)	UnOcc. Cool/ Heat Load (MBH)	Occ Cooling/Heating Energy Consump. (MMBTU)	UnOcc Cooling/Heating Energy Consump. (MMBTU)	Cooling Energy Savings (MMBTU)	HVAC Electrical Savings (kWh)	Heating Energy Savings (MMBTU)
A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**Q**	**R**	**S**	**T**	**U**	**V**	**W**	**X**	**Y**	**Z**	**AA**	**AB**	**AC**	**AD**	**AE**	**AF**	**AG**	**AH**	**AI**
Cooling																																		
105 to 110	107.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,304	2,289	0	0	0	0	0	0	4,304	2,289	0	0	0		
100 to 105	102.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,873	2,060	0	0	0	0	0	0	4,233	2,420	0	0	0		
95 to 100	97.5	75.8	39.4	0	4	0	4	0	1	0	3	0	1	1	3	0	1	1	3	3,443	1,831	1	2	0	1	1	3	3,212	1,601	1	2	0		
90 to 95	92.5	74.9	38.7	0	34	9	43	2	8	5	28	4	6	6	27	4	6	6	27	3,013	1,602	9	17	4	6	6	27	2,793	1,383	8	14	3		
85 to 90	87.5	72.8	36.9	0	105	22	127	7	24	14	82	11	19	17	81	11	19	17	81	2,582	1,374	22	42	11	19	17	81	2,390	1,181	20	36	8		
80 to 85	82.5	69.0	33.5	4	247	105	356	18	67	40	230	30	53	46	226	30	53	46	226	2,152	1,145	51	98	30	53	46	226	2,010	1,003	48	86	16		
75 to 80	77.5	66.7	31.7	55	243	158	456	23	86	52	295	39	68	59	290	39	68	59	290	1,721	916	52	101	39	68	59	290	1,607	801	49	88	16		
70 to 75	72.5	64.6	30.0	137	208	183	528	27	99	60	342	45	79	69	336	45	79	69	336	1,291	687	45	88	45	79	69	336	1,201	597	42	76	15		
65 to 70	67.5	61.1	27.5	199	231	248	678	35	127	77	439	58	101	88	431	58	101	88	431	861	458	39	75	58	101	88	431	809	406	36	67	11		
60 to 65	62.5	56.0	24.0	306	300	310	916	47	172	104	593	78	136	120	582	78	136	120	582	430	229	26	51	78	136	120	582	430	229	26	51	0		
Heating																																		
55 to 60	57.5	51.2	21.1	270	226	289	785	40	147	89	508	67	117	102	499	67	117	102	499	(1,529)	0	10	70	67	117	102	499	(1,497)	0	5	69			7
50 to 55	52.5	46.7	18.6	291	186	261	738	38	138	84	478	63	110	96	469	63	110	96	469	(2,137)	(119)	107	96	63	110	96	469	(2,092)	(119)	100	94			9
45 to 50	47.5	41.8	16.1	210	129	187	526	27	99	60	341	45	78	69	334	45	78	69	334	(2,753)	(356)	147	183	45	78	69	334	(2,694)	(356)	140	181			9
40 to 45	42.5	38.1	14.4	282	188	155	625	32	117	71	405	53	93	82	397	53	93	82	397	(3,377)	(593)	259	397	53	93	82	397	(3,305)	(593)	249	394			13
35 to 40	37.5	33.1	12.2	288	296	306	890	46	167	101	576	76	132	116	566	76	132	116	566	(4,010)	(831)	491	821	76	132	116	566	(3,924)	(831)	474	816			22
30 to 35	32.5	28.5	10.3	252	222	251	725	37	136	82	469	62	108	95	461	62	108	95	461	(4,651)	(1,068)	501	877	62	108	95	461	(4,551)	(1,068)	485	872			21
25 to 30	27.5	24.1	8.6	182	160	177	519	27	97	59	336	44	77	68	330	44	77	68	330	(5,301)	(1,305)	432	777	44	77	68	330	(5,186)	(1,305)	419	773			17
20 to 25	22.5	20.3	7.2	231	89	177	497	26	93	56	322	42	74	65	316	42	74	65	316	(5,959)	(1,542)	485	888	42	74	65	316	(5,829)	(1,542)	471	884			18
15 to 20	17.5	15.5	5.6	135	42	57	234	12	44	27	151	20	35	31	149	20	35	31	149	(6,626)	(1,780)	262	486	20	35	31	149	(6,480)	(1,780)	255	483			10
10 to 15	12.5	10.9	4.1	44	7	24	75	4	14	9	49	6	11	10	48	6	11	10	48	(7,301)	(2,017)	95	177	6	11	10	48	(7,140)	(2,017)	92	177			3
5 to 10	7.5	6.4	2.7	23	3	1	27	1	5	3	17	2	4	4	17	2	4	4	17	(7,984)	(2,254)	38	72	2	4	4	17	(7,807)	(2,254)	37	71			1
0 to 5	2.5	2.4	1.5	11	0	0	11	1	2	1	7	1	2	1	7	1	2	1	7	(8,676)	(2,492)	17	32	1	2	1	7	(8,483)	(2,492)	17	32			1
-5 to 0	(2.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(9,315)	(2,729)	0	0	0	0	0	0	(9,107)	(2,729)	0	0			0
-10 to -5	(7.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(9,954)	(2,966)	0	0	0	0	0	0	(9,732)	(2,966)	0	0			0
-15 to -10	(12.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(10,593)	(3,204)	0	0	0	0	0	0	(10,356)	(3,204)	0	0			0
-20 to -15	(17.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(11,231)	(3,441)	0	0	0	0	0	0	(10,981)	(3,441)	0	0			0
-25 to -20	(22.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(11,870)	(3,678)	0	0	0	0	0	0	(11,605)	(3,678)	0	0			0
				2,920	2,920	2,920	8,760	451	1,643	995	5,671	746	1,304	1,143	5,567	746	1,304	1,143	5,567			3,088	5,350	746	1,304	1,143	5,567			2,973	5,266	68	0	131

Cell Ref.	Comment
A-H	TMY-3 Weather Data for Hartford, CT
I - L	Existing Occupancy hours
M - P	Existing Heating/Cooling hours
Q - T	Existing Motor Operating Hours
U	Occupied Cooling and Heating loads (MBH)
V	Unoccupied Cooling and Heating loads (MBH)
W	Cooling = [col U] x ([col M] + [col O]) ÷ 1,000 ÷ AD45
	Heating = -MIN([col I] + [col K] , [col M] + [col O]) x MIN([col U] + internal gains , 0) + IF([col I] + [col K] > [col M]+[col O] , (([col I] + [col K]) - ([col M] + [col O])) x MIN([col V] + internal gains , 0) , 0) ÷ 1,000 ÷ AD44
X	Cooling = [col R] x ([col J] + [col L]) ÷ 1,000 ÷ AD45
	Heating = -([col N] + [col P]) x MIN([col V] + internal gains , 0) + IF([col I] + [col K] < [col M] + [col O] , (([col M] + [col O]) - ([col I] + [col K])) x MIN([col U] + internal gains , 0)) ÷ 1,000 ÷ AD44
Y - AB	Proposed Operating hours
AC	Proposed Occupied Cooling and Heating Loads:
	Cooling = ([col B] - AC61) ÷ ([col B] - AC56) x [col U]
	Heating = ([col B] - AE61) ÷ ([col B] - AE56) x [col U]
AD	Proposed Unoccupied Cooling and Heating Loads:
	Cooling = ([col B] - AC62) ÷ ([col B] - AC57) x [col V]
	Heating = ([col B] - AE62) ÷ ([col B] - AE57) x [col V] ([col V] is modified to account for reduced kitchen and building ventilation due to EMS)
AE	Cooling = [col AC] x ([col Y] + [col AA]) ÷ 1,000 ÷ AD45
	Heating = -MIN([col I] + [col K] , [col Y] + [col AA]) x MIN([col AC] + internal gains , 0) + IF([col I] + [col K] > [col Y]+[col AA] , (([col I] + [col K]) - ([col Y] + [col AA])) x MIN([col AD] + internal gains , 0) , 0) ÷ 1,000 ÷ AD44
AF	Cooling = [col AD] x ([col Z] + [col AB]) ÷ 1,000 ÷ AD45
	Heating = -([col Z] + [col AB]) x MIN([col AD] + internal gains , 0) + IF([col I] + [col K] < [col Y] + [col AA] , (([col Y] + [col AA]) - ([col I] + [col K])) x MIN([col AC] + internal gains , 0)) ÷ 1,000 ÷ AD44
AG	= ([col W] + [col X]) - ([col AE] + [col AF])
	HVAC Fan and Pump Savings
AH	Cooling =([col Q] + [col S] + ([col R] + [col T]) x AD49) x (AD46 + AD48) - ([col Y] + [col AA] + ([col Z] + [col AB]) x AD49) x (AD46 + AD48)
	Heating =([col Q] + [col S]) x AD46 + IF(B20<35,([col R] + [col T]) x AD49 x AD46, IF(B20>50,0,([col R] + [col T]) x AD49 x AD46)) - ((([col Y] + [col AA]) x AD46 + IF(B20<35,([col Z] + [col AB]) x AD49 x AD46, IF(B20>50,0,([col Z] + [col AB]) x AD49 x AD46)))
AI	= ([col W] + [col X]) - ([col AE] + [col AF])

Assumptions:	Value	Unit	CELL REF	Description
Occupied Area	210,403	SF	**AD43**	
Existing Heating Plant Efficiency	76.0%		**AD44**	HW
Existing Chiller Efficiency	3.2	COP	**AD45**	
Fan Power	5.5	kW	**AD46**	AHU-4 Council Chambers
Heating Pump Power	0.0	kW	**AD47**	
Cooling Pump Power	0.0	kW	**AD48**	
UnOcc. Fan & Pump Cycling	10.0%		**AD49**	% Operating Hours During UnOcc.
UnOcc. Kitchen Vent. Reduction	0.0%		**AD50**	% CFM Saved
UnOcc. Ventilation Reduction	0.0%		**AD51**	% CFM Saved
Occ. Ventilation Reduction	3.9%		**AD52**	% CFM Saved due to DCV

Average Existing Space Temperatures					
	Cooling		Heating		Description
Occupied	74.0	**AC56**	70.4	**AE56**	
UnOccupied	85.0	**AC57**	55.0	**AE57**	

Average Proposed Space Temperatures					
	Cooling		Heating		Description
Occupied	74.0	**AC61**	70.4	**AE61**	
UnOccupied	85.0	**AC62**	55.0	**AE62**	

Page content is subject to Confidentiality Restrictions

City of Bristol, CT
Chippens Hill Middle School
Energy Management System Upgrade/Expansion

TMY-3 Weather Data for Hartford, CT								Existing Occupancy Schedule				Existing Heating/Cooling Schedule				Existing Motor Operating Schedule				Existing				Proposed								Savings		
Amb. Temp Bin deg. F	Ave Temp deg. F	M.C.W.B deg. F	M.C. Enthalpy Btu/lbma	01-08 Hours	09-16 Hours	17-24 Hours	Total Bin Hours	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ. Cool/ Heat Load (MBH)	UnOcc. Cool/ Heat Load (MBH)	Occ Cooling/Heating Energy Consump. (MMBTU)	UnOcc Cooling/Heating Energy Consump. (MMBTU)	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ. Cool/ Heat Load (MBH)	UnOcc. Cool/ Heat Load (MBH)	Occ Cooling/Heating Energy Consump. (MMBTU)	UnOcc Cooling/Heating Energy Consump. (MMBTU)	Cooling Energy Savings (MMBTU)	HVAC Electrical Savings (kWh)	Heating Energy Savings (MMBTU)
A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**Q**	**R**	**S**	**T**	**U**	**V**	**W**	**X**	**Y**	**Z**	**AA**	**AB**	**AC**	**AD**	**AE**	**AF**	**AG**	**AH**	**AI**
Cooling																																		
105 to 110	107.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	695	370	0	0	0	0	0	0	695	370	0	0	0		
100 to 105	102.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	626	333	0	0	0	0	0	0	976	683	0	0	0		
95 to 100	97.5	75.8	39.4	0	4	0	4	1	0	0	3	0	1	0	3	0	1	0	3	556	296	0	0	0	1	0	3	332	71	0	0	0		
90 to 95	92.5	74.9	38.7	0	34	9	43	6	4	4	29	3	7	5	27	3	7	5	27	487	259	1	3	3	7	5	27	272	45	1	1	3		
85 to 90	87.5	72.8	36.9	0	105	22	127	17	11	12	87	9	21	16	81	9	21	16	81	417	222	3	8	9	21	16	81	230	35	2	1	8		
80 to 85	82.5	69.0	33.5	4	247	105	356	49	31	34	242	25	60	44	228	25	60	44	228	348	185	8	18	25	60	44	228	209	47	5	5	17		
75 to 80	77.5	66.7	31.7	55	243	158	456	62	39	44	311	32	76	57	291	32	76	57	291	278	148	8	19	32	76	57	291	166	36	5	5	17		
70 to 75	72.5	64.6	30.0	137	208	183	528	72	46	51	360	37	88	65	338	37	88	65	338	209	111	7	16	37	88	65	338	121	23	4	3	16		
65 to 70	67.5	61.1	27.5	199	231	248	678	93	58	65	462	47	113	84	433	47	113	84	433	139	74	6	14	47	113	84	433	89	24	4	4	12		
60 to 65	62.5	56.0	24.0	306	300	310	916	125	79	88	624	64	153	114	586	64	153	114	586	70	37	4	9	64	153	114	586	70	37	4	9	0		
Heating																																		
55 to 60	57.5	51.2	21.1	270	226	289	785	107	68	75	535	55	131	97	502	55	131	97	502	(789)	0	0	0	55	131	97	502	(765)	0	0	0			0
50 to 55	52.5	46.7	18.6	291	186	261	738	101	64	71	503	51	123	92	472	51	123	92	472	(1,068)	(85)	41	1	51	123	92	472	(1,035)	(85)	35	1			6
45 to 50	47.5	41.8	16.1	210	129	187	526	72	45	51	358	37	88	65	336	37	88	65	336	(1,348)	(256)	66	94	37	88	65	336	(1,305)	(256)	60	94			6
40 to 45	42.5	38.1	14.4	282	188	155	625	85	54	60	426	43	105	78	400	43	105	78	400	(1,627)	(427)	121	222	43	105	78	400	(1,576)	(427)	113	222			8
35 to 40	37.5	33.1	12.2	288	296	306	890	122	77	86	606	62	149	110	569	62	149	110	569	(1,906)	(598)	234	473	62	149	110	569	(1,846)	(598)	221	473			13
30 to 35	32.5	28.5	10.3	252	222	251	725	99	62	70	494	50	121	90	463	50	121	90	463	(2,185)	(769)	241	514	50	121	90	463	(2,116)	(769)	229	514			12
25 to 30	27.5	24.1	8.6	182	160	177	519	71	45	50	353	36	87	64	332	36	87	64	332	(2,464)	(940)	211	459	36	87	64	332	(2,387)	(940)	201	459			10
20 to 25	22.5	20.3	7.2	231	89	177	497	68	43	48	339	35	83	62	318	35	83	62	318	(2,743)	(1,111)	241	528	35	83	62	318	(2,657)	(1,111)	230	528			11
15 to 20	17.5	15.5	5.6	135	42	57	234	32	20	22	159	16	39	29	150	16	39	29	150	(3,022)	(1,282)	132	290	16	39	29	150	(2,927)	(1,282)	126	290			5
10 to 15	12.5	10.9	4.1	44	7	24	75	10	6	7	51	5	13	9	48	5	13	9	48	(3,301)	(1,453)	48	106	5	13	9	48	(3,198)	(1,453)	46	106			2
5 to 10	7.5	6.4	2.7	23	3	1	27	4	2	3	18	2	5	3	17	2	5	3	17	(3,580)	(1,624)	19	43	2	5	3	17	(3,468)	(1,624)	19	43			1
0 to 5	2.5	2.4	1.5	11	0	0	11	2	1	1	7	1	2	1	7	1	2	1	7	(3,859)	(1,795)	9	19	1	2	1	7	(3,738)	(1,795)	8	19			0
-5 to 0	(2.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(4,139)	(1,966)	0	0	0	0	0	0	(4,009)	(1,966)	0	0			0
-10 to -5	(7.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(4,418)	(2,137)	0	0	0	0	0	0	(4,279)	(2,137)	0	0			0
-15 to -10	(12.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(4,697)	(2,308)	0	0	0	0	0	0	(4,550)	(2,308)	0	0			0
-20 to -15	(17.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(4,976)	(2,479)	0	0	0	0	0	0	(4,820)	(2,479)	0	0			0
-25 to -20	(22.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(5,255)	(2,650)	0	0	0	0	0	0	(5,090)	(2,650)	0	0			0
				2,920	2,920	2,920	8,760	1,197	755	842	5,966	608	1,466	1,086	5,600	608	1,466	1,086	5,600			1,402	2,835	608	1,466	1,086	5,600			1,314	2,776	73	0	74

Cell Ref.	Comment
A-H	TMY-3 Weather Data for Hartford, CT
I - L	Existing Occupancy hours
M - P	Existing Heating/Cooling hours
Q - T	Existing Motor Operating Hours
U	Occupied Cooling and Heating loads (MBH)
V	Unoccupied Cooling and Heating loads (MBH)
W	Cooling = [col U] x ([col M] + [col O]) ÷ 1,000 ÷ AD45
	Heating = -MIN([col I] + [col K] , [col M] + [col O]) x MIN([col U] + internal gains , 0) + IF([col I] + [col K] > [col M]+[col O] , (([col I] + [col K]) - ([col M] + [col O])) x MIN([col V] + internal gains , 0) , 0) ÷ 1,000 ÷ AD44
X	Cooling = [col R] x ([col J] + [col L]) ÷ 1,000 ÷ AD45
	Heating = -([col N] + [col P]) x MIN([col V] + internal gains , 0) + IF([col I] + [col K] < [col M] + [col O] , (([col M] + [col O]) - ([col I] + [col K])) x MIN([col U] + internal gains , 0)) ÷ 1,000 ÷ AD44
Y - AB	Proposed Operating hours
AC	Proposed Occupied Cooling and Heating Loads:
	Cooling = ([col B] - AC61) ÷ ([col B] - AC56) x [col U]
	Heating = ([col B] - AE61) ÷ ([col B] - AE56) x [col U]
AD	Proposed Unoccupied Cooling and Heating Loads:
	Cooling = ([col B] - AC62) ÷ ([col B] - AC57) x [col V]
	Heating = ([col B] - AE62) ÷ ([col B] - AE57) x [col V] ([col V] is modified to account for reduced kitchen and building ventilation due to EMS)
AE	Cooling = [col AC] x ([col Y] + [col AA]) ÷ 1,000 ÷ AD45
	Heating = -MIN([col I] + [col K] , [col Y] + [col AA]) x MIN([col AC] + internal gains , 0) + IF([col I] + [col K] > [col Y]+[col AA] , (([col I] + [col K]) - ([col Y] + [col AA])) x MIN([col AD] + internal gains , 0) , 0) ÷ 1,000 ÷ AD44
AF	Cooling = [col AD] x ([col Z] + [col AB]) ÷ 1,000 ÷ AD45
	Heating = -([col Z] + [col AB]) x MIN([col AD] + internal gains , 0) + IF([col I] + [col K] < [col Y] + [col AA] , (([col Y] + [col AA]) - ([col I] + [col K])) x MIN([col AC] + internal gains , 0)) ÷ 1,000 ÷ AD44
AG	= ([col W] + [col X]) - ([col AE] + [col AF])
	HVAC Fan and Pump Savings
AH	Cooling =([col Q] + [col S] + ([col R] + [col T]) x AD49) x (AD46 + AD48) - ([col Y] + [col AA] + ([col Z] + [col AB]) x AD49) x (AD46 + AD48)
	Heating =([col Q] + [col S]) x AD46 + IF(B20<35,([col R] + [col T]) x AD49 x AD46, IF(B20>50,0,([col R] + [col T]) x AD49 x AD46)) - ((([col Y] + [col AA]) x AD46 + IF(B20<35,([col Z] + [col AB]) x AD49 x AD46, IF(B20>50,0,([col Z] + [col AB]) x AD49 x AD46)))
AI	= ([col W] + [col X]) - ([col AE] + [col AF])

Assumptions:	Value	Unit	CELL REF	Description
Occupied Area	166,855	SF	**AD43**	
Existing Heating Plant Efficiency	78.0%		**AD44**	HW
Existing Chiller Efficiency	2.9	COP	**AD45**	
Fan Power	26.9	kW	**AD46**	AHU-4 Council Chambers
Heating Pump Power	0.0	kW	**AD47**	
Cooling Pump Power	0.0	kW	**AD48**	
UnOcc. Fan & Pump Cycling	10.0%		**AD49**	% Operating Hours During UnOcc.
UnOcc. Kitchen Vent. Reduction	0.0%		**AD50**	% CFM Saved
UnOcc. Ventilation Reduction	0.0%		**AD51**	% CFM Saved
Occ. Ventilation Reduction	8.1%		**AD52**	% CFM Saved due to DCV

Average Existing Space Temperatures					
	Cooling		Heating		Description
Occupied	74.0	**AC56**	71.6	**AE56**	
UnOccupied	85.0	**AC57**	55.0	**AE57**	

Average Proposed Space Temperatures					
	Cooling		Heating		Description
Occupied	74.0	**AC61**	71.6	**AE61**	
UnOccupied	85.0	**AC62**	55.0	**AE62**	

Page content is subject to Confidentiality Restrictions

City of Bristol, CT
South Side Elementary School
Energy Management System Upgrade/Expansion

TMY-3 Weather Data for Hartford, CT								Existing Occupancy Schedule				Existing Heating/Cooling Schedule				Existing Motor Operating Schedule				Existing				Proposed								Savings		
Amb. Temp Bin deg. F	Ave Temp deg. F	M.C.W.B deg. F	M.C. Enthalpy Btu/lbma	01-08 Hours	09-16 Hours	17-24 Hours	Total Bin Hours	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ. Cool/ Heat Load (MBH)	UnOcc. Cool/ Heat Load (MBH)	Occ Cooling/Heating Energy Consump. (MMBTU)	UnOcc Cooling/Heating Energy Consump. (MMBTU)	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ. Cool/ Heat Load (MBH)	UnOcc. Cool/ Heat Load (MBH)	Occ Cooling/Heating Energy Consump. (MMBTU)	UnOcc Cooling/Heating Energy Consump. (MMBTU)	Cooling Energy Savings (MMBTU)	HVAC Electrical Savings (kWh)	Heating Energy Savings (MMBTU)
A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**Q**	**R**	**S**	**T**	**U**	**V**	**W**	**X**	**Y**	**Z**	**AA**	**AB**	**AC**	**AD**	**AE**	**AF**	**AG**	**AH**	**AI**
Cooling																																		
105 to 110	107.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,744	855	0	0	0	0	0	0	1,744	855	0	0	0		
100 to 105	102.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,570	769	0	0	0	0	0	0	1,721	920	0	0	0		
95 to 100	97.5	75.8	39.4	0	4	0	4	1	0	0	3	1	0	0	3	1	0	0	3	1,395	684	0	1	1	0	0	3	1,298	587	0	1	0		
90 to 95	92.5	74.9	38.7	0	34	9	43	7	3	0	33	10	0	0	33	10	0	0	33	1,221	598	4	7	10	0	0	33	1,128	506	4	6	1		
85 to 90	87.5	72.8	36.9	0	105	22	127	20	10	0	97	30	0	1	96	30	0	1	96	1,046	513	11	17	30	0	1	96	966	432	10	14	3		
80 to 85	82.5	69.0	33.5	4	247	105	356	56	29	0	271	85	0	2	269	85	0	2	269	872	427	26	39	85	0	2	269	812	368	24	34	7		
75 to 80	77.5	66.7	31.7	55	243	158	456	72	37	0	347	109	0	3	345	109	0	3	345	698	342	26	40	109	0	3	345	649	294	25	35	7		
70 to 75	72.5	64.6	30.0	137	208	183	528	83	43	0	402	126	0	3	399	126	0	3	399	523	256	23	35	126	0	3	399	485	219	21	30	7		
65 to 70	67.5	61.1	27.5	199	231	248	678	106	55	0	516	162	0	4	513	162	0	4	513	349	171	20	30	162	0	4	513	327	149	18	26	5		
60 to 65	62.5	56.0	24.0	306	300	310	916	144	74	0	698	218	0	5	693	218	0	5	693	174	85	13	20	218	0	5	693	174	85	13	20	0		
Heating																																		
55 to 60	57.5	51.2	21.1	270	226	289	785	123	64	0	598	187	0	4	594	187	0	4	594	(516)	(50)	17	52	187	0	4	594	(494)	(50)	14	50			6
50 to 55	52.5	46.7	18.6	291	186	261	738	116	60	0	562	176	0	4	558	176	0	4	558	(692)	(149)	45	141	176	0	4	558	(662)	(149)	40	138			7
45 to 50	47.5	41.8	16.1	210	129	187	526	83	43	0	401	125	0	3	398	125	0	3	398	(868)	(248)	52	167	125	0	3	398	(831)	(248)	48	164			7
40 to 45	42.5	38.1	14.4	282	188	155	625	98	51	0	476	149	0	4	473	149	0	4	473	(1,044)	(347)	86	276	149	0	4	473	(1,000)	(347)	80	273			9
35 to 40	37.5	33.1	12.2	288	296	306	890	140	72	0	678	212	0	5	673	212	0	5	673	(1,221)	(446)	157	505	212	0	5	673	(1,168)	(446)	146	499			16
30 to 35	32.5	28.5	10.3	252	222	251	725	114	59	0	552	173	0	4	548	173	0	4	548	(1,397)	(546)	155	502	173	0	4	548	(1,337)	(546)	146	497			15
25 to 30	27.5	24.1	8.6	182	160	177	519	82	42	0	395	124	0	3	392	124	0	3	392	(1,573)	(645)	131	425	124	0	3	392	(1,506)	(645)	124	420			12
20 to 25	22.5	20.3	7.2	231	89	177	497	78	40	0	379	118	0	3	376	118	0	3	376	(1,749)	(744)	145	469	118	0	3	376	(1,674)	(744)	137	465			13
15 to 20	17.5	15.5	5.6	135	42	57	234	37	19	0	178	56	0	1	177	56	0	1	177	(1,925)	(843)	77	250	56	0	1	177	(1,843)	(843)	73	248			7
10 to 15	12.5	10.9	4.1	44	7	24	75	12	6	0	57	18	0	0	57	18	0	0	57	(2,102)	(942)	28	90	18	0	0	57	(2,012)	(942)	26	89			2
5 to 10	7.5	6.4	2.7	23	3	1	27	4	2	0	21	6	0	0	20	6	0	0	20	(2,278)	(1,041)	11	36	6	0	0	20	(2,180)	(1,041)	10	35			1
0 to 5	2.5	2.4	1.5	11	0	0	11	2	1	0	8	3	0	0	8	3	0	0	8	(2,454)	(1,141)	5	16	3	0	0	8	(2,349)	(1,141)	5	16			0
-5 to 0	(2.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(2,630)	(1,240)	0	0	0	0	0	0	(2,518)	(1,240)	0	0			0
-10 to -5	(7.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(2,806)	(1,339)	0	0	0	0	0	0	(2,686)	(1,339)	0	0			0
-15 to -10	(12.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(2,983)	(1,438)	0	0	0	0	0	0	(2,855)	(1,438)	0	0			0
-20 to -15	(17.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(3,159)	(1,537)	0	0	0	0	0	0	(3,024)	(1,537)	0	0			0
-25 to -20	(22.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(3,335)	(1,637)	0	0	0	0	0	0	(3,192)	(1,637)	0	0			0
				2,920	2,920	2,920	8,760	1,376	711	0	6,673	2,087	0	49	6,624	2,087	0	49	6,624			1,033	3,116	2,087	0	49	6,624			965	3,059	32	0	94

Cell Ref.	Comment
A-H	TMY-3 Weather Data for Hartford, CT
I - L	Existing Occupancy hours
M - P	Existing Heating/Cooling hours
Q - T	Existing Motor Operating Hours
U	Occupied Cooling and Heating loads (MBH)
V	Unoccupied Cooling and Heating loads (MBH)
W	Cooling = [col U] x ([col M] + [col O]) ÷ 1,000 ÷ AD45
	Heating = -MIN([col I] + [col K] , [col M] + [col O]) x MIN([col U] + internal gains , 0) + IF([col I] + [col K] > [col M]+[col O] , (([col I] + [col K]) - ([col M] + [col O])) x MIN([col V] + internal gains , 0) , 0) ÷ 1,000 ÷ AD44
X	Cooling = [col R] x ([col J] + [col L]) ÷ 1,000 ÷ AD45
	Heating = -([col N] + [col P]) x MIN([col V] + internal gains , 0) + IF([col I] + [col K] < [col M] + [col O] , (([col M] + [col O]) - ([col I] + [col K])) x MIN([col U] + internal gains , 0)) ÷ 1,000 ÷ AD44
Y - AB	Proposed Operating hours
AC	Proposed Occupied Cooling and Heating Loads:
	Cooling = ([col B] - AC61) ÷ ([col B] - AC56) x [col U]
	Heating = ([col B] - AE61) ÷ ([col B] - AE56) x [col U]
AD	Proposed Unoccupied Cooling and Heating Loads:
	Cooling = ([col B] - AC62) ÷ ([col B] - AC57) x [col V]
	Heating = ([col B] - AE62) ÷ ([col B] - AE57) x [col V] ([col V] is modified to account for reduced kitchen and building ventilation due to EMS)
AE	Cooling = [col AC] x ([col Y] + [col AA]) ÷ 1,000 ÷ AD45
	Heating = -MIN([col I] + [col K] , [col Y] + [col AA]) x MIN([col AC] + internal gains , 0) + IF([col I] + [col K] > [col Y]+[col AA] , (([col I] + [col K]) - ([col Y] + [col AA])) x MIN([col AD] + internal gains , 0) , 0) ÷ 1,000 ÷ AD44
AF	Cooling = [col AD] x ([col Z] + [col AB]) ÷ 1,000 ÷ AD45
	Heating = -([col Z] + [col AB]) x MIN([col AD] + internal gains , 0) + IF([col I] + [col K] < [col Y] + [col AA] , (([col Y] + [col AA]) - ([col I] + [col K])) x MIN([col AC] + internal gains , 0)) ÷ 1,000 ÷ AD44
AG	= ([col W] + [col X]) - ([col AE] + [col AF])
	HVAC Fan and Pump Savings
AH	Cooling =([col Q] + [col S] + ([col R] + [col T]) x AD49) x (AD46 + AD48) - ([col Y] + [col AA] + ([col Z] + [col AB]) x AD49) x (AD46 + AD48)
	Heating =([col Q] + [col S]) x AD46 + IF(B20<35,([col R] + [col T]) x AD49 x AD46, IF(B20>50,0,([col R] + [col T]) x AD49 x AD46)) - ((([col Y] + [col AA]) x AD46 + IF(B20<35,([col Z] + [col AB]) x AD49 x AD46, IF(B20>50,0,([col Z] + [col AB]) x AD49 x AD46)))
AI	= ([col W] + [col X]) - ([col AE] + [col AF])

Assumptions:	Value	Unit	CELL REF	Description
Occupied Area	64,590	SF	**AD43**	
Existing Heating Plant Efficiency	72.0%		**AD44**	HW
Existing Chiller Efficiency	2.9	COP	**AD45**	
Fan Power	14.0	kW	**AD46**	AHU-4 Council Chambers
Heating Pump Power	0.0	kW	**AD47**	
Cooling Pump Power	0.0	kW	**AD48**	
UnOcc. Fan & Pump Cycling	10.0%		**AD49**	% Operating Hours During UnOcc.
UnOcc. Kitchen Vent. Reduction	0.0%		**AD50**	% CFM Saved
UnOcc. Ventilation Reduction	0.0%		**AD51**	% CFM Saved
Occ. Ventilation Reduction	9.8%		**AD52**	% CFM Saved due to DCV

Average Existing Space Temperatures					
	Cooling		Heating		Description
Occupied	72.0	**AC56**	72.1	**AE56**	
UnOccupied	85.0	**AC57**	60.0	**AE57**	

Average Proposed Space Temperatures					
	Cooling		Heating		Description
Occupied	72.0	**AC61**	72.1	**AE61**	
UnOccupied	85.0	**AC62**	60.0	**AE62**	

Page content is subject to Confidentiality Restrictions

City of Bristol, CT
City Hall & Annex
Energy Management System Upgrade/Expansion

TMY-3 Weather Data for Hartford, CT								Existing Occupancy Schedule				Existing Heating/Cooling Schedule				Existing Motor Operating Schedule				Existing				Proposed								Savings		
Amb. Temp Bin deg. F	Ave Temp deg. F	M.C.W.B deg. F	M.C. Enthalpy Btu/lbma	01-08 Hours	09-16 Hours	17-24 Hours	Total Bin Hours	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ. Cool/ Heat Load (MBH)	UnOcc. Cool/ Heat Load (MBH)	Occ Cooling/Heating Energy Consump. (MMBTU)	UnOcc Cooling/Heating Energy Consump. (MMBTU)	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ. Cool/ Heat Load (MBH)	UnOcc. Cool/ Heat Load (MBH)	Occ Cooling/Heating Energy Consump. (MMBTU)	UnOcc Cooling/Heating Energy Consump. (MMBTU)	Cooling Energy Savings (MMBTU)	HVAC Electrical Savings (kWh)	Heating Energy Savings (MMBTU)
A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**Q**	**R**	**S**	**T**	**U**	**V**	**W**	**X**	**Y**	**Z**	**AA**	**AB**	**AC**	**AD**	**AE**	**AF**	**AG**	**AH**	**AI**
Cooling																																		
105 to 110	107.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,445	1,301	0	0	0	0	0	0	2,445	1,301	0	0	0	0	
100 to 105	102.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,201	1,170	0	0	0	0	0	0	2,268	1,237	0	0	0	0	
95 to 100	97.5	75.8	39.4	0	4	0	4	1	0	0	3	1	0	1	2	1	0	1	2	1,956	1,040	1	1	1	0	1	2	1,913	997	1	1	0	3	
90 to 95	92.5	74.9	38.7	0	34	9	43	6	4	4	28	11	0	8	24	11	0	8	24	1,712	910	13	9	11	0	8	24	1,671	869	12	9	1	29	
85 to 90	87.5	72.8	36.9	0	105	22	127	19	11	13	84	31	0	24	72	31	0	24	72	1,467	780	32	23	31	0	24	72	1,431	745	32	22	2	87	
80 to 85	82.5	69.0	33.5	4	247	105	356	53	32	37	234	88	0	66	202	88	0	66	202	1,223	650	76	53	88	0	66	202	1,196	624	74	51	4	215	
75 to 80	77.5	66.7	31.7	55	243	158	456	68	41	48	300	112	0	85	258	112	0	85	258	978	520	78	54	112	0	85	258	957	499	76	52	4	275	
70 to 75	72.5	64.6	30.0	137	208	183	528	79	47	55	347	130	0	98	299	130	0	98	299	734	390	67	47	130	0	98	299	717	373	66	45	4	319	
65 to 70	67.5	61.1	27.5	199	231	248	678	101	61	71	446	167	0	126	384	167	0	126	384	489	260	58	40	167	0	126	384	479	250	57	39	3	409	
60 to 65	62.5	56.0	24.0	306	300	310	916	136	82	95	602	226	0	171	519	226	0	171	519	245	130	39	27	226	0	171	519	245	130	39	27	0	553	
Heating																																		
55 to 60	57.5	51.2	21.1	270	226	289	785	117	70	82	516	194	0	146	445	194	0	146	445	(312)	(25)	0	46	194	0	146	445	(304)	(25)	0	44		474	2
50 to 55	52.5	46.7	18.6	291	186	261	738	110	66	77	485	182	0	138	418	182	0	138	418	(437)	(109)	11	92	182	0	138	418	(425)	(109)	8	90		445	5
45 to 50	47.5	41.8	16.1	210	129	187	526	78	47	55	346	130	0	98	298	130	0	98	298	(562)	(194)	29	113	130	0	98	298	(547)	(194)	26	111		359	4
40 to 45	42.5	38.1	14.4	282	188	155	625	93	56	65	411	154	0	117	354	154	0	117	354	(687)	(278)	60	190	154	0	117	354	(669)	(278)	56	187		426	6
35 to 40	37.5	33.1	12.2	288	296	306	890	132	80	93	585	220	0	166	504	220	0	166	504	(812)	(362)	121	351	220	0	166	504	(790)	(362)	115	346		607	11
30 to 35	32.5	28.5	10.3	252	222	251	725	108	65	76	477	179	0	135	411	179	0	135	411	(937)	(446)	128	351	179	0	135	411	(912)	(446)	122	347		495	10
25 to 30	27.5	24.1	8.6	182	160	177	519	77	46	54	341	128	0	97	294	128	0	97	294	(1,062)	(531)	113	298	128	0	97	294	(1,033)	(531)	108	295		354	8
20 to 25	22.5	20.3	7.2	231	89	177	497	74	44	52	327	123	0	93	282	123	0	93	282	(1,187)	(615)	128	330	123	0	93	282	(1,155)	(615)	123	327		339	9
15 to 20	17.5	15.5	5.6	135	42	57	234	35	21	24	154	58	0	44	133	58	0	44	133	(1,311)	(699)	70	177	58	0	44	133	(1,276)	(699)	67	175		160	5
10 to 15	12.5	10.9	4.1	44	7	24	75	11	7	8	49	18	0	14	43	18	0	14	43	(1,436)	(783)	25	63	18	0	14	43	(1,398)	(783)	24	63		51	2
5 to 10	7.5	6.4	2.7	23	3	1	27	4	2	3	18	7	0	5	15	7	0	5	15	(1,561)	(867)	10	25	7	0	5	15	(1,519)	(867)	10	25		18	1
0 to 5	2.5	2.4	1.5	11	0	0	11	2	1	1	7	3	0	2	6	3	0	2	6	(1,686)	(952)	5	11	3	0	2	6	(1,641)	(952)	4	11		8	0
-5 to 0	(2.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(1,811)	(1,036)	0	0	0	0	0	0	(1,762)	(1,036)	0	0		0	0
-10 to -5	(7.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(1,936)	(1,120)	0	0	0	0	0	0	(1,884)	(1,120)	0	0		0	0
-15 to -10	(12.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(2,061)	(1,204)	0	0	0	0	0	0	(2,006)	(1,204)	0	0		0	0
-20 to -15	(17.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(2,186)	(1,288)	0	0	0	0	0	0	(2,127)	(1,288)	0	0		0	0
-25 to -20	(22.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(2,311)	(1,373)	0	0	0	0	0	0	(2,249)	(1,373)	0	0		0	0
				2,920	2,920	2,920	8,760	1,304	783	913	5,761	2,161	0	1,634	4,965	2,161	0	1,634	4,965			1,062	2,300	2,161	0	1,634	4,965			1,020	2,264	16	5,625	62

Cell Ref.	Comment
A-H	TMY-3 Weather Data for Hartford, CT
I - L	Existing Occupancy hours
M - P	Existing Heating/Cooling hours
Q - T	Existing Motor Operating Hours
U	Occupied Cooling and Heating loads (MBH)
V	Unoccupied Cooling and Heating loads (MBH)
W	Cooling = [col U] x ([col M] + [col O]) ÷ 1,000 ÷ AD45
	Heating = -MIN([col I] + [col K] , [col M] + [col O]) x MIN([col U] + internal gains , 0) + IF([col I] + [col K] > [col M]+[col O] , (([col I] + [col K]) - ([col M] + [col O])) x MIN([col V] + internal gains , 0) , 0) ÷ 1,000 ÷ AD44
X	Cooling = [col R] x ([col J] + [col L]) ÷ 1,000 ÷ AD45
	Heating = -([col N] + [col P]) x MIN([col V] + internal gains , 0) + IF([col I] + [col K] < [col M] + [col O] , (([col M] + [col O]) - ([col I] + [col K])) x MIN([col U] + internal gains , 0)) ÷ 1,000 ÷ AD44
Y - AB	Proposed Operating hours
AC	Proposed Occupied Cooling and Heating Loads:
	Cooling = ([col B] - AC61) ÷ ([col B] - AC56) x [col U]
	Heating = ([col B] - AE61) ÷ ([col B] - AE56) x [col U]
AD	Proposed Unoccupied Cooling and Heating Loads:
	Cooling = ([col B] - AC62) ÷ ([col B] - AC57) x [col V]
	Heating = ([col B] - AE62) ÷ ([col B] - AE57) x [col V] ([col V] is modified to account for reduced kitchen and building ventilation due to EMS)
AE	Cooling = [col AC] x ([col Y] + [col AA]) ÷ 1,000 ÷ AD45
	Heating = -MIN([col I] + [col K] , [col Y] + [col AA]) x MIN([col AC] + internal gains , 0) + IF([col I] + [col K] > [col Y]+[col AA] , (([col I] + [col K]) - ([col Y] + [col AA])) x MIN([col AD] + internal gains , 0) , 0) ÷ 1,000 ÷ AD44
AF	Cooling = [col AD] x ([col Z] + [col AB]) ÷ 1,000 ÷ AD45
	Heating = -([col Z] + [col AB]) x MIN([col AD] + internal gains , 0) + IF([col I] + [col K] < [col Y] + [col AA] , (([col Y] + [col AA]) - ([col I] + [col K])) x MIN([col AC] + internal gains , 0)) ÷ 1,000 ÷ AD44
AG	= ([col W] + [col X]) - ([col AE] + [col AF])
	HVAC Fan and Pump Savings
AH	Cooling =([col Q] + [col S] + ([col R] + [col T]) x AD49) x (AD46 + AD48) - ([col Y] + [col AA] + ([col Z] + [col AB]) x AD49) x (AD46 + AD48)
	Heating =([col Q] + [col S]) x AD46 + IF(B20<35,([col R] + [col T]) x AD49 x AD46, IF(B20>50,0,([col R] + [col T]) x AD49 x AD46)) - ((([col Y] + [col AA]) x AD46 + IF(B20<35,([col Z] + [col AB]) x AD49 x AD46, IF(B20>50,0,([col Z] + [col AB]) x AD49 x AD46)))
AI	= ([col W] + [col X]) - ([col AE] + [col AF])

Assumptions:	Value	Unit	CELL REF	Description
Occupied Area	60,053	SF	**AD43**	
Existing Heating Plant Efficiency	78.0%		**AD44**	HW
Existing Chiller Efficiency	2.5	COP	**AD45**	
Fan Power	1.79	kW	**AD46**	AHU-4 Council Chambers
Heating Pump Power	0.0	kW	**AD47**	
Cooling Pump Power	0.0	kW	**AD48**	
UnOcc. Fan & Pump Cycling	10.0%		**AD49**	% Operating Hours During UnOcc.
UnOcc. Kitchen Vent. Reduction	0.0%		**AD50**	% CFM Saved
UnOcc. Ventilation Reduction	0.0%		**AD51**	% CFM Saved
Occ. Ventilation Reduction	8.2%		**AD52**	% CFM Saved due to DCV

Average Existing Space Temperatures					
	Cooling		Heating		Description
Occupied	74.0	**AC56**	70.0	**AE56**	
UnOccupied	85.0	**AC57**	59.0	**AE57**	

Average Proposed Space Temperatures					
	Cooling		Heating		Description
Occupied	74.0	**AC61**	70.0	**AE61**	
UnOccupied	85.0	**AC62**	59.0	**AE62**	

Page content is subject to Confidentiality Restrictions

City of Bristol, CT
Police Court & Parking Garage
Energy Management System Upgrade/Expansion

TMY-3 Weather Data for Hartford, CT								Existing Occupancy Schedule				Existing Heating/Cooling Schedule				Existing Motor Operating Schedule				Existing				Proposed								Savings		
Amb. Temp Bin deg. F	Ave Temp deg. F	M.C.W.B deg. F	M.C. Enthalpy Btu/lbma	01-08 Hours	09-16 Hours	17-24 Hours	Total Bin Hours	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ. Cool/ Heat Load (MBH)	UnOcc. Cool/ Heat Load (MBH)	Occ Cooling/Heating Energy Consump. (MMBTU)	UnOcc Cooling/Heating Energy Consump. (MMBTU)	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ. Cool/ Heat Load (MBH)	UnOcc. Cool/ Heat Load (MBH)	Occ Cooling/Heating Energy Consump. (MMBTU)	UnOcc Cooling/Heating Energy Consump. (MMBTU)	Cooling Energy Savings (MMBTU)	HVAC Electrical Savings (kWh)	Heating Energy Savings (MMBTU)
A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**Q**	**R**	**S**	**T**	**U**	**V**	**W**	**X**	**Y**	**Z**	**AA**	**AB**	**AC**	**AD**	**AE**	**AF**	**AG**	**AH**	**AI**
Cooling																																		
105 to 110	107.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,834	1,389	0	0	0	0	0	0	2,834	1,389	0	0	0		
100 to 105	102.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,550	1,250	0	0	0	0	0	0	2,609	1,309	0	0	0		
95 to 100	97.5	75.8	39.4	0	4	0	4	1	0	3	0	1	0	2	1	1	0	2	1	2,267	1,111	3	0	1	0	2	1	2,229	1,074	2	0	0		
90 to 95	92.5	74.9	38.7	0	34	9	43	10	0	33	0	13	0	22	8	13	0	22	8	1,984	972	24	3	13	0	22	8	1,948	936	23	3	1		
85 to 90	87.5	72.8	36.9	0	105	22	127	30	0	97	0	39	0	64	24	39	0	64	24	1,700	833	60	7	39	0	64	24	1,669	802	59	6	1		
80 to 85	82.5	69.0	33.5	4	247	105	356	85	0	271	0	109	0	181	66	109	0	181	66	1,417	695	140	16	109	0	181	66	1,394	671	138	15	3		
75 to 80	77.5	66.7	31.7	55	243	158	456	108	0	348	0	140	0	231	84	140	0	231	84	1,133	556	144	16	140	0	231	84	1,115	537	141	15	3		
70 to 75	72.5	64.6	30.0	137	208	183	528	125	0	403	0	162	0	268	98	162	0	268	98	850	417	125	14	162	0	268	98	835	402	123	13	3		
65 to 70	67.5	61.1	27.5	199	231	248	678	161	0	517	0	208	0	344	126	208	0	344	126	567	278	107	12	208	0	344	126	558	269	105	12	2		
60 to 65	62.5	56.0	24.0	306	300	310	916	217	0	699	0	282	0	465	170	282	0	465	170	283	139	72	8	282	0	465	170	283	139	72	8	0		
Heating																																		
55 to 60	57.5	51.2	21.1	270	226	289	785	186	0	599	0	241	0	398	145	241	0	398	145	(344)	(43)	126	4	241	0	398	145	(337)	(43)	120	4			6
50 to 55	52.5	46.7	18.6	291	186	261	738	175	0	563	0	227	0	374	137	227	0	374	137	(481)	(129)	225	19	227	0	374	137	(471)	(129)	217	19			8
45 to 50	47.5	41.8	16.1	210	129	187	526	125	0	401	0	162	0	267	97	162	0	267	97	(619)	(216)	239	25	162	0	267	97	(606)	(216)	232	25			7
40 to 45	42.5	38.1	14.4	282	188	155	625	148	0	477	0	192	0	317	116	192	0	317	116	(757)	(302)	387	42	192	0	317	116	(740)	(302)	376	42			11
35 to 40	37.5	33.1	12.2	288	296	306	890	211	0	679	0	274	0	452	165	274	0	452	165	(894)	(388)	697	78	274	0	452	165	(875)	(388)	679	78			18
30 to 35	32.5	28.5	10.3	252	222	251	725	172	0	553	0	223	0	368	134	223	0	368	134	(1,032)	(474)	687	78	223	0	368	134	(1,010)	(474)	670	78			17
25 to 30	27.5	24.1	8.6	182	160	177	519	123	0	396	0	160	0	263	96	160	0	263	96	(1,169)	(561)	577	67	160	0	263	96	(1,144)	(561)	563	67			14
20 to 25	22.5	20.3	7.2	231	89	177	497	118	0	379	0	153	0	252	92	153	0	252	92	(1,307)	(647)	634	74	153	0	252	92	(1,279)	(647)	619	74			14
15 to 20	17.5	15.5	5.6	135	42	57	234	56	0	178	0	72	0	119	43	72	0	119	43	(1,444)	(733)	337	40	72	0	119	43	(1,413)	(733)	329	40			8
10 to 15	12.5	10.9	4.1	44	7	24	75	18	0	57	0	23	0	38	14	23	0	38	14	(1,582)	(819)	120	14	23	0	38	14	(1,548)	(819)	118	14			3
5 to 10	7.5	6.4	2.7	23	3	1	27	6	0	21	0	8	0	14	5	8	0	14	5	(1,719)	(906)	48	6	8	0	14	5	(1,683)	(906)	47	6			1
0 to 5	2.5	2.4	1.5	11	0	0	11	3	0	8	0	3	0	6	2	3	0	6	2	(1,857)	(992)	21	3	3	0	6	2	(1,817)	(992)	21	3			0
-5 to 0	(2.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(1,994)	(1,078)	0	0	0	0	0	0	(1,952)	(1,078)	0	0			0
-10 to -5	(7.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(2,132)	(1,164)	0	0	0	0	0	0	(2,087)	(1,164)	0	0			0
-15 to -10	(12.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(2,270)	(1,251)	0	0	0	0	0	0	(2,221)	(1,251)	0	0			0
-20 to -15	(17.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(2,407)	(1,337)	0	0	0	0	0	0	(2,356)	(1,337)	0	0			0
-25 to -20	(22.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(2,545)	(1,423)	0	0	0	0	0	0	(2,490)	(1,423)	0	0			0
				2,920	2,920	2,920	8,760	2,080	0	6,680	0	2,694	0	4,445	1,622	2,694	0	4,445	1,622			4,772	525	2,694	0	4,445	1,622			4,656	522	12	0	106

Cell Ref.	Comment
A-H	TMY-3 Weather Data for Hartford, CT
I - L	Existing Occupancy hours
M - P	Existing Heating/Cooling hours
Q - T	Existing Motor Operating Hours
U	Occupied Cooling and Heating loads (MBH)
V	Unoccupied Cooling and Heating loads (MBH)
W	Cooling = [col U] x ([col M] + [col O]) ÷ 1,000 ÷ AD45
	Heating = -MIN([col I] + [col K] , [col M] + [col O]) x MIN([col U] + internal gains , 0) + IF([col I] + [col K] > [col M]+[col O] , (([col I] + [col K]) - ([col M] + [col O])) x MIN([col V] + internal gains , 0) , 0) ÷ 1,000 ÷ AD44
X	Cooling = [col R] x ([col J] + [col L]) ÷ 1,000 ÷ AD45
	Heating = -([col N] + [col P]) x MIN([col V] + internal gains , 0) + IF([col I] + [col K] < [col M] + [col O] , (([col M] + [col O]) - ([col I] + [col K])) x MIN([col U] + internal gains , 0)) ÷ 1,000 ÷ AD44
Y - AB	Proposed Operating hours
AC	Proposed Occupied Cooling and Heating Loads:
	Cooling = ([col B] - AC61) ÷ ([col B] - AC56) x [col U]
	Heating = ([col B] - AE61) ÷ ([col B] - AE56) x [col U]
AD	Proposed Unoccupied Cooling and Heating Loads:
	Cooling = ([col B] - AC62) ÷ ([col B] - AC57) x [col V]
	Heating = ([col B] - AE62) ÷ ([col B] - AE57) x [col V] ([col V] is modified to account for reduced kitchen and building ventilation due to EMS)
AE	Cooling = [col AC] x ([col Y] + [col AA]) ÷ 1,000 ÷ AD45
	Heating = -MIN([col I] + [col K] , [col Y] + [col AA]) x MIN([col AC] + internal gains , 0) + IF([col I] + [col K] > [col Y]+[col AA] , (([col I] + [col K]) - ([col Y] + [col AA])) x MIN([col AD] + internal gains , 0) , 0) ÷ 1,000 ÷ AD44
AF	Cooling = [col AD] x ([col Z] + [col AB]) ÷ 1,000 ÷ AD45
	Heating = -([col Z] + [col AB]) x MIN([col AD] + internal gains , 0) + IF([col I] + [col K] < [col Y] + [col AA] , (([col Y] + [col AA]) - ([col I] + [col K])) x MIN([col AC] + internal gains , 0)) ÷ 1,000 ÷ AD44
AG	= ([col W] + [col X]) - ([col AE] + [col AF])
	HVAC Fan and Pump Savings
AH	Cooling =([col Q] + [col S] + ([col R] + [col T]) x AD49) x (AD46 + AD48) - ([col Y] + [col AA] + ([col Z] + [col AB]) x AD49) x (AD46 + AD48)
	Heating =([col Q] + [col S]) x AD46 + IF(B20<35,([col R] + [col T]) x AD49 x AD46, IF(B20>50,0,([col R] + [col T]) x AD49 x AD46)) - ((([col Y] + [col AA]) x AD46 + IF(B20<35,([col Z] + [col AB]) x AD49 x AD46, IF(B20>50,0,([col Z] + [col AB]) x AD49 x AD46)))
AI	= ([col W] + [col X]) - ([col AE] + [col AF])

Assumptions:	Value	Unit	CELL REF	Description
Occupied Area	83,343	SF	**AD43**	
Existing Heating Plant Efficiency	78.0%		**AD44**	HW
Existing Chiller Efficiency	2.9	COP	**AD45**	
Fan Power	5.7	kW	**AD46**	AHU-4 Council Chambers
Heating Pump Power	0.0	kW	**AD47**	
Cooling Pump Power	0.0	kW	**AD48**	
UnOcc. Fan & Pump Cycling	10.0%		**AD49**	% Operating Hours During UnOcc.
UnOcc. Kitchen Vent. Reduction	0.0%		**AD50**	% CFM Saved
UnOcc. Ventilation Reduction	0.0%		**AD51**	% CFM Saved
Occ. Ventilation Reduction	5.7%		**AD52**	% CFM Saved due to DCV

Average Existing Space Temperatures					
	Cooling		Heating		Description
Occupied	72.0	**AC56**	70.0	**AE56**	
UnOccupied	85.0	**AC57**	60.0	**AE57**	

Average Proposed Space Temperatures					
	Cooling		Heating		Description
Occupied	72.0	**AC61**	70.0	**AE61**	
UnOccupied	85.0	**AC62**	60.0	**AE62**	

Page content is subject to Confidentiality Restrictions

Appendix for ESM 6:
Demand Control Ventilation

II. Manufacturer Specification Sheets

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

GREYSTONE

ACCURACY BY DESIGN

CARBON DIOXIDE (CO2) DETECTORS



Corporate Space Enclosure

Air quality starts with sensing the problem

Greystone's Carbon Dioxide (CO2) detectors provide unsurpassed accuracy, reliability and selection.

Peace of mind through reliable gas sensors

GREYSTONE IS AN ISO 9002 REGISTERED COMPANY

CO_2 DETECTOR

Environmental, industrial and commercial indoor Carbon Dioxide (CO_2) gas detector. Available in both a space and duct mount version.



Duct Mount ABS Enclosure with Sampling Tube

APPLICATION:
To sense and transmit to any compatible electronic analog control, DDC/PLC controller or automation system for the control of ventilation equipment. Designed to meet ventilation requirements specified in ASHRAE Standard 62-1989.

FEATURES:

- Setup/calibration fully menu driven (requires LCD option)
- Monitors CO2 over range 0-2000 PPM (factory default)
- Field adjustable range from 0-1500 PPM up to 10,000 PPM without re-calibration!
- NDIR single beam with patented ACLP self-calibration algorithm
- Guaranteed 5 year calibration interval
- Optional on board relay with field adjustable trip point
- Optional LCD for displaying PPM level and menu options
- Powered by either AC or DC source with no change to circuit required
- Choice of two field adjustable analog output signals, linearized over full range
- Easy to calibrate in the field

SPECIFICATIONS	**CO_2 DETECTOR – Product # CDD**
Gas Detected	Carbon Dioxide (CO_2)
Range	0 – 2000 ppm standard, programmable from 1500 up to 10,000 ppm in 500 ppm increments
Standard Accuracy	±75 PPM or3% of reading (whichever is greater) 15-32 C (59-90 F) for 0-2000 ppm range ±5% of reading for 2000-10,000 ppm
Extended Accuracy	±150 ppm or 5% of reading (whichever is greater) 0-50 C (32-122 F) for 0-2000 ppm range ±7% of reading for 2000-10,000 ppm
Sensing Element	Non-Dispersive Infrared (NDIR)
Operation Conditions	0-50C(32-122F), 0-95% RH non-condensing
Repeatability	±20 PPM
Stability	±20 PPM typical, 5 year calibration interval
Manufacturing Process	ISO 9002 certified
Output Signal	4-20 mA active (sourcing), 0-5Vdc and 0-10Vdc, jumper selectable (Note correct part number)
Output Drive Capability	550 ohm max for current output, 10 Kohm min for voltage output
Output Resolution	10 bit PWM
LCD Display (optional)	LCD for displaying PPM level (required for field programming) 1 ppm resolution, 1.1” w x 0.5” h (28 x 13 mm) alpha-numeric 2 line x 8 characters
Field Calibration	Calibration, applying calibration gas standards (Contact Greystone for Calibration kit)
External Dimensions	Corporate Space – 91mm W x 127mm H x 43 mm D (3.6” x 5” x 1.7”) Duct ABS – 124 mm W x 183 mm H x 43 mm D (4.9” x 7.22” x 1.69”)

SPECIFICATIONS (Con't)	CO_2 DETECTOR – Product # CDD
Pressure Dependence	0.13% of reading per mm Hg
Altitude Correction	Programmable from 0-5000 ft in 500 ft increments
Response Time	< 60 seconds for 90% step change
Warm-up Time	< two (2) minutes
Power Supply	20-30 Vac/dc (non-isolated half-wave rectified)
Consumption	80 mA max @ 24 Vdc, 36 mA avg @24 Vdc
Input Voltage Effect	Negligible over specified operating range
Protection Circuitry	Reverse voltage protected and output limited
Optional Relay Output	One Form C contact (N.O. and N.C.), status LED, 5 amps @ 250 Vac, 5 amps @ 30Vdc, p.f. = 1 Relay Trip Point – Programmable 500-1500 ppm in 50 ppm increments Relay Hysteresis – Programmable 25-200 ppm in 25 ppm increments
Programming and Selection	Via internal push-buttons and jumper
Wiring Connections	Screw terminal block (14 to 22 AWG)

CARBON DIOXIDE (CO2): PRODUCT ORDERING INFORMATION

MODEL	Description
CDD	Carbon Dioxide Detector (CO_2)

CODE	Sensing Element
1	Non-Dispersive Infrared (NDIR)

CODE	Gas Type	Range	
A	CO_2 – Carbon Dioxide Detector (CDD)	0-2000 PPM Standard	User programmable up to 10,000 PPM

CODE	Enclosure and Outputs
1	Corporate Space c/w 4-20 mA and 0-5 Vdc outputs
2	Corporate Space c/w 4-20 mA and 0-10 Vdc outputs
6	Duct ABS c/w Sampling Tube, 4-20 mA, 0-5 Vdc and 0-10 Vdc outputs

CODE	Circuit Board Relay
00	No Relay
10	One Relay (DPDT, N.O. or N.C., 5A @ 24 VDC)

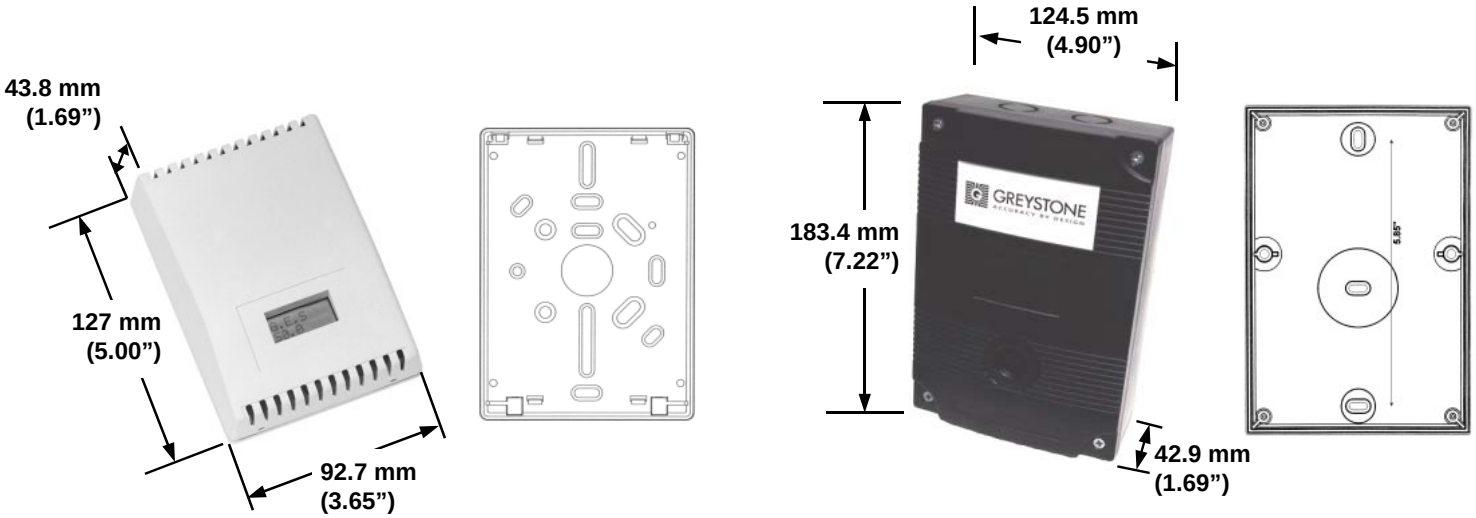
CODE	Options
0	No options
1	LCD
2	RS-485 Communication (Please contact Greystone)

CDD	1	A	1	00	0	← **Typical Model Number**

Example: NDIR CO2 Corporate No Relay No Options

Greystone Energy Systems, Inc. reserves the right to make design modifications without prior notice.

DIMENSIONS nts



ACLP SOFTWARE AND 5 YEAR CALIBRATION GUARANTEE

ACLP SOFTWARE

ACLP (Automatic Calibration Logic Program) software utilizes the computing power in the sensor's on-board micro-processor to remember the lowest CO2 concentration that takes place every 24 hours. The sensor assumes this low point is at outside levels. The sensor is also smart enough to discount periodic elevated readings that might occur if for example a space was used 24 hours per day over a few days. Once the sensor has collected 14 days worth of low concentration points it performs a statistical analysis to see if there has been any small changes in the sensor reading over background levels that could be attributable to sensor drift. If the analysis concludes there is drift, a small correction factor is made to the sensor calibration to adjust for this change.

5 YEAR CALIBRATION GUARANTEE

Based on the results of years of testing of **ACLP** software, Greystone now offers a 5 year calibration guarantee on all its CDD series wall and duct mount sensors used for CO2 based ventilation control when operated in an environment that can utilize **ACLP** software. If the sensor is found to be out of calibration more than 150 ppm as compared to a calibration gas or recently calibrated reference, Greystone will provide a free factory calibration of the sensor if returned to Greystone. This guarantee only applies if the sensor is operated in an environment where inside levels periodically drop to outside concentrations (i.e. during evenings or weekends when there is no occupancy) as is required by **ACLP** software. If a space does not experience a periodic drop to outside levels (e.g. where occupancy is 24 hours, 7 days/week), **ACLP** software should be deactivated off. With **ACLP** deactivated (via menu buttons) calibration may be required every 2 to 3 years.

GREYSTONE
ACCURACY BY DESIGN

Greystone Energy Systems Inc.
150 English Drive, Moncton, NB
Canada E1E 4G7

(506) 853-3057 Fax: (506) 853-6014
e-mail: mail@greystoneenergy.com
www.greystoneenergy.com

Greystone Energy Systems Inc., established in 1983, is Canada's largest manufacturer of HVAC sensors and transducers for Building Automation Management Systems. We have conscientiously established a worldwide reputation as an industry leader by maintaining leading-edge design technology, prompt technical support, and a commitment to on-time deliveries. We take pride in our Quality Management System which is ISO 9002 certified, assuring our customers of consistent product reliability.

GREYSTONE IS AN ISO 9002 REGISTERED COMPANY

ESM 12:
Variable Frequency Drives

ESM Overview

Ameresco proposes to install variable frequency drives for the existing fan motors serving AHU-1 at the City Hall and the two (2) space heating pumps serving the Chippens Middle School. The VFDs will be integrated to the new EMS system. The installation of VFDs and controls will allow for modulating with varying load more efficiently than the existing methods of control, which will reduce electrical energy and improve system efficiency.



Figure 12.1: Ameresco proposes to install VFDs on the Supply and Return fan motors serving AHU-1 at the City Hall.

ESM Detail

Existing System

AHU-1 is a constant volume air handling unit at City Hall which serves the interior VAV zones. The supply fan motor is 15 HP and the return fan motor is 7.5 HP. Currently each VAV box utilizes a bypass damper to regulate duct pressure.

Space heating hot water is pumped through Chippens Hill Middle School by two (2) 20 HP pumps located in the boiler room. A differential pressure valve regulates the pressure in the system.

Proposed System

Ameresco proposes to install two (2) variable frequency drives on the AHU-1 fans at City Hall, and two (2) VFDs on the hot water pumps serving the Chippens Middle School. The new VFD's will be integrated with the updated EMS systems. The scope of work includes all mechanical, electrical, and demolition work required to retrofit the motors. The scope of work includes:

Chippens Hill Scope of Work:

- Provide and install two (2) new 20-hp VFDs for existing hot water pumps
  - Install on wall in boiler room next to pumps in place of existing starters
  - Install N2 communications wiring to new drives and integrate into existing EMS
  - Provide with electronic bypass
  - Provide and install all power and control wiring
  - Provide all programming and graphics updates
  - Reuse existing DP sensor
  - Reprogram the existing bypass valve to operate as a backup to the VFDs
  - Replace three (3) 3-way valves serving air handling units with new 2-way valves.

"Page content is subject to Confidentiality Restrictions"

City Hall Scope of Work:

- Provide and install two (2) new VFDs for existing AHU-1
  - Install on wall next to unit
  - Provide with LON interface card and integrate to new EMS
  - Provide with electronic bypass
  - Reuse existing static pressure control
  - Install motor ground rings as required
  - Provide and install all power and control wiring

Fan No.	Fan HP
AHU-1	15
REF-1	7.5

Exclusions

- Replacement of disconnects, breakers, fuses, wiring
- Any belt, sheave, or heater replacement.

>Equipment, Design and Construction Documentation

Equipment will be identified in submittals provided for approval prior to procurement. Documents will be submitted to the facilities department for their review and comment. Upon approval, these will constitute the construction documents. Upon completion of the construction phase, the documents will be revised as needed to reflect "As-Built" conditions and submitted in multiple for record.

>Impact on Facility Operations and Performance

The new VFDs will provide improved temperature control and significantly reduce electrical energy. VFD's will also enable soft start capability, which will reduce power draw spikes and decrease mechanical damage to equipment.

"Page content is subject to Confidentiality Restrictions"

Appendix for ESM 12: Variable Frequency Drives

I. Energy Savings Calculations

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

City of Bristol, CT	
Energy and Demand Savings Summary	
Measure ID:	**12**
Measure Name:	**Variable Frequency Drives**
Measure Location:	
Engineers:	

Site Name:		**Chippens**	**City_Hall**	**Summary**
Item	Units	Savings	Savings	
Electricity				
Energy On-Peak	kWh	5,695	14,710	20,405
Energy Off-Peak	kWh	19,979	14,522	34,501
Energy Total	kWh	25,674	29,232	54,906
Demand On-Peak, Monthly	kW			0.0
Demand On-Peak, Annual	kW			0.0
Demand Off-Peak, Monthly	kW			0.0
Demand Off-Peak, Annual	kW			0.0
Fossil Fuel				
Natural Gas (NG)	CCF			0
Liquid Propane Gas (LPG)	Gallons			0
Steam	Mlbs			0
Fuel Oil, #2	Gallons			0
Fuel Oil, #4	Gallons			0
Fuel Oil, #6	Gallons			0
Max Daily Demand (Natural Gas)	CCF (Demand)			0
Water				
Water Savings	CF			0
Sewer				
Sewer Savings	CF			0

City of Bristol, CT
City Hall & Annex
Variable Frequency Drives

TMY-3 Weather Data for Hartford, CT								Proposed EMS Schedule and Loads						Existing Fan Usage		Proposed Fan Usage				Savings	
Amb. Temp Bin deg. F	Ave Temp deg. F	M.C.W.B deg. F	M.C. Enthalpy Btu/lbma	01-08 Hours	09-16 Hours	17-24 Hours	Total Bin Hours	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ. Cool/ Heat Load (MBH)	UnOcc. Cool/ Heat Load (MBH)	Peak Cool/Heat Fan Usage (kWh)	Off-Peak Cool/Heat Fan Usage (kWh)	Proposed Occ VFD Load Percentage (%)	Proposed UnOcc VFD Load Percentage (%)	Peak Cool/Heat Fan Usage (kWh)	Off-Peak Cool/Heat Fan Usage (kWh)	HVAC Fan Savings (Peak kWh)	HVAC Fan Savings (Off-Peak kWh)
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
Cooling																					
105 to 110	107.5	0.0	0.0	0	0	0	0	0	0	0	0	2,445	1,301	0	0	100%	100%	0	0	0	0
100 to 105	102.5	0.0	0.0	0	0	0	0	0	0	0	0	2,201	1,170	0	0	100%	100%	0	0	0	0
95 to 100	97.5	75.8	39.4	0	4	0	4	1	0	1	2	1,956	1,040	13	13	100%	100%	13	13	(0)	(0)
90 to 95	92.5	74.9	38.7	0	34	9	43	11	0	8	24	1,712	910	138	136	88%	88%	105	103	33	33
85 to 90	87.5	72.8	36.9	0	105	22	127	31	0	24	72	1,467	780	407	401	75%	75%	221	217	186	184
80 to 85	82.5	69.0	33.5	4	247	105	356	88	0	66	202	1,223	650	1,141	1,125	70%	70%	531	524	610	601
75 to 80	77.5	66.7	31.7	55	243	158	456	112	0	85	258	978	520	1,461	1,441	70%	70%	680	671	781	770
70 to 75	72.5	64.6	30.0	137	208	183	528	130	0	98	299	734	390	1,692	1,668	70%	70%	788	777	904	892
65 to 70	67.5	61.1	27.5	199	231	248	678	167	0	126	384	489	260	2,173	2,142	70%	70%	1,012	997	1,161	1,145
60 to 65	62.5	56.0	24.0	306	300	310	916	226	0	171	519	245	130	2,935	2,895	70%	70%	1,367	1,348	1,569	1,547
Heating																					
55 to 60	57.5	51.2	21.1	270	226	289	785	194	0	146	445	(312)	(25)	2,516	2,481	70%	70%	1,171	1,155	1,344	1,326
50 to 55	52.5	46.7	18.6	291	186	261	738	182	0	138	418	(437)	(109)	2,365	2,332	70%	70%	1,101	1,086	1,264	1,246
45 to 50	47.5	41.8	16.1	210	129	187	526	130	0	98	298	(562)	(194)	1,686	1,662	70%	70%	785	774	901	888
40 to 45	42.5	38.1	14.4	282	188	155	625	154	0	117	354	(687)	(278)	2,003	1,975	70%	70%	932	919	1,070	1,055
35 to 40	37.5	33.1	12.2	288	296	306	890	220	0	166	504	(812)	(362)	2,852	2,812	70%	70%	1,328	1,309	1,524	1,503
30 to 35	32.5	28.5	10.3	252	222	251	725	179	0	135	411	(937)	(446)	2,323	2,291	70%	70%	1,082	1,067	1,242	1,224
25 to 30	27.5	24.1	8.6	182	160	177	519	128	0	97	294	(1,062)	(531)	1,663	1,640	70%	70%	774	764	889	876
20 to 25	22.5	20.3	7.2	231	89	177	497	123	0	93	282	(1,187)	(615)	1,593	1,570	70%	70%	750	738	843	833
15 to 20	17.5	15.5	5.6	135	42	57	234	58	0	44	133	(1,311)	(699)	750	739	78%	73%	440	422	310	317
10 to 15	12.5	10.9	4.1	44	7	24	75	18	0	14	43	(1,436)	(783)	240	237	85%	82%	172	167	68	70
5 to 10	7.5	6.4	2.7	23	3	1	27	7	0	5	15	(1,561)	(867)	87	85	93%	91%	75	73	12	12
0 to 5	2.5	2.4	1.5	11	0	0	11	3	0	2	6	(1,686)	(952)	35	35	100%	100%	36	35	(1)	(1)
-5 to 0	(2.5)	0.0	0.0	0	0	0	0	0	0	0	0	(1,811)	(1,036)	0	0	100%	100%	0	0	0	0
-10 to -5	(7.5)	0.0	0.0	0	0	0	0	0	0	0	0	(1,936)	(1,120)	0	0	100%	100%	0	0	0	0
-15 to -10	(12.5)	0.0	0.0	0	0	0	0	0	0	0	0	(2,061)	(1,204)	0	0	100%	100%	0	0	0	0
-20 to -15	(17.5)	0.0	0.0	0	0	0	0	0	0	0	0	(2,186)	(1,288)	0	0	100%	100%	0	0	0	0
-25 to -20	(22.5)	0.0	0.0	0	0	0	0	0	0	0	0	(2,311)	(1,373)	0	0	100%	100%	0	0	0	0
				2,920	2,920	2,920	8,760	2,161	0	1,634	4,965			28,073	27,681			13,363	13,159	14,710	14,522

Cell Ref.	Comment
A-H	TMY-3 Weather Data for Hartford, CT
I - L	Proposed Operating hours
M	Proposed Occupied Cooling and Heating Loads from EMS
N	Proposed Unoccupied Cooling and Heating Loads from EMS
O	= ([col I] x [col Q] ^P45 + [col J] x P47 x [col R] ^P45) x P44
P	= ([col K] x [col Q] ^P45 + [col L] x P47 x [col R] ^P45) x P44
Q	Estimated VFD Loading based on 100% at design day load and 70% at minimum
R	Estimated VFD Loading based on 100% at design day load and 70% at minimum
S	= ([col I] x [col Q] ^P46 + [col J] x P47 x [col R] ^P46) x P44 ÷ 0.98
T	= ([col K] x [col Q] ^P46 + [col L] x P47 x [col R] ^P46) x P44 ÷ 0.98
U	= ([col O] - [col S])
V	= ([col P] - [col T])

Assumptions:	Value	Unit	CELL	Description
			REF	
Occupied Area	60,053	SF	P43	
Fan Power	13.0	kW	P44	total kW of controlled fans
Exisiting VAV Factor	0.0		P45	Constant Volume
Proposed VAV Factor	2.2		P46	VFD with static pressure control
UnOcc. Fan Cycling	10.0%		P47	% Operating Hours During UnOcc.
Minimum Allowable VFD Speed	70.0%		P48	estimate

City of Bristol, CT
Chippens Hill Middle School
Variable Frequency Drives

TMY-3 Weather Data for Hartford, CT								Proposed EMS Schedule and Loads						Existing Pump Usage		Proposed Pump Usage				Savings	
Amb. Temp Bin deg. F	Ave Temp deg. F	M.C.W.B deg. F	M.C. Enthalpy Btu/lbma	01-08 Hours	09-16 Hours	17-24 Hours	Total Bin Hours	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ. Cool/ Heat Load (MBH)	UnOcc. Cool/ Heat Load (MBH)	Peak Cool/Heat Pump Usage (kWh)	Off-Peak Cool/Heat Pump Usage (kWh)	Proposed Occ VFD Load Percentage (%)	Proposed UnOcc VFD Load Percentage (%)	Peak Cool/Heat Pump Usage (kWh)	Off-Peak Cool/Heat Pump Usage (kWh)	HVAC Pump Savings (Peak kWh)	HVAC Pump Savings (Off-Peak kWh)
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
Cooling																					
105 to 110	107.5	0.0	0.0	0	0	0	0					695	370	0	0	100%	100%	0	0	0	0
100 to 105	102.5	0.0	0.0	0	0	0	0					626	333	0	0	100%	100%	0	0	0	0
95 to 100	97.5	75.8	39.4	0	4	0	4					556	296	0	0	100%	100%	0	0	0	0
90 to 95	92.5	74.9	38.7	0	34	9	43					487	259	0	0	88%	88%	0	0	0	0
85 to 90	87.5	72.8	36.9	0	105	22	127					417	222	0	0	75%	75%	0	0	0	0
80 to 85	82.5	69.0	33.5	4	247	105	356					348	185	0	0	63%	63%	0	0	0	0
75 to 80	77.5	66.7	31.7	55	243	158	456					278	148	0	0	60%	60%	0	0	0	0
70 to 75	72.5	64.6	30.0	137	208	183	528					209	111	0	0	60%	60%	0	0	0	0
65 to 70	67.5	61.1	27.5	199	231	248	678					139	74	0	0	60%	60%	0	0	0	0
60 to 65	62.5	56.0	24.0	306	300	310	916					70	37	0	0	60%	60%	0	0	0	0
Heating																					
55 to 60	57.5	51.2	21.1	270	226	289	785	55	131	97	502	(789)	0	616	1,100	60%	60%	204	365	412	735
50 to 55	52.5	46.7	18.6	291	186	261	738	51	123	92	472	(1,068)	(85)	579	1,034	60%	60%	192	343	387	691
45 to 50	47.5	41.8	16.1	210	129	187	526	37	88	65	336	(1,348)	(256)	512	1,117	60%	60%	170	371	342	747
40 to 45	42.5	38.1	14.4	282	188	155	625	43	105	78	400	(1,627)	(427)	609	1,328	60%	60%	202	440	407	887
35 to 40	37.5	33.1	12.2	288	296	306	890	62	149	110	569	(1,906)	(598)	867	1,891	60%	60%	288	627	579	1,263
30 to 35	32.5	28.5	10.3	252	222	251	725	50	121	90	463	(2,185)	(769)	1,940	6,254	60%	60%	644	715	1,297	5,539
25 to 30	27.5	24.1	8.6	182	160	177	519	36	87	64	332	(2,464)	(940)	1,389	4,477	64%	60%	480	547	909	3,930
20 to 25	22.5	20.3	7.2	231	89	177	497	35	83	62	318	(2,743)	(1,111)	1,330	4,287	71%	62%	500	595	831	3,693
15 to 20	17.5	15.5	5.6	135	42	57	234	16	39	29	150	(3,022)	(1,282)	626	2,019	78%	71%	256	317	370	1,701
10 to 15	12.5	10.9	4.1	44	7	24	75	5	13	9	48	(3,301)	(1,453)	201	647	86%	81%	90	115	111	532
5 to 10	7.5	6.4	2.7	23	3	1	27	2	5	3	17	(3,580)	(1,624)	72	233	93%	90%	35	47	37	186
0 to 5	2.5	2.4	1.5	11	0	0	11	1	2	1	7	(3,859)	(1,795)	29	95	100%	100%	16	21	14	73
-5 to 0	(2.5)	0.0	0.0	0	0	0	0	0	0	0	0	(4,139)	(1,966)	0	0	100%	100%	0	0	0	0
-10 to -5	(7.5)	0.0	0.0	0	0	0	0	0	0	0	0	(4,418)	(2,137)	0	0	100%	100%	0	0	0	0
-15 to -10	(12.5)	0.0	0.0	0	0	0	0	0	0	0	0	(4,697)	(2,308)	0	0	100%	100%	0	0	0	0
-20 to -15	(17.5)	0.0	0.0	0	0	0	0	0	0	0	0	(4,976)	(2,479)	0	0	100%	100%	0	0	0	0
-25 to -20	(22.5)	0.0	0.0	0	0	0	0	0	0	0	0	(5,255)	(2,650)	0	0	100%	100%	0	0	0	0
				2,920	2,920	2,920	8,760	393	946	701	3,613			8,772	24,483			3,076	4,504	5,695	19,979

Cell Ref.	Comment
A-H	TMY-3 Weather Data for Hartford, CT
I - L	Proposed Operating hours
M	Proposed Occupied Cooling and Heating Loads from EMS
N	Proposed Unoccupied Cooling and Heating Loads from EMS
O	= ([col I] + [col J] x P46) x P44
P	= ([col K] + [col L] x P46) x P44
Q	Estimated VFD Loading based on 100% at design day load and 60% at minimum
R	Estimated VFD Loading based on 100% at design day load and 60% at minimum
S	= ([col I] x P44 x [col Q] ^2.2 / 0.98 + ([col J] x P44 x P46 x [col R] ^2.2 / 0.98
T	= ([col K] x P44 x [col Q] ^2.2 / 0.98 + ([col L] x P44 x P46 x [col R] ^2.2 / 0.98
U	= ([col O] - [col S])
V	= ([col P] - [col T])

Assumptions:	Value	Unit	CELL	Description
			REF	
Occupied Area	166,855	SF	**P43**	
Pump Power	11.3	kW	**P44**	total kW of controlled pumps
Minimum Allowable VFD Speed	60.0%		**P45**	estimate
UnOcc. Pump Cycling	10.0%		**P46**	% Operating Hours During UnOcc.

Appendix for ESM 12: Variable Frequency Drives

II. Manufacturer Specification Sheets

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

Variable frequency drive
Product overview

One source for engineering, manufacturing and support









EATON
Powering Business Worldwide

A drive for any application

Your application might call for an ultra-compact solution, clean power or future configurability.

Whether it is a standard product from the catalog or a custom-enclosed variable frequency drive (VFD) solution, Eaton delivers. Eaton drives are designed for industrial, HVAC, water/wastewater treatment, machinery OEM and other application demands.

Whether designing a new industrial complex, renovating an existing structure or developing a new machine, Eaton has the right product for your application.

Product selection matrix



Application	DC1	DA1	M-Max	H-Max	SVX	SPX	LCX	SPI/SPA	CPX	CFX
Single-phase input	Yes	Yes	Yes	—	Yes	Yes	—	—	—	—
Maximum 230V hp	5	7.5	15	125	125	125	—	—	200	100
Maximum 480V hp	15	15	25	250	250	2200	3200	2400	800	400
Maximum 575V hp	—	—	7.5	—	200	2300	2800	2200	800	400
Micro drive / MOEM	● ▲	● ▲	● ▲							
HVAC drive	● ▲			● ■						
General purpose					● ■	● ■				
High performance		● ▲				● ■	● ◆	● ◆	■	■
Harmonic mitigating									■	■

● = Standard open drive

■ = Standard enclosed drive

▲ = Enclosed—consult Control Power Flex Center (Parma, OH)

◆ = Enclosed—consult Enclosed Drives Plant (Watertown, WI)

Drive	Applications	Description	Offering/Range		Benefits	Acceptance	Communication Options	Cross-Reference	Enclosure
DC1 	• General-purpose microdrive • Machinery OEM drive	The DC1 VFD is a compact VFD with only 14 basic parameters, SmartWire-DT connectivity and outstanding ease of mounting and installation. The DC1 is perfect for quick commissioning and is ideal for panel builders. This drive supports single-phase motor applications, and detachable terminal blocks make control wiring much easier.	**Single-phase to single-phase** 115V to 0.75 hp 230V to 1.5 hp **Single-phase to three-phase** 115V to 1.5 hp 230V to 5 hp	**Three-phase to three-phase** 230V to 5 hp 480V to 15 hp	**Ease of use**: Only 14 standard parameters for startup—quick commissioning, parameter copy function from drive to drive and PC connectivity via COM-STICK, integrated info card **Space-saving design**: DIN rail mountable, side-by-side mounting, contactor style wiring **Efficiency**: Temperature controlled fan **Rugged and reliable**: Ambient temperature –10°C to +50°C without any derating, high protection degree classes: IP66 for decentralized applications	UL c UL CE RoHS COMPLIANT	• Modbus RTU • CANopen® • SmartWire™	• ABB (ACS 150, 355, 550) • Danfoss (Micro Drive, VLT 2800) • Hitachi (WJ200) • Yaskawa (J1000, V1000) • Lenze (SMD, 8400 BaseLine/StateLine) • Siemens (Micromaster 420, G110, Sinamics G120C) • WEG (CFW-10, CFW-08, CFW-09)	• Open IP20, IP66
DA1 	• High-performance microdrive • Machinery OEM drive	The DA1 VFD is the perfect match for demanding OEM applications. High-performance processor, safe torque off, multiple fieldbus protocols including SmartWire-DT, sensorless vector control and the possibility to operate permanent magnet motors are sure to leave a lasting impression. In addition, detachable terminal blocks make control wiring much easier.	**Single-phase to three-phase** 230V to 3 hp	**Three-phase to three-phase** 230V to 7.5 hp 480V to 15 hp	**Ease of use**: Only 14 standard parameters for startup—quick commissioning, parameter copy function from drive to drive and PC connectivity via COM-STICK, integrated info card **Space-saving design**: DIN rail mountable, side-by-side mounting, contactor style wiring **Efficiency**: Temperature controlled fan **Rugged and reliable**: Ambient temperature –10°C to +50°C without any derating, high protection degree classes: IP66 for decentralized applications, STO, standard brake chopper circuit and RFI	UL c UL CE RoHS COMPLIANT	• DC1 Communications+ • BACnet/IP® • PROFIBUS DP • DeviceNet • EtherNet/IP	• ABB (ACS 150, 355, 550) • Danfoss (Micro Drive, VLT 2800) • Yaskawa (J1000, V1000) • Schneider (ATV 312, 32) • Siemens (Micromaster 420, G110, Sinamics G120C) • Rockwell/Allen-Bradley (PowerFlex Series 4, 40)	• Open IP20, IP66
M-Max 	• General-purpose microdrive	The M-Max™ VFD is a compact microdrive with a broad power range, perfectly suited for machinery applications in many industries: food and beverage, HVAC, packaging, pumping, general machine and more.	**Single-phase to three-phase** 115V to 1.5 hp 230V to 3 hp	**Three-phase to three-phase** 230V to 15 hp 480V to 25 hp 575V to 7.5 hp	**Ease of use**: Startup Wizard, copy/paste tool, local/remote button, programmable multi-function inputs **Space-saving design**: DIN rail mountable, side-by-side mounting, numerous orientations, small footprint **Efficiency**: Average 30% less loss wattage, temperature controlled fan **Rugged and reliable**: High overload rating (CT), conformal coated circuit boards, NEMA® 1 enclosure option, EMC filters, brake chopper circuit, 50°C rating, temperature controlled fan	UL c UL CE IEC RoHS COMPLIANT	• Modbus RTU • PROFIBUS DP • DeviceNet	• ABB (ACS Series 150, 155) • Danfoss (VLT Micro Drive) • Lenze/AC Tech (SC Series, SM Series) • Rockwell/Allen-Bradley (PowerFlex Series 4, 40) • Schneider/Square D (Altivar® Series 12, 312) • Siemens (Micromaster 420)	• Open IP20, IP21 • Open NEMA 1
H-Max 	• HVAC drive	The H-Max™ VFD is specifically designed to meet the needs of the HVAC industry by offering leading HVAC software and hardware features. With an industry-leading energy efficiency algorithm, high short-circuit current rating and robust design, it offers customers increased efficiency, safety and reliability.	—	**Three-phase to three-phase** 230V to 125 hp 480V to 250 hp	**Ease of use**: Startup Wizard, graphic display and keypad, menu-based navigation, copy/paste tool, local/remote button, programmable multi-function I/O, built-in communication protocols (BACnet, Modbus®, N2) **Space-saving design**: Compact design, open NEMA 12 option, onboard I/O expansion provisions **Efficiency**: "Active Energy Control," offering 2–10% energy savings over competition **Rugged and reliable**: 5% DC choke with MOV protection, conformal coated circuit boards, EMC filters	UL c UL CE OSHPD	• Modbus RTU/TCP • BACnet MS/IP • LonWorks®	• ABB (ACH550) • Danfoss (FC-102) • Yaskawa (E7) • Siemens (BT300) • Vacon (100 HVAC)	• Open IP21, IP54 • Open NEMA 1, 12 • Enclosed NEMA 1, 12, 3R • IntelliDisconnect (breaker included) • IntelliPass (bypass included)
SVX 	• General-purpose drive	The SVX VFD is a general purpose, compact, modular solution for variable speed applications and offers a variety of features and application capabilities.	**Single-phase to three-phase** 230V to 40 hp 480V to 60 hp	**Three-phase to three-phase** 230V to 125 hp 480V to 250 hp 575V to 200 hp	**Ease of use**: Startup Wizard, seven built-in applications, local/remote button, modular design, text display **Space-saving design**: Compact design, open NEMA 12 option, onboard I/O expansion provisions **Efficiency**: Built-in 3% line reactor and EMI RFI filter H standard **Rugged and reliable**: High overload (CT) and low overload (VT) rated, robust time-proven design, durable metal power section, brake chopper circuit	UL c UL CE IEC	• EtherNet/IP • Modbus RTU/TCP • PROFIBUS DP • DeviceNet • CANopen • LonWorks	• ABB (ACS310, ACS550) • GE (AF-650) • Rockwell/Allen-Bradley (PowerFlex 70, 753) • Schneider/Square D (Altivar 61, 71) • Siemens (Micromaster 430, Sinamics G120) • Vacon (NXL) • Yaskawa (P1000, A1000)	• Open IP21, IP54 • Open NEMA 1, 12 • Enclosed NEMA 1, 12, 3R • AGSVX (agriculture config) • Pump panel (pump config) • Consult Eaton for NEMA 4X
SPX 	• High-performance drive	In applications where reliability and quality are essential for high performance, the SPX VFD is the ideal choice. They are equipped with high processing power, capable of closed loop feedback, safe torque off, permanent magnet motor operation, and very precise motor control.	—	**Three-phase to three-phase** 230V to 100 hp 480V to 2200 hp 575V to 2300 hp	**Ease of use**: Startup Wizard, seven built-in applications, customizable software, advanced capabilities and inputs, local/remote button, modular design, text display **Space-saving design**: Compact design, open NEMA 12 option, onboard I/O expansion provisions **Efficiency**: Built-in 3% line reactor and EMI RFI filter H standard, increased microprocessing power **Rugged and reliable**: High overload (CT) and low overload (VT) rated, robust time-proven design, durable metal power section, brake chopper circuit	UL c UL CE IEC	• EtherNet/IP • Modbus RTU/TCP • PROFIBUS DP • DeviceNet • CANopen • LonWorks	• ABB (ACS800) • Rockwell/Allen-Bradley (PowerFlex 700, 755) • Schneider/Square D (Altivar 71) • Siemens (Micromaster 440, Sinamics G130, G180, S120) • Vacon (NXS) • Yaskawa (A1000)	• Open IP20, IP21, IP54 • Open NEMA 1, 12 • Enclosed NEMA 1, 12, 3R • Consult Eaton for NEMA 4X
LCX 	• Liquid cooled drive	The LCX VFD is well suited for locations when air-cooling would be difficult or expensive or when space is at a premium. These extremely compact drives are suitable for ships, mines and heavy industry.	—	**Three-phase to three-phase** 480V to 3200 hp 575V to 2800 hp	**Ease of use**: Startup Wizard, customizable software, advanced capabilities and inputs, local/remote button, modular design, text display **Space-saving design**: Compact space-saving design especially beneficial for NEMA 4X applications **Efficiency**: Advanced low heat transfer cooling system, increased microprocessing power **Rugged and reliable**: Same reliable control module and operating system as SPX	UL c UL CE IEC	• EtherNet/IP • Modbus RTU/TCP • PROFIBUS DP • DeviceNet • CANopen • LonWorks	• ABB (ACS8000-07LC) • Rockwell/Allen-Bradley (PowerFlex 700L) • Schneider/Square D (Altivar 61Q) • Siemens (Sinamics G150) • Vacon (NXP)	• Open IP00
SPI/SPA 	• Common DC bus drive • Active front end drive • Regenerative drive	Eaton offers a comprehensive range of common DC bus VFD products. This includes a number of front-end units and inverter units in the entire power range. Common DC bus drives are used in a multitude of applications and combinations. Drives that are braking can transfer the energy directly to the drives in a motoring mode.	—	**Three-phase to three-phase** 480V to 2400 hp 575V to 2200 hp	**Ease of use**: Startup Wizard, customizable software, advanced capabilities and inputs, local/remote button, modular design, text display **Space-saving design**: Compact modular expandable design **Efficiency**: Bidirectional/regenerative energy savings capabilities **Rugged and reliable**: Same reliable control module and operating system as SPX, shared components for inverter and active front end for reduced spare	UL c UL CE IEC	• EtherNet/IP • Modbus RTU/TCP • PROFIBUS DP • DeviceNet • CANopen • LonWorks	• ABB (ACS8000-U11) • Emerson (Unidrive SP) • Rockwell/Allen-Bradley (PowerFlex 20, 700AFE) • Schneider/Square D (Altivar ATV32, LXM32) • Siemens (Sinamics S120) • Vacon (NXP) • Yaskawa (F7)	• Open IP00, IP21 • Open NEMA 1
CPX 	• 18-pulse drive	The CPX VFD uses advanced 18-pulse clean power technology that significantly reduces line harmonics at the drive input terminals and is designed to exceed IEEE 519-1992 requirements. Delivering true power factor and reducing harmonic distortion prevents upstream transformer overheating and overloading of breakers and feeders, enabling the application of variable frequency drives on generators and other high-impedance power systems.	—	**Three-phase to three-phase** 230V to 200 hp 480V to 800 hp 575V to 800 hp (Consult Eaton for larger hp)	**Ease of use**: Uses the core SVX/SPX drive platform; therefore, sharing many of the drive-related characteristics of the component drive including Startup Wizard and built-in applications **Space-saving design**: Designed and engineered to optimize space, including flange mounting the drive with the heat sink external to the enclosure. Smallest footprint in the industry **Efficiency**: Designed and tested to provide maximum efficiency through best-in-class components **Rugged and reliable**: Proven design built on 10+ years of experience in 18-pulse engineering	UL	• EtherNet/IP • Modbus RTU/TCP • PROFIBUS DP • DeviceNet • CANopen • LonWorks	• ABB • Rockwell/Allen-Bradley • Schneider/Square D • Yaskawa	• Enclosed NEMA 1, 12 and 3R • Consult Eaton for NEMA 4X
CFX 	• Filtered drive	The CFX VFD uses a tuned passive filter to significantly reduce the line harmonics generated by a standard 6-pulse drive. Designed for small to mid-sized drive applications, the CFX, in conjunction with the CPX, offers the user a tiered approach to harmonic mitigation.	—	**Three-phase to three-phase** 230V to 100 hp 480V to 400 hp 575V to 400 hp	**Ease of use**: Uses the core SVX/SPX drive platform, Startup Wizard, built-in applications **Space-saving design**: Designed and engineered to optimize space including flange mounting the drive with the heat sink external to the enclosure. Smallest footprint in the industry **Efficiency**: Designed and tested to provide maximum efficiency through best-in-class components **Rugged and reliable**: Tested and proven solution built to meeting commercial and industrial applications. Engineered solutions to further protect filter and drive available	UL	• EtherNet/IP • Modbus RTU/TCP • PROFIBUS DP • DeviceNet • CANopen • LonWorks	• ABB • Rockwell/Allen-Bradley • Schneider/Square D • Yaskawa	• Enclosed NEMA 1, 12 and 3R • Consult Eaton for NEMA 4X
SC 9000 	• Medium voltage drive	The Ampgard® SC 9000™ medium voltage VFD combines innovative technology with the reliable design and construction of Eaton Ampgard products. Designed for use with induction or synchronous motors, the Ampgard SC 9000 delivers maximum benefits while being the smallest medium voltage drive in the industry.	—	**Three-phase to three-phase** 2400 to 4160V Up to 6000 hp	**Ease of use**: Drive can be integrated into Ampgard motor control products lineup connected by common bus, common control board and keypad with low voltage product offering **Space-saving design**: Smallest footprint in the industry, common bus connection to other motor control products for ease of installation **Efficiency**: Integrated 24-pulse converter, three-level inverter topology **Rugged and reliable**: Full load burn-in testing completed on every drive, time-proven Ampgard motor control assembly design, encapsulated drawout inverted to reduce risk of environmental contamination	UL	• EtherNet/IP • Modbus RTU/TCP • PROFIBUS DP • DeviceNet • CANopen • LonWorks	• Siemens (ROBICON Perfect Harmony™) • Rockwell/Allen-Bradley (PowerFlex 7000) • Toshiba (T300MVi) • ABB (ACS 1000)	• Enclosed NEMA 1

Selection considerations

- *What is your system application?*
- *Is your load constant torque or variable torque?*
- *What are your voltage and hp requirements?*
- *What is the motor Full Load Amps (FLA)?*
- *Do you need an open or enclosed product?*
- *What NEMA enclosure rating do you need?*
- *Do you need a main breaker or a bypass?*
- *Do you need any accessories or communication cards?*

Key contacts

Contact	Phone	Email
Technical support	(877) 386-2273 x2 x6 x3	TRCDrivesTechSupport@Eaton.com
Pre-sale support	(877) 386-2273 x2 x6 x2	PreSaleVFD@Eaton.com
Post-sale support	(877) 386-2273 x2 x6 x3	VFDAftermarketEG@Eaton.com

Online resources

Resource	Website
Eaton drives	Eaton.com/Drives
Eaton engineer services	Eaton.com/EESS
Eaton systems integrators	Eaton.com/SI
Eaton CAD drawings	Eaton.com/Drawings
Eaton software downloads	Eaton.com/Software
Eaton Europe	Eaton.eu/Electrical
Eaton Asia	Eaton.com.cn

Warranty process

Required information: product serial number, original general order number, customer site location, contact information and detailed description of the issue.

1. Call Post-Sale Support for troubleshooting assistance at (877) 386-2273 x2 x6 x3.
2. Contact EatonCare or CORE for warranty parts and service processing at (877) 386-2273 x4 x2.
3. Return replaced components per the instructions provided on the return paperwork.

PC software

Software
9000XDrive and 9000XLoad—Used with SVX, SPX, LCX, SPI, SPA and all enclosed drives using these units
MaxConnect and MaxLoader—Used with M-Max and H-Max
DrivesConnect—Used with DA1 and DC1

Notes:

Download at Eaton.com/software → Adjustable Frequency Drives.

Download at Eaton.com/drives → Software Downloads.

Online training

Eaton 101 Series—Low Voltage Motor Control
http://www.eaton.com/Eaton/ProductsServices/Electrical/Support/Training/101BasicsSeries/index.html

M-Max VFD Demo Simulator—Online M-Max Demo Simulation
Online M-Max training simulator that reviews the keypad, display, menu navigation, basic parameter changes and the operation of the demo cases (www.eaton.com/m-maxdemo)

Classroom training

Certification and Service Training
Commissioner Certification Training (SVX, SPX, H-Max, CPX, CFX)
Service Provider Training (SVX, SPX, CPX, CFX, HVX)

Note:

Eaton.com/drives → Aftermarket → Training and Tools.

Calculators

Harmonics Estimator—Estimate Total Harmonic Distortion (THD) of System
By having the transformer information and the one-line diagrams, a harmonics analysis can be quickly put together to ensure the system will meet requirements set by IEEE 519. Drive configurations can quickly be changed, allowing engineers to provide the most cost-effective solution (www.eaton.com/drives → Software Downloads → Register for Harmonics Calculator)

Energy Savings Estimator—Estimate ROI for System
The program creates an Energy Savings Estimation Report that details yearly energy savings, reduction in CO_2 emissions and estimated payback time by analyzing system configuration, total installation costs and duty cycle (www.eaton.com/drives → Software Downloads → Register for Energy Savings Estimator)

Continue to learn more about Eaton drives, enclosed VFD offering and services.

Please visit us at Eaton.com/drives

Eaton
1000 Eaton Boulevard
Cleveland, OH 44122
United States
Eaton.com

© 2013 Eaton
All Rights Reserved
Printed in USA
Publication No. BR040002EN / Z14462
November 2013

Powering Business Worldwide

Eaton is a registered trademark.

All other trademarks are property of their respective owners.

BT300 HVAC Drives



Figure 1. BT300 HVAC Drive without and with Integral Disconnect.

Description

Siemens Industry's BT300 is designed specifically for the demands of today's HVAC systems. Increased focus on energy efficiency of variable flow systems has increased the need for easy-to-use and highly reliable variable frequency drives that reduce the cost of installation and maintenance while maximizing energy savings.

The BT300 comes standard with unique and industry-leading features:

- Motor Switch Ride Through – during maintenance the motor maintenance switch can be opened and closed without stopping or tripping the drive
- Thin Film Capacitors – eliminate the need to condition or reform the capacitors before applying power
- View/Monitor nine parameters at one time – user selectable, users determine the parameters for their applications
- Smallest Type 12 footprint on the market – lower shipping cost and easy installation

Designed for HVAC

HVAC demands are unique to other drive applications. The BT300 is singularly focused on the needs of HVAC variable flow systems:

- Built-in wizards for start-up and easy setup of advanced functions
  - PID Start-up Wizard
  - Multi-pump Wizard
  - Fire Mode Wizard
- Integrated harmonic filters reducing noise and interference eliminating the need for additional filters and reactors.
- Internal reactors equivalent to 5% input impedance.
- BT300 Thin Film Capacitors do not require conditioning. Immediate drive replacement is possible.
- Standard Integration Protocols (APOGEE® P1, BACnet, Modbus, LON (optional), Metasys N2)
- Two built-in PID controllers for fast and accurate process control
- Built-in fire mode controller
- Energy Savings with > 97.5% efficiency
- Optimized cooling fans
- UL Type 1 and Type 12 – Same Size
- 208V to 240V 1 HP to 125 HP
- 380V to 480V 1.5 HP to 250 HP
- Optional integrated drive disconnect
- Advanced I/O expansion capability built into the drive
- One common interface throughout all power ranges
- Intuitive graphical keypad with multilingual display.

Ease of Use

The BT300 drives are easy to use, easy to understand and easy to program. This means installed cost and maintenance savings. Information you want for your specific operation:

- Built-in Help Menu – explains each parameter
- Built-in Maintenance Manual - shows possible causes and suggested remedies
- Nine user-selected values can be defined and monitored at one time – providing you with all the information you need at a glance
- Embedded Ethernet and RS-485 - No additional hardware or cost for Ethernet. Standard HVAC protocols out-of-the-box.
  - APOGEE P1
  - BACnet IP
  - BACnet MS/TP
  - Modbus RTU
  - Modbus TCP
  - Metasys N2

World-class Standard of Quality

Siemens Industry's VFDs are designed to operate in all types of power situations or demanding environments. The BT300's reliability is a result of extensive testing from design to deployment. This testing includes highly accelerated stress testing in extreme temperatures, vibration, and humidity as well as current and voltage variations. Not only will the BT300 withstand most power situations and demanding environmental conditions, it will provide confidence and peace of mind knowing that it will not fail, ensuring a long, trouble-free installation.

Investment Protection

The BT300 supports Siemens Industry's long-standing, industry-leading backward compatibility tradition. The BT300 HVAC Drive is backward compatible to SED2 installations. A migration kit to mount a BT300 Drive in place of an SED2 to support the existing conventional or electronic bypass fail is an ideal solution to moving your technology forward at the lowest possible cost. The SED2 to BT300 Migration Kits provide you with all the components necessary to mount your BT300 quickly and easily in various locations within your facility.

Environmentally Responsible

The BT300 saves energy, is environmentally safe and RoHS Compliant. All BT300s are constructed with lead-free circuit boards and produce no hazardous waste. They use the latest technologies for insulated-gate bipolar transistors (IGBT) and power capacitors. The thin-film power capacitors do not contain toxic electrolytes; therefore, the BT300 capacitors will not dry out. There is no need to “wake up” or condition the capacitors before installing. Your BT300 is safe to connect even after years of storage.

The BT300 IGBT design results in lower heat losses and lower operating temperatures. It weighs 40% less than competitors' models decreasing the cost of shipping and allowing for easier installation. An average BT300 generates 68% to 125% fewer CO2 emissions than heavier competitors' drives during shipping.

Product Numbers

Example Product Numbers																	
	(1)	B	T	3	0	0	-	0	0	1	X	2	-	0	1	X	
	(2)	B	T	3	0	0	-	0	0	1	5	4	-	1	2	D	L

Model	
BT300	VFD only
Separator	
HP	
1, 1.5, 2, 3, 5, 7.5, 10,15	
20, 25, 30, 40, 50, 60, 75	
100, 125, 150, 200, 250	
X	No fraction HP
5	1/2 HP
Voltage	
2	200 to 240
4	380 to 480
Separator	
NEMA Enclosure	
01	Type 1
12	Type 12
Type	
X	Drive only
D	Integral Disconnect Switch (available in Type 12 only)
Options	
L	LON card installed

Example (1) = 1 HP, 208V Drive in Type 1 enclosure

(2) = 1.5 HP, 480V Drive in Type 12 enclosure with an integral disconnect switch and LON card.

Frame Sizes and Power Ranges (BT300 Type 1 and Type 12)

Voltage	KW	0.75	1.1	1.5	2.2	4	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110	132	160
	HP	1	1.5	2	3	5	7.5	10	15	20	25	30	40	50	60	75	100	125	150	200	250
208V	Frame Size	4				5			6		7			8			9				
480V	Frame Size		4				5			6			7				8			9	

Specifications

Table 1. Drive Specifications.

Drive Specifications	Description
Input voltage and power ranges (3-phase)	208V to 240V -10% to +10% 1 HP to 125 HP (0.75 kW to 90 kW) 380V to 480V -10% to +10% 1.5 HP to 250 HP (1.1 kW to 160 kW)
Input frequency	45 Hz to 66 Hz
Output frequency	0 Hz to 320 Hz
Frequency resolution	0.01 Hz
Efficiency	>97.5%
Overload Capacity	1.1 × Nominal rated output current 110% for 1 minute/10 minutes
Switching Frequency	1.5K to 10K Hz; Automatic switching frequency de-rating in case of overheating
Short Circuit Withstand Rating	100,000 AIC
Frequency reference Analog Input	Resolution 0.01 Hz Resolution 0.1% (10-bit)
Field weakening point	8 to 320 Hz
Acceleration time	0.1 to 3000 seconds
Deceleration time	0.1 to 3000 seconds
Ambient Operating Temperature	-14° F (-10°C) no frost to 104°F (40°C) without de-rating and 131°F (55°C) with de-rating
Storage Temperature	-40°F (-40°C) to 158°F (70°C)
Relative Humidity	0 to 95% RH, non-condensing, non-corrosive
Air Quality Chemical Vapors Mechanical Particles	IEC 60068-2-60 IEC 60721-3-3, unit in operation, class 3C3 IEC 60721-3-3, unit in operation, class 3S2
Altitude	100% load capacity (no de-rating) up to 3,280 ft (1,000 m) 1% de-rating for each 328 ft (100 m) above 3,28 ft (1,000 m) Maximum altitude 14,763 ft (4,500 m)
Vibration	IEC 61800-5-1 and IEC 60068-2-6
Shock	IEC 61800-5-1 and IEC 60068-2-27
Enclosures	UL Type 1, UL Type 12
EMC Immunity	Fulfills IEC 61800-3, first and second environment
EMC Emissions	EN61800-3C2
Average Noise level (cooling fan) sound level in dB(A)	FS4: 65; FS5: 70; FS6 and FS7: 77 FR8: 86; FR9: 87
Agency Approvals	UL 508C; UL, cUL
Conformity	CE, RoHS compliant
Analog Inputs	2: voltage or current (0 to 10 Vdc, 0/4 to 20 mA)
Analog Output	1: selectable voltage or current
Digital Inputs	6: programmable and isolated
Relay Outputs	2: Form C 1: Normally Open
Auxiliary input voltage	24 Vdc +/- 10% 250 mA maximum
Auxiliary output voltage	24 Vdc +/- 10% 250 mA maximum, total of both outputs
Control method	Linear, parabolic and programmable V/f; and flux current control low-power mode
PWM frequency	2K Hz to 16K Hz (adjustable in 2k Hz increments)
Fixed frequencies	15 programmable
Skip frequency bands	3 programmable
Serial Interface Embedded Resident Protocols	RS485 and Ethernet APOGEE P1, BACnet IP; BACnet MS/TP, Modbus RTU, Modbus TCP, Metasys N2
Protection features	Under-voltage trip limit, Over-voltage trip limit, Ground fault protection, Mains supervision; Motor phase supervision; Over-current protection; Unit over-temperature protection; Motor overload protection; Motor stall protection; Motor underload protection; Short-circuit protection of +24V and +10V reference voltages.

Specifications, Continued

Table 2. Output Ratings.

Voltage (±10%)	Description			Output Rating	Output Rating	Rated Continuous Current	Frame Size
	UL Type 1	UL Type 12	UL Type 12 with Drive Disconnect	HP	kW		
208V (3-Phase)	BT300-001X2-01X	BT300-001X2-12X	BT300-001X2-12D	1.0	0.75	4.8	FS4
	BT300-00152-01X	BT300-00152-12X	BT300-00152-12D	1.5	1.1	6.7	FS4
	BT300-002X2-01X	BT300-002X2-12X	BT300-002X2-12D	2.0	1.5	8.0	FS4
	BT300-003X2-01X	BT300-003X2-12X	BT300-003X2-12D	3.0	2.2	11.0	FS4
	BT300-005X2-01X	BT300-005X2-12X	BT300-005X2-12D	5.0	3.0	18.0	FS5
	BT300-00752-01X	BT300-00752-12X	BT300-00752-12D	7.5	5.5	24.0	FS5
	BT300-010X2-01X	BT300-010X2-12X	BT300-010X2-12D	10.0	7.5	31.0	FS5
	BT300-015X2-01X	BT300-015X2-12X	BT300-015X2-12D	15.0	11.0	48.0	FS6
	BT300-020X2-01X	BT300-020X2-12X	BT300-020X2-12D	20.0	15.0	62.0	FS6
	BT300-025X2-01X	BT300-025X2-12X	BT300-025X2-12D	25.0	18.5	75.0	FS7
	BT300-030X2-01X	BT300-030X2-12X	BT300-030X2-12D	30.0	22.0	88.0	FS7
	BT300-040X2-01X	BT300-040X2-12X	BT300-040X2-12D	40.0	30.0	105.0	FS7
	BT300-050X2-01X	BT300-050X2-12X	—	50.0	37.0	140.0	FS8
	BT300-060X2-01X	BT300-060X2-12X	—	60.0	45.0	170.0	FS8
230V (3-Phase)	BT300-075X2-01X	BT300-075X2-12X	—	75.0	55.0	205.0	FS8
	BT300-100X2-01X	BT300-100X2-12X	—	100.0	75.0	261.0	FS9
	BT300-125X2-01X	BT300-125X2-12X	—	125.0	90.0	310.0	FS9
380V to 480V (3-Phase)	BT300-00154-01X	BT300-00154-12X	BT300-00154-12D	1.5	1.1	3.7	FS4
	BT300-002X4-01X	BT300-002X4-12X	BT300-002X4-12D	2.0	1.5	5.3	FS4
	BT300-003X4-01X	BT300-003X4-12X	BT300-003X4-12D	3.0	2.2	6.2	FS4
	BT300-005X4-01X	BT300-005X4-12X	BT300-005X4-12D	5.0	3.0	10.6	FS4
	BT300-00754-01X	BT300-00754-12X	BT300-00754-12D	7.5	5.5	13.2	FS4
	BT300-010X4-01X	BT300-010X4-12X	BT300-010X4-12D	10.0	7.5	16.0	FS5
	BT300-015X4-01X	BT300-015X4-12X	BT300-015X4-12D	15.0	11.0	23.0	FS5
	BT300-020X4-01X	BT300-020X4-12X	BT300-020X4-12D	20.0	15.0	31.0	FS5
	BT300-025X4-01X	BT300-025X4-12X	BT300-025X4-12D	25.0	18.5	38.0	FS6
	BT300-030X4-01X	BT300-030X4-12X	BT300-030X4-12D	30.0	22.0	46.0	FS6
	BT300-040X4-01X	BT300-040X4-12X	BT300-040X4-12D	40.0	30.0	61.0	FS6
	BT300-050X4-01X	BT300-050X4-12X	BT300-050X4-12D	50.0	37.0	72.0	FS7
	BT300-060X4-01X	BT300-060X4-12X	BT300-060X4-12D	60.0	45.0	87.0	FS7
	BT300-075X4-01X	BT300-075X4-12X	BT300-075X4-12D	75.0	55.0	105.0	FS7
	BT300-100X4-01X	BT300-100X4-12X	—	100.0	75.0	140.0	FS8
	BT300-125X4-01X	BT300-125X4-12X	—	125.0	90.0	170.0	FS8
	BT300-150X4-01X	BT300-150X4-12X	—	150.0	110.0	205.0	FS8
	BT300-200X4-01X	BT300-200X4-12X	—	200.0	132.0	261.0	FS9
	BT300-250X4-01X	BT300-250X4-12X	—	250.0	160.0	310.0	FS9

Accessories

Flange Mounting Kits:

- ❑ BT300-FLG-FS4 Flange Mounting Kit for FS4
- ❑ BT300-FLG-FS5 Flange Mounting Kit for FS5
- ❑ BT300-FLG-FS6 Flange Mounting Kit for FS6
- ❑ BT300-FLG-FS7 Flange Mounting Kit for FS7

Option Boards (all boards are varnished):

- ❑ BT300-OPT-B1-V 6 × DI/DO, each I/O can be individually programmable as input or output
- ❑ BT300-OPT-B2-V 2 × Relay output & Thermistor
- ❑ BT300-OPT-B4-V 1 × Analog Input, 2 × Analog Output (isolated)
- ❑ BT300-OPT-B5-V 3 × Relay Output
- ❑ BT300-OPT-B9-V 1 × Relay Output, 5 × DI (42 to 240 Vac)
- ❑ BT300-OPT-BH-V Passive Input Sensor Card
- ❑ BT300-OPT-BF-V 1 x AO, 1 x DO, 1 x RO

Door Mounting Kits:

- ❑ BT300-PNL-N12 Door Panel Kit, drive side IP54 protected, cable length 9.8 ft (3 m)
- ❑ BT300-HHPANEL Hand Held Panel Kit

LON Interface Option Board

- ❑ BT300-OPT-C4-V

Miscellaneous Accessories:

- ❑ BT300-CABLE PC cable for PC Tool, USB to RS-485, cable length 9.8 ft (3 m)
- ❑ BT300-BATTERY Battery package for (5 pcs) for real time clock

SED2 to BT300 Migration Kits (Converts your SED2 bypass into a BT300 bypass)

- ❑ SED2-BT300-AB-4 SED2 208V, 0.5 to 3 HP; 480V, 0.5 to 5 HP
- ❑ SED2-BT300-C-4 480V, 7.5 HP
- ❑ SED2-BT300-C-5 SED2 208V, 5 to 10 HP; 480V 10 to 20 HP
- ❑ SED2-BT300-D-6 SED2 208V, 15 to 20 HP; 480V, 25 to 40 HP
- ❑ SED2-BT300-D-7 SED2 208V, 25 HP
- ❑ SED2-BT300-E-7 SED2 208V, 30 HP 480V, 50 to 60 HP
- ❑ SED2-BT300-F-7 SED2 208V, 40 HP SED2 480V, 75 HP
- ❑ SED2-BT300-F-8 SED2 208V, 50 to 60 HP; 480V, 100 to 125 HP
- ❑ SED2-BT300-C-R SED2 FSC to BT300 Remote Mount
- ❑ SED2-BT300-DE-R SED2 FSD and FSE to BT300 Remote Mount

Dimensions

Table 3. Overall Dimensions for BT300 Type 1 and Type 12 in Inches (Millimeters).

Frame Size	Height	Width	Depth (without Disconnect)	Depth (with Disconnect)	Weight lb (kg)
FS4	12.9 (328)	5.0 (128)	7.5 (190)	10.6 (270)	13.0 (6)
FS5	16.5 (419)	5.7 (144)	8.4 (214)	11.6 (294)	22.0 (10)
FS6	21.9 (557)	7.7 (195)	9.0 (229)	11.9 (302)	44.0 (20)
FS7	26.0 (660)	9.3 (237)	10.2 (259)	13.1 (332)	83.0 (37.5)
FS8	38.0 (966)	11.4 (290)	13.5 (343)	N/A	145.5 (66)
FS9	45.3 (1150)	18.9 (480)	14.4 (365)	N/A	238.0 (108)

Dimensions, Continued

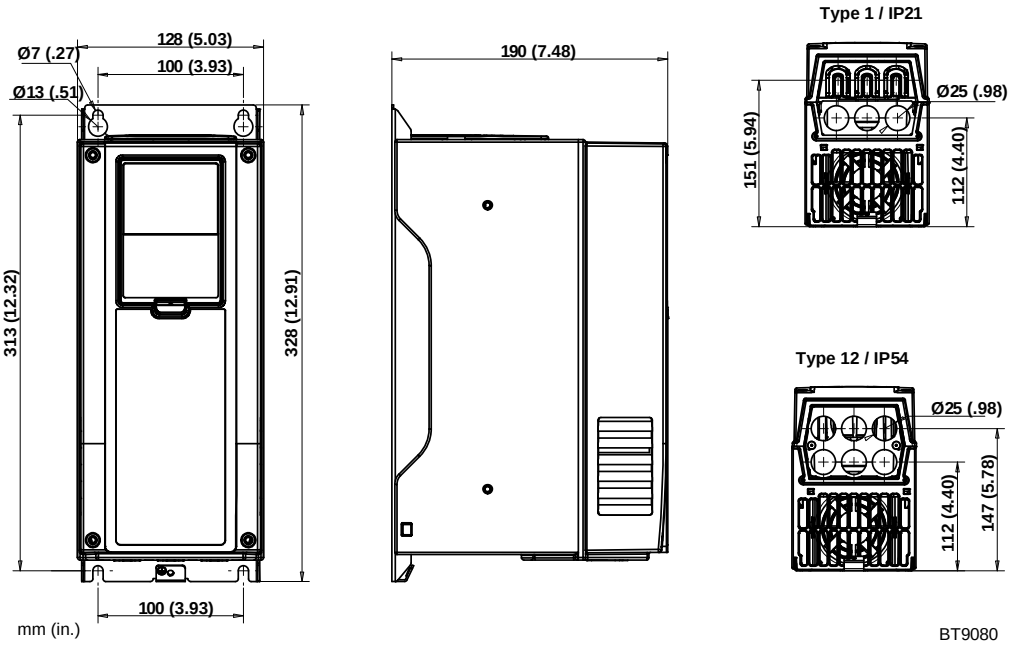


Figure 2. Siemens Drive Dimensions, FS4, Wall-Mount.

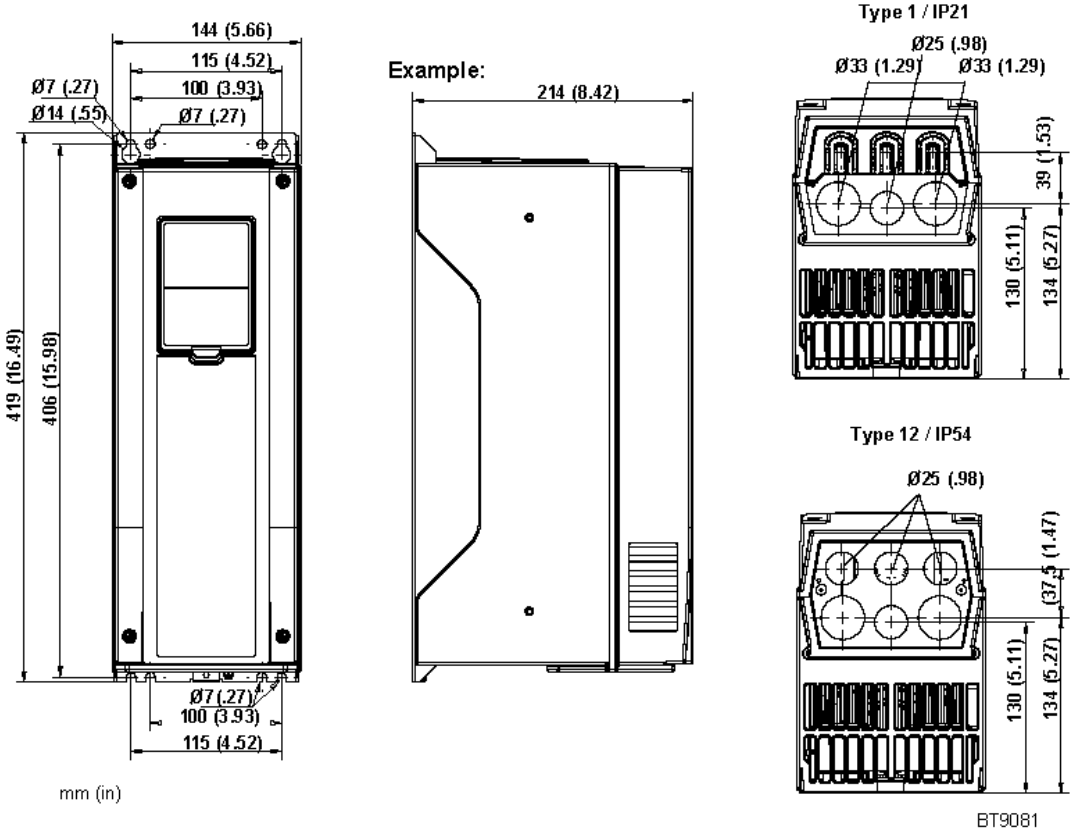


Figure 3. Siemens Drive Dimensions, FS5, Wall-Mount.

Dimensions, Continued

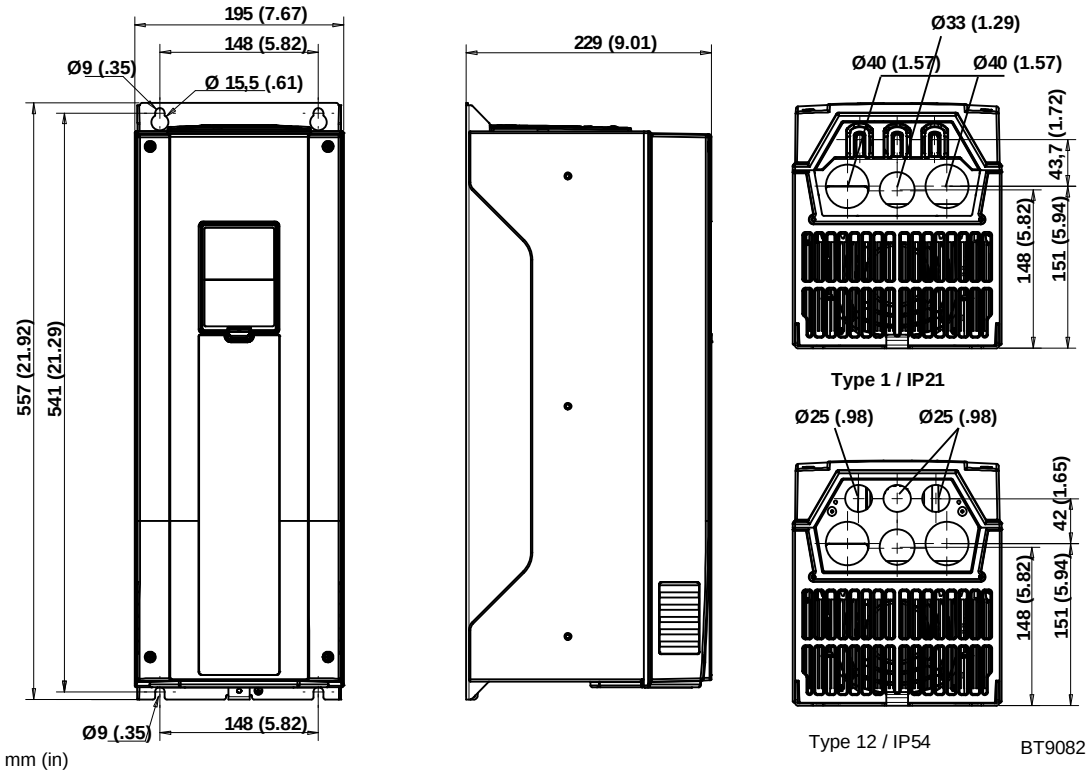


Figure 4. Siemens Drive Dimensions, FS6, Wall-Mount.

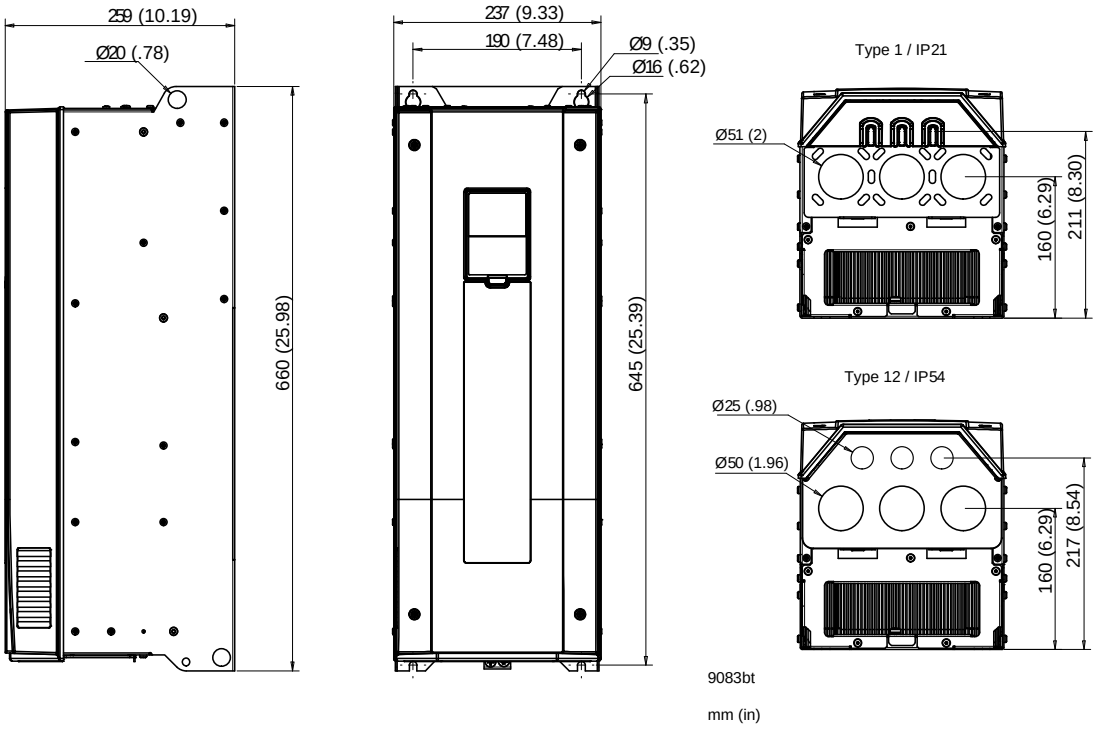


Figure 5. Siemens Drive Dimensions, FS7, Wall-Mount.

Dimensions, Continued

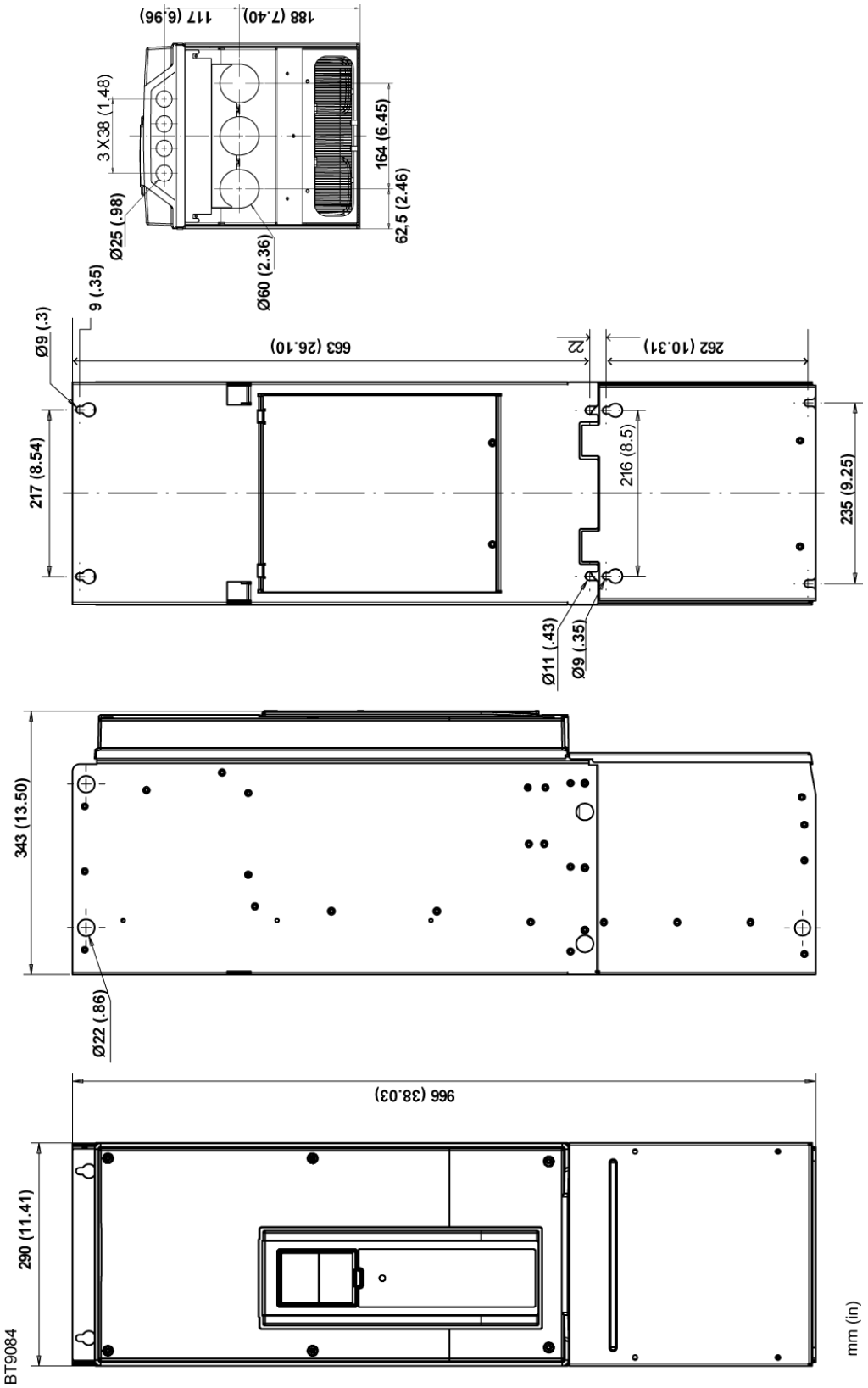


Figure 6. Siemens Drive Dimensions, FS8.

Dimensions, Continued

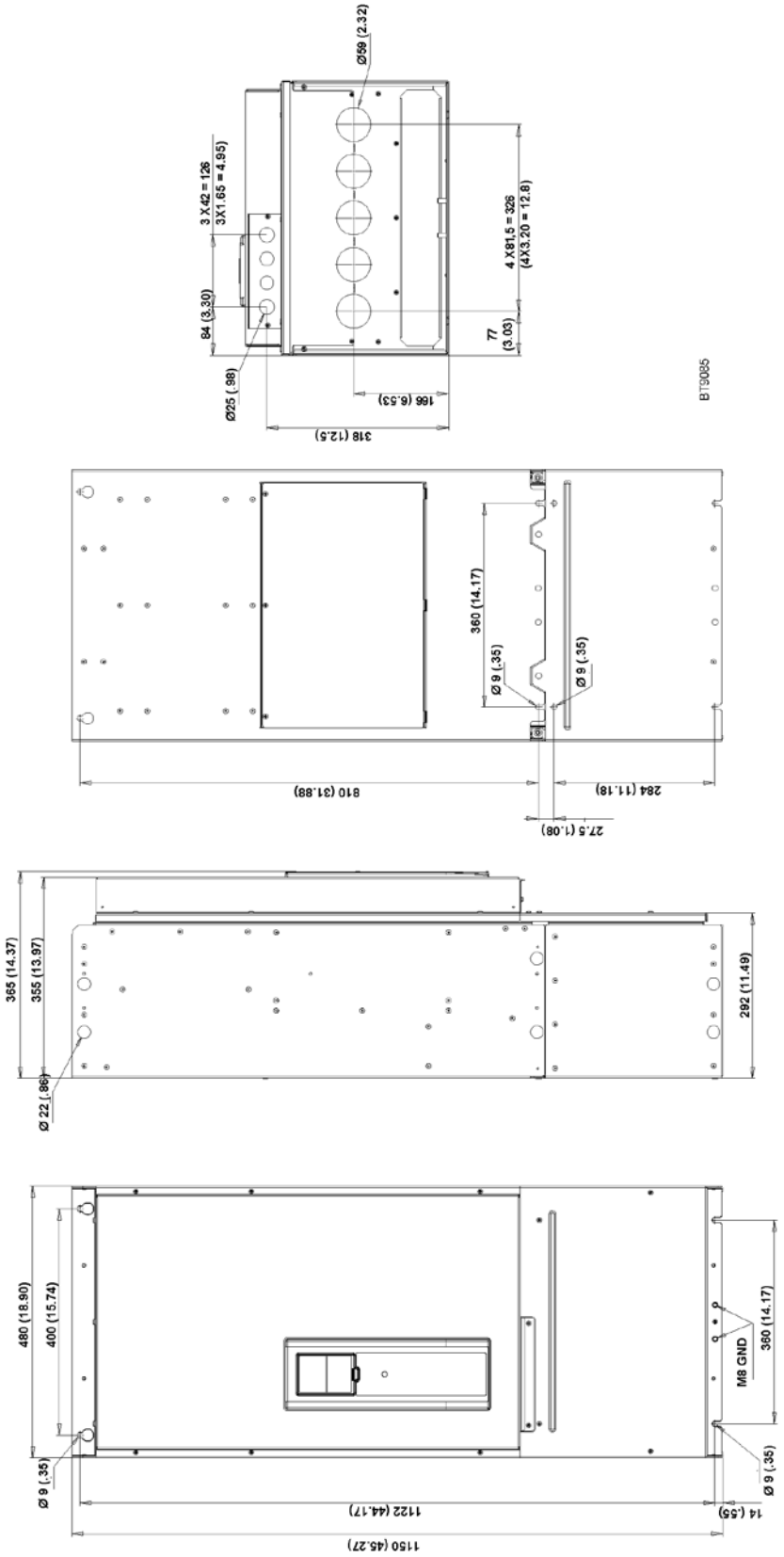
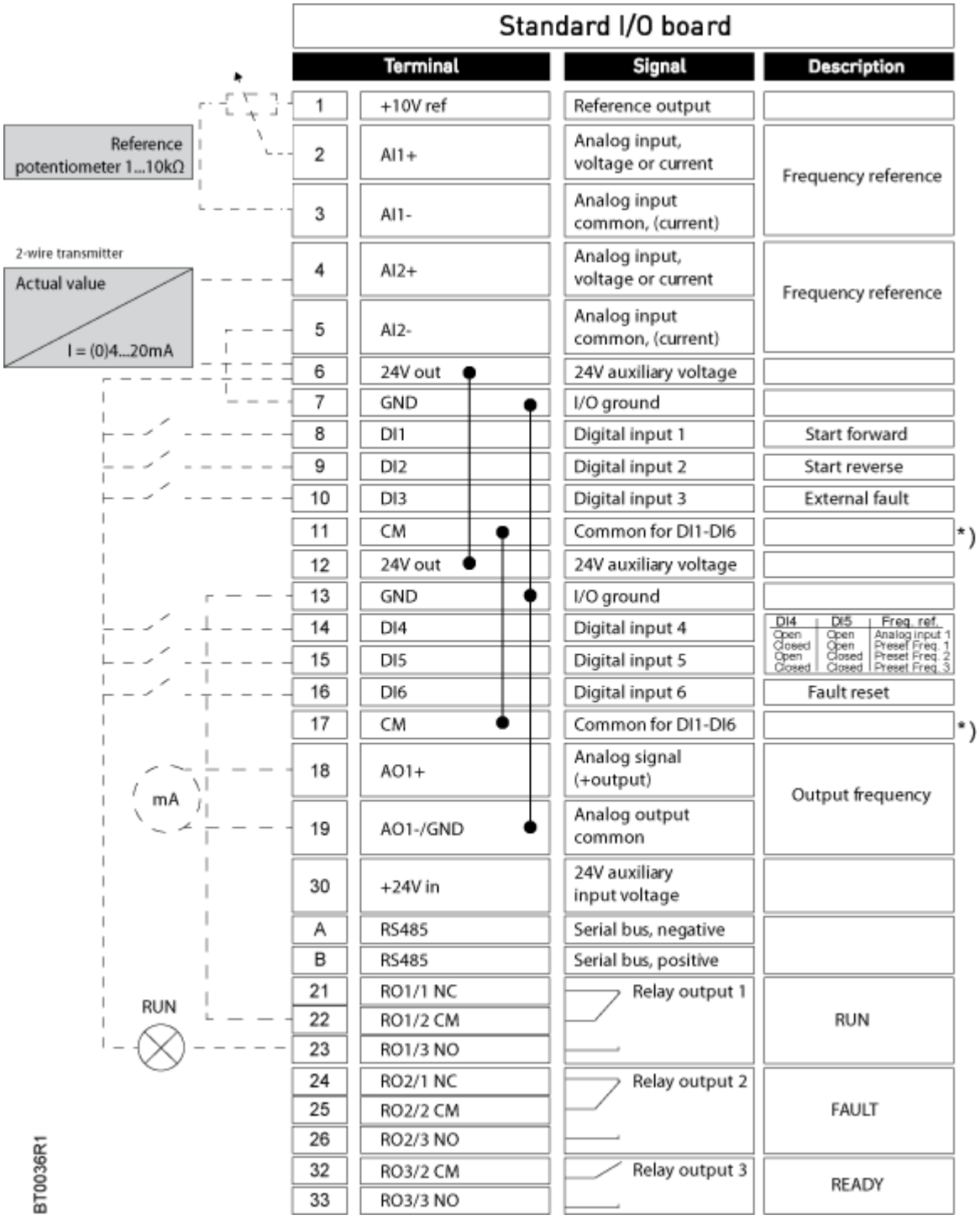


Figure 7. Siemens Drive Dimensions, FS9.

Wiring Diagrams

Table 4. Control I/O Terminal Signals on Basic IO Board and Connection Example.



* Digital inputs can be isolated from ground.

Table 5. Order Worksheet.

				Description			
Item	**Quantity**	**Designation**	**Part Number**	**Voltage**	**HP**	**Enclosure**	**Frame Size**

ESM 13:
Transformer Replacement

ESM Overview

Ameresco proposes to replace a number of existing step-down transformers with new energy-efficient transformers at the Central High School, Eastern High School, City Hall, Police Court, Main Library, City Yard and Water Pollution Control Park. All of the transformers are dry-type indoor transformers that step-down 480 volt power to 208Y/120 volt power. Ameresco proposes to replace these transformers with new premium efficiency units that will reduce the electric losses and lower the cooling load of some of the equipment rooms.



Figure 13.1: Existing Transformer found at the City Hall.

ESM Detail

Existing System

Most transformers in use at for the City of Bristol are estimated to be loaded at about 10% - 15% of their total capacity which is typical of school and office buildings. They are designed to be able to transform the electricity from 460 volts to 120/208 volts at power level ratings up to the design ratings and are most efficient at or around the design rating. Operating at low levels for normal transformers is inefficient. The standard low voltage step-down transformers often have high temperatures resulting in more energy consumption and warmer electric rooms. The transformers identified during the audit for replacement are listed in the following table.

Building	Location	Existing Size (KVA)	Proposed Size (KVA)
Central High School	Off RM 38	112.5	75.0
Central High School	Off Rm 38	75.0	50.0
Central High School	Basement Storage by Stair # 1	75.0	50.0
Central High School	Basement Storage Room by Stair # 1	75.0	50.0
Central High School	Storage Room 13C	30.0	30.0
Central High School	Storage Room 13C	112.5	75.0
Central High School	Off Room 6A	75.0	50.0
Central High School	Off Room 104	75.0	50.0
Central High School	Off Room 123	75.0	50.0
Central High School	Off Room 123	75.0	50.0
Central High School	Main Electric Room	300.0	300.0
Eastern High School	Kitchen Elec Closet	30.0	30.0
Eastern High School	Kitchen Elec Closet	45.0	30.0
Eastern High School	B-14 off Rm B-13	112.5	75.0
Eastern High School	B-14 off Rm B-13	45.0	30.0

"Page content is subject to Confidentiality Restrictions"

Building	Location	Existing Size (KVA)	Proposed Size (KVA)
Eastern High School	Main Elec Rm B5	500.0	400.0
Eastern High School	Boiler Rm	30.0	30.0
Eastern High School	B-15 off Boiler Rm	45.0	30.0
Eastern High School	B-15 Off Boiler Rm	30.0	30.0
Eastern High School	Off Hall to Rm 130	45.0	30.0
Eastern High School	Off Hall to Rm 130	30.0	30.0
Eastern High School	Small Gym Hall	30.0	30.0
Eastern High School	Small Gym Hall	30.0	30.0
Eastern High School	Concession Stand	30.0	30.0
Eastern High School	Rm 131A	45.0	30.0
Eastern High School	Rm 131A	30.0	30.0
Eastern High School	Engineering Lab, Rm 2	45.0	30.0
Eastern High School	Engineering Lab Rm2	45.0	30.0
Eastern High School	Rm 246A	30.0	30.0
Eastern High School	Rm 246A	30.0	30.0
Eastern High School	Off Rm 220A	30.0	30.0
Eastern High School	Off Rm 220A	30.0	30.0
Eastern High School	Off Rm 224A	30.0	30.0
Eastern High School	LP-F2-1	30.0	30.0
Eastern High School	Next to Rm 216	30.0	30.0
Eastern High School	Next to Rm 216	30.0	30.0
Eastern High School	Garage	15.0	15.0
City Hall	Mech Rm	100.0	75.0
City Hall	Mech Rm	50.0	37.5
City Hall	1st flr Elec Closet	100.0	75.0
City Hall	2nd flr Elec Closet	75.0	50.0
City Hall	3rd flr Elec Closet	50.0	37.5
Police Court	INV	45.0	45.0
Police Court	Main Elec Rm	75.0	50.0
Police Court	1st flr Elec "D"	75.0	50.0
Police Court	1st flr Elec A	75.0	50.0
Police Court	2nd flr by Break Rm	75.0	50.0
Police Court	2nd flr	75.0	50.0
Main Library	Main Elec Rm	300.0	225.0
City Yard	Garage	37.5	37.5
City Yard	Stock Room	50.0	37.5
WPCP	Headworks	15.0	15.0
WPCP	Headworks	15.0	15.0
WPCP	Sludge	15.0	15.0
WPCP	Sludge	15.0	15.0
WPCP	Compost	30.0	30.0
WPCP	Compost	15.0	15.0
WPCP	Operations	30.0	30.0
WPCP	Operations	30.0	30.0
WPCP	Pump House	15.0	15.0
WPCP	Pump House	15.0	15.0
WPCP	Blower	15.0	15.0
WPCP	Blower	15.0	15.0

Proposed System

Ameresco proposes to replace low voltage transformers at the sites listed above with new units that meet the federal Energy Star program requirements for energy efficiency under non-linear load conditions. Specifically, the new transformers will be selected to meet NEMA TP-1 efficiencies under a K-7 load profile. The K-factor is an overall measurement of the level of harmonics in a system. Typical K-factors range from 4 to 9 in

a mixed (linear and non-linear) load environment, such as a commercial office space. Higher harmonic levels are mostly associated with applications having a high density of computer and other non-linear loads.

A total of 63 transformers were identified that qualify for replacement. The transformers are dry-type indoor transformer that step-down 480-volt power to 208/120-volt power. Tie-ins to the existing primary and secondary power feeds will be required. Ameresco recommends installing Powersmiths' E-SAVER Model C3L transformers under this ESM.

Installation of the measure will require isolation of each of the affected transformers and the associated distribution panels that are fed by the transformer while the transformer is removed and the new transformer installed.

Specific Information about the Existing System

The new transformers will be manufactured by PowerSmiths, based on model C3L. Some of the transformers rated for 45 kW and higher that had a low measured load during the audit will be downsized one size.

Typical installation sequence of the transformers would be as follows:

- Lockout/tagout panel feeding step-down transformer
- Disconnect primary and secondary feeds into transformer
- Remove and dispose of existing transformer, recycling where possible
- Install new transformer on same pad or floor footprint
- Reconnect primary and secondary feeds into transformer

Implementation of this measure will also provide the City with a valuable capital upgrade that will improve the reliability of the electrical distribution system and reduce the likelihood of failure that can occur with overheated transformers. The proposed measure will significantly reduce electric energy costs.

The measure assumes the following:

- The new transformers will be installed in the same location as existing.
- The existing feeders are assumed to be reused
- Removal or remediation of any hazardous materials is not included.
- Ameresco is not responsible for reprogramming of the fire alarm, security alarms, computer servers or computer systems that may be required for the shutdown of the electric circuits affected by the measure.
- Repair or upgrade of any feeders, breakers or disconnects are not included.
- Correction of any existing code violation is not included.
- The typical shut down for a conversion is 1 to 2 hours per transformer.

"Page content is subject to Confidentiality Restrictions"

>Equipment, Design and Construction Documentation

Equipment will be identified in submittals provided for approval prior to procurement. Documents will be submitted to the facilities department for their review and comment. Upon approval, these will constitute the construction documents. Upon completion of the construction phase, the documents will be revised as needed to reflect "As-Built" conditions and submitted in multiple for record.

>Impact on Facility Operations and Performance

The new transformers will reduce the temperature in the electric closets. As most of the transformers are over 15 years old, the new equipment will extend the useful life of the electric system.

Appendix for ESM 13: Transformer Replacement

I. Energy Savings Calculations

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

City of Bristol, CT	
Energy and Demand Savings Summary	
Measure ID:	**13**
Measure Name:	**Transformer Replacement**
Measure Location:	
Engineers:	

Site Name:		**Central_High**	**Eastern_High**	**City_Hall**	**Police**	**Main_Library**	**City_Yard**	**Water_Pollution**	**Summary**
Item	Units	Savings	Savings	Savings	Savings	Savings	Savings	Savings	
Electricity									
Energy On-Peak	kWh	19,479	28,735	7,876	11,249	5,485	1,995	7,317	82,135
Energy Off-Peak	kWh	62,672	94,067	23,887	25,296	15,670	6,357	23,498	251,447
Energy Total	kWh	82,151	122,803	31,764	36,544	21,155	8,352	30,814	333,583
Demand On-Peak, Monthly	kW	9.4	14.0	3.6	4.2	2.4	1.0	3.5	38.1
Demand On-Peak, Annual	kW	112.7	167.9	43.7	50.1	29.0	11.5	42.2	457.1
Demand Off-Peak, Monthly	kW								0.0
Demand Off-Peak, Annual	kW								0.0
Fossil Fuel									0
Natural Gas (NG)	CCF								0
Liquid Propane Gas (LPG)	Gallons								0
Steam	Mlbs								0
Fuel Oil, #2	Gallons								0
Fuel Oil, #4	Gallons								0
Fuel Oil, #6	Gallons								0
Max Daily Demand (Natural Gas)	CCF (Demand)								0
Water									0
Water Savings	CF								0
Sewer									0
Sewer Savings	CF								0

City of Bristol, CT
Bristol Central High School
Transformer Replacemen

	Existing Transformer Details														Proposed Transformer Details						Savings		
Location	Existing Unit Size (kVA)	New Unit Size (kVA)	Occ. Hours % Load	UnOcc. Hours % Load	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Load Power Factor	Existing Occ. Efficiency	Existing UnOcc. Efficiency	Existing Occ. kW Losses	Existing UnOcc. kW Losses	Existing Annual Peak Losses (kWh)	Existing Annual Off-Peak Losses (kWh)	Proposed Occ. Efficiency	Proposed UnOcc. Efficiency	Proposed Occ. kW Losses	Proposed UnOcc. kW Losses	Proposed Annual Peak Losses (kWh)	Proposed Annual Off-Peak Losses (kWh)	Monthly Demand Savings (kW)	Annual Peak Electric Energy Savings (kWh)	Annual Off-Peak Electric Energy Savings (kWh)
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
Off RM 38	112.5	75.0	15.0%	10.0%	791	1,285	1,487	5,196	100.0%	93.9%	91.3%	1.10	1.07	2,249	7,205	98.0%	97.3%	0.23	0.20	443	1,401	0.88	1,807	5,804
Off Rm 38	75.0	50.0	15.0%	10.0%	791	1,285	1,487	5,196	100.0%	92.6%	89.5%	0.90	0.88	1,837	5,886	97.7%	97.0%	0.17	0.16	337	1,064	0.73	1,500	4,822
Basement Storage by Stair # 1	75.0	50.0	15.0%	10.0%	791	1,285	1,487	5,196	100.0%	92.6%	89.5%	0.90	0.88	1,837	5,886	97.7%	97.0%	0.17	0.16	337	1,064	0.73	1,500	4,822
Basement Storage Room by Stair # 1	75.0	50.0	15.0%	10.0%	791	1,285	1,487	5,196	100.0%	92.6%	89.5%	0.90	0.88	1,837	5,886	97.7%	97.0%	0.17	0.16	337	1,064	0.73	1,500	4,822
Storage Room 13C	30.0	30.0	15.0%	10.0%	791	1,285	1,487	5,196	100.0%	89.9%	85.8%	0.51	0.50	1,040	3,337	97.1%	96.0%	0.13	0.12	266	843	0.37	774	2,494
Storage Room 13C	112.5	75.0	15.0%	10.0%	791	1,285	1,487	5,196	100.0%	93.9%	91.3%	1.10	1.07	2,249	7,205	98.0%	97.3%	0.23	0.20	443	1,401	0.88	1,807	5,804
Off Room 6A	75.0	50.0	15.0%	10.0%	791	1,285	1,487	5,196	100.0%	92.6%	89.5%	0.90	0.88	1,837	5,886	97.7%	97.0%	0.17	0.16	337	1,064	0.73	1,500	4,822
Off Room 104	75.0	50.0	15.0%	10.0%	791	1,285	1,487	5,196	100.0%	92.6%	89.5%	0.90	0.88	1,837	5,886	97.7%	97.0%	0.17	0.16	337	1,064	0.73	1,500	4,822
Off Room 123	75.0	50.0	15.0%	10.0%	791	1,285	1,487	5,196	100.0%	92.6%	89.5%	0.90	0.88	1,837	5,886	97.7%	97.0%	0.26	0.23	505	1,596	0.64	1,332	4,290
Off Room 123	75.0	50.0	15.0%	10.0%	791	1,285	1,487	5,196	100.0%	92.6%	89.5%	0.90	0.88	1,837	5,886	97.7%	97.0%	0.26	0.23	505	1,596	0.64	1,332	4,290
Main Electric Room	300.0	300.0	15.0%	10.0%	791	1,285	1,487	5,196	100.0%	93.8%	91.2%	2.96	2.90	6,071	19,482	98.7%	98.3%	0.60	0.52	1,144	3,601	2.36	4,927	15,880
Totals	**1,080.0**	**830.0**	**15.0%**	**10.0%**								**11.96**	**11.67**	**24,468**	**78,431**			**2.58**	**2.30**	**4,989**	**15,760**	**9.39**	**19,479**	**62,672**

Cell Ref.	Comment
A	Location of Transformer
B	Existing Transformer Nameplate Rating - kVA
C	New Transformer Nameplate Rating - kVA
D - E	Estimated existing transformer loading as a percent of nameplate rating
F - I	Facility operating hours from EMS calculation
J	Estimated load powerfactor seen at the transformer - output
K	= [col B] x [col D] x 1,000 ÷ ([col B] x [col D] x 1,000 + (standard no load losses) + [col D]^2 x (standard full load losses minus standard no load losses))
L	= [col B] x [col E] x 1,000 ÷ ([col B] x [col E] x 1,000 + (standard no load losses) + [col E]^2 x (standard full load losses minus standard no load losses))
M	= ([col B] x [col D] x [col J] ÷ [col K] - [col B] x [col D] x [col J])
N	= ([col B] x [col E] x [col J] ÷ [col L] - [col B] x [col E] x [col J])
O	= [col M] x [col F] + [col N] x [col G]
P	= [col M] x [col H] + [col N] x [col I]
Q	= [col C] x [col D] x 1,000 ÷ ([col C] x [col D] x 1,000 + (esaver no load losses) + [col D]^2 x (esaver full load losses minus esaver no load losses))
R	= [col C] x [col E] x 1,000 ÷ ([col C] x [col E] x 1,000 + (esaver no load losses) + [col E]^2 x (esaver full load losses minus esaver no load losses))
S	= ([col C] x [col D] x [col J] ÷ [col Q] - [col C] x [col D] x [col J])
T	= ([col C] x [col E] x [col J] ÷ [col R] - [col C] x [col E] x [col J])
U	= [col S] x [col F] + [col T] x [col G]
V	= [col S] x [col H] + [col T] x [col I]
W	= [col M] - [col S]
X	= [col O] - [col U]
Y	= [col P] -[col V]

ESAVER-C3L loss calculator

kVA	No Loads (W)	full load losses (w)
5	25	500
9	45	700
15	55	851
20	70	836
25	101	883
30	115	989
40	137	1233
45	124	1654
50	140	1644
75	187	1956
100	198	2882
112.5	219	2926
150	303	3251
200	394	4435
225	440	5026
300	462	6477
400	632	7755
500	706	8907
750	1094	11026

Standard AL 115C loss table

kVA	No Load (W)	Full load (W)
5	125	675
9	225	875
15	325	985
20	380	1063
25	490	1218
30	490	1218
40	500	1629
45	680	1835
50	690	1967
75	856	2789
100	1046	3559
113	1046	3559
150	1327	4620
200	1942	6033
225	2250	6740
300	2860	7160
400	3345	8495
500	3830	9830
750	3980	16800

City of Bristol, CT
Bristol Eastern High School
Transformer Replacemen

	Existing Transformer Details														Proposed Transformer Details						Savings		
Location	Existing Unit Size (kVA)	New Unit Size (kVA)	Occ. Hours % Load	UnOcc. Hours % Load	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Load Power Factor	Existing Occ. Efficiency	Existing UnOcc. Efficiency	Existing Occ. kW Losses	Existing UnOcc. kW Losses	Existing Annual Peak Losses (kWh)	Existing Annual Off-Peak Losses (kWh)	Proposed Occ. Efficiency	Proposed UnOcc. Efficiency	Proposed Occ. kW Losses	Proposed UnOcc. kW Losses	Proposed Annual Peak Losses (kWh)	Proposed Annual Off-Peak Losses (kWh)	Monthly Demand Savings (kW)	Annual Peak Electric Energy Savings (kWh)	Annual Off-Peak Electric Energy Savings (kWh)
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
Kitchen Elec Closet	30.0	30.0	15.0%	10.0%	746	1,304	1,143	5,567	100.0%	89.9%	85.8%	0.51	0.50	1,026	3,347	97.1%	96.0%	0.13	0.12	262	843	0.37	765	2,504
Kitchen Elec Closet	45.0	30.0	15.0%	10.0%	746	1,304	1,143	5,567	100.0%	90.5%	86.7%	0.71	0.69	1,429	4,656	97.1%	96.0%	0.13	0.12	262	843	0.57	1,167	3,814
B-14 off Rm B-13	112.5	75.0	15.0%	10.0%	746	1,304	1,143	5,567	100.0%	93.9%	91.3%	1.10	1.07	2,220	7,223	98.0%	97.3%	0.23	0.20	436	1,399	0.88	1,784	5,824
B-14 off Rm B-13	45.0	30.0	15.0%	10.0%	746	1,304	1,143	5,567	100.0%	90.5%	86.7%	0.71	0.69	1,429	4,656	97.1%	96.0%	0.13	0.12	262	843	0.57	1,167	3,814
Main Elec Rm B5	500.0	400.0	15.0%	10.0%	746	1,304	1,143	5,567	100.0%	95.0%	92.8%	3.97	3.89	8,033	26,186	98.7%	98.3%	0.79	0.70	1,508	4,820	3.17	6,524	21,366
Boiler Rm	30.0	30.0	15.0%	10.0%	746	1,304	1,143	5,567	100.0%	89.9%	85.8%	0.51	0.50	1,026	3,347	97.1%	96.0%	0.13	0.12	262	843	0.37	765	2,504
B-15 off Boiler Rm	45.0	30.0	15.0%	10.0%	746	1,304	1,143	5,567	100.0%	90.5%	86.7%	0.71	0.69	1,429	4,656	97.1%	96.0%	0.13	0.12	262	843	0.57	1,167	3,814
B-15 Off Boiler Rm	30.0	30.0	15.0%	10.0%	746	1,304	1,143	5,567	100.0%	89.9%	85.8%	0.51	0.50	1,026	3,347	97.1%	96.0%	0.13	0.12	262	843	0.37	765	2,504
Off Hall to RM 130	45.0	30.0	15.0%	10.0%	746	1,304	1,143	5,567	100.0%	90.5%	86.7%	0.71	0.69	1,429	4,656	97.1%	96.0%	0.20	0.19	393	1,264	0.50	1,036	3,392
Off Hall to RM 130	30.0	30.0	15.0%	10.0%	746	1,304	1,143	5,567	100.0%	89.9%	85.8%	0.51	0.50	1,026	3,347	97.1%	96.0%	0.13	0.12	262	843	0.37	765	2,504
Small Gym Hall	30.0	30.0	15.0%	10.0%	746	1,304	1,143	5,567	100.0%	89.9%	85.8%	0.51	0.50	1,026	3,347	97.1%	96.0%	0.13	0.12	262	843	0.37	765	2,504
Small Gym Hall	30.0	30.0	15.0%	10.0%	746	1,304	1,143	5,567	100.0%	89.9%	85.8%	0.51	0.50	1,026	3,347	97.1%	96.0%	0.13	0.12	262	843	0.37	765	2,504
Concession Stand	30.0	30.0	15.0%	10.0%	746	1,304	1,143	5,567	100.0%	89.9%	85.8%	0.51	0.50	1,026	3,347	97.1%	96.0%	0.13	0.12	262	843	0.37	765	2,504
Rm 131A	45.0	30.0	15.0%	10.0%	746	1,304	1,143	5,567	100.0%	90.5%	86.7%	0.71	0.69	1,429	4,656	97.1%	96.0%	0.20	0.19	393	1,264	0.50	1,036	3,392
Rm 131A	30.0	30.0	15.0%	10.0%	746	1,304	1,143	5,567	100.0%	89.9%	85.8%	0.51	0.50	1,026	3,347	97.1%	96.0%	0.13	0.12	262	843	0.37	765	2,504
Engineering Lab, RM 2	45.0	30.0	15.0%	10.0%	746	1,304	1,143	5,567	100.0%	90.5%	86.7%	0.71	0.69	1,429	4,656	97.1%	96.0%	0.20	0.19	393	1,264	0.50	1,036	3,392
Engineering Lab Rm2	45.0	30.0	15.0%	10.0%	746	1,304	1,143	5,567	100.0%	90.5%	86.7%	0.71	0.69	1,429	4,656	97.1%	96.0%	0.20	0.19	393	1,264	0.50	1,036	3,392
RM 246A	30.0	30.0	15.0%	10.0%	746	1,304	1,143	5,567	100.0%	89.9%	85.8%	0.51	0.50	1,026	3,347	97.1%	96.0%	0.13	0.12	262	843	0.37	765	2,504
RM 246A	30.0	30.0	15.0%	10.0%	746	1,304	1,143	5,567	100.0%	89.9%	85.8%	0.51	0.50	1,026	3,347	97.1%	96.0%	0.13	0.12	262	843	0.37	765	2,504
Off RM 220A	30.0	30.0	15.0%	10.0%	746	1,304	1,143	5,567	100.0%	89.9%	85.8%	0.51	0.50	1,026	3,347	97.1%	96.0%	0.13	0.12	262	843	0.37	765	2,504
Off RM 220A	30.0	30.0	15.0%	10.0%	746	1,304	1,143	5,567	100.0%	89.9%	85.8%	0.51	0.50	1,026	3,347	97.1%	96.0%	0.13	0.12	262	843	0.37	765	2,504
Off RM 224A	30.0	30.0	15.0%	10.0%	746	1,304	1,143	5,567	100.0%	89.9%	85.8%	0.51	0.50	1,026	3,347	97.1%	96.0%	0.13	0.12	262	843	0.37	765	2,504
LP-F2-1	30.0	30.0	15.0%	10.0%	746	1,304	1,143	5,567	100.0%	89.9%	85.8%	0.51	0.50	1,026	3,347	97.1%	96.0%	0.13	0.12	262	843	0.37	765	2,504
Next to RM 216	30.0	30.0	15.0%	10.0%	746	1,304	1,143	5,567	100.0%	89.9%	85.8%	0.51	0.50	1,026	3,347	97.1%	96.0%	0.13	0.12	262	843	0.37	765	2,504
Next to RM 216	30.0	30.0	15.0%	10.0%	746	1,304	1,143	5,567	100.0%	89.9%	85.8%	0.51	0.50	1,026	3,347	97.1%	96.0%	0.13	0.12	262	843	0.37	765	2,504
Garage	15.0	15.0	15.0%	10.0%	746	1,304	1,143	5,567	100.0%	86.9%	81.9%	0.34	0.33	686	2,234	96.9%	96.0%	0.07	0.06	137	434	0.27	550	1,800
Totals	**1,422.5**	**1,180.0**	**15.0%**	**10.0%**								**18.45**	**18.09**	**37,364**	**121,788**			**4.46**	**4.06**	**8,628**	**27,720**	**13.99**	**28,735**	**94,067**

Cell Ref.	Comment
A	Location of Transformer
B	Existing Transformer Nameplate Rating - kVA
C	New Transformer Nameplate Rating - kVA
D - E	Estimated existing transformer loading as a percent of nameplate rating
F - I	Facility operating hours from EMS calculation
J	Estimated load powerfactor seen at the transformer - output
K	= [col B] x [col D] x 1,000 ÷ ([col B] x [col D] x 1,000 + (standard no load losses) + [col D]^2 x (standard full load losses minus standard no load losses))
L	= [col B] x [col E] x 1,000 ÷ ([col B] x [col E] x 1,000 + (standard no load losses) + [col E]^2 x (standard full load losses minus standard no load losses))
M	= ([col B] x [col D] x [col J] ÷ [col K] - [col B] x [col D] x [col J])
N	= ([col B] x [col E] x [col J] ÷ [col L] - [col B] x [col E] x [col J])
O	= [col M] x [col F] + [col N] x [col G]
P	= [col M] x [col H] + [col N] x [col I]
Q	= [col C] x [col D] x 1,000 ÷ ([col C] x [col D] x 1,000 + (esaver no load losses) + [col D]^2 x (esaver full load losses minus esaver no load losses))
R	= [col C] x [col E] x 1,000 ÷ ([col C] x [col E] x 1,000 + (esaver no load losses) + [col E]^2 x (esaver full load losses minus esaver no load losses))
S	= ([col C] x [col D] x [col J] ÷ [col Q] - [col C] x [col D] x [col J])
T	= ([col C] x [col E] x [col J] ÷ [col R] - [col C] x [col E] x [col J])
U	= [col S] x [col F] + [col T] x [col G]
V	= [col S] x [col H] + [col T] x [col I]
W	= [col M] - [col S]
X	= [col O] - [col U]
Y	= [col P] -[col V]

ESAVER-C3L loss calculator

kVA	No Loads (W)	full load losses (w)
5	25	500
9	45	700
15	55	851
20	70	836
25	101	883
30	115	989
40	137	1233
45	124	1654
50	140	1644
75	187	1956
100	198	2882
112.5	219	2926
150	303	3251
200	394	4435
225	440	5026
300	462	6477
400	632	7755
500	706	8907
750	1094	11026

Standard AL 115C loss table

kVA	No Load (W)	Full load (W)
5	125	675
9	225	875
15	325	985
20	380	1063
25	490	1218
30	490	1218
40	500	1629
45	680	1835
50	690	1967
75	856	2789
100	1046	3559
113	1046	3559
150	1327	4620
200	1942	6033
225	2250	6740
300	2860	7160
400	3345	8495
500	3830	9830
750	3980	16800

City of Bristol, CT
City Hall & Annex
Transformer Replacemen

	Existing Transformer Details														Proposed Transformer Details						Savings		
Location	Existing Unit Size (kVA)	New Unit Size (kVA)	Occ. Hours % Load	UnOcc. Hours % Load	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Load Power Factor	Existing Occ. Efficiency	Existing UnOcc. Efficiency	Existing Occ. kW Losses	Existing UnOcc. kW Losses	Existing Annual Peak Losses (kWh)	Existing Annual Off-Peak Losses (kWh)	Proposed Occ. Efficiency	Proposed UnOcc. Efficiency	Proposed Occ. kW Losses	Proposed UnOcc. kW Losses	Proposed Annual Peak Losses (kWh)	Proposed Annual Off-Peak Losses (kWh)	Monthly Demand Savings (kW)	Annual Peak Electric Energy Savings (kWh)	Annual Off-Peak Electric Energy Savings (kWh)
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
Mech Rm	100.0	75.0	15.0%	10.0%	2,161	0	1,634	4,965	100.0%	93.2%	90.3%	1.10	1.07	2,382	7,120	98.0%	97.3%	0.23	0.20	490	1,387	0.88	1,892	5,733
Mech Rm	50.0	37.5	15.0%	10.0%	2,161	0	1,634	4,965	100.0%	91.3%	87.7%	0.72	0.70	1,553	4,664	97.7%	96.8%	0.13	0.12	291	834	0.58	1,262	3,829
1st Fl Elec Closet	100.0	75.0	15.0%	10.0%	2,161	0	1,634	4,965	100.0%	93.2%	90.3%	1.10	1.07	2,382	7,120	98.0%	97.3%	0.23	0.20	490	1,387	0.88	1,892	5,733
2nd fl Elec Closet	75.0	50.0	15.0%	10.0%	2,161	0	1,634	4,965	100.0%	92.6%	89.5%	0.90	0.88	1,944	5,816	97.7%	97.0%	0.17	0.16	376	1,054	0.73	1,568	4,762
3rd Fl Elec Closet	50.0	37.5	15.0%	10.0%	2,161	0	1,634	4,965	100.0%	91.3%	87.7%	0.72	0.70	1,553	4,664	97.7%	96.8%	0.13	0.12	291	834	0.58	1,262	3,829
Totals	**375.0**	**275.0**	**15.0%**	**10.0%**								**4.54**	**4.42**	**9,814**	**29,384**			**0.90**	**0.81**	**1,938**	**5,497**	**3.65**	**7,876**	**23,887**

Cell Ref.	Comment
A	Location of Transformer
B	Existing Transformer Nameplate Rating - kVA
C	New Transformer Nameplate Rating - kVA
D - E	Estimated existing transformer loading as a percent of nameplate rating
F - I	Facility operating hours from EMS calculation
J	Estimated load powerfactor seen at the transformer - output
K	= [col B] x [col D] x 1,000 ÷ ([col B] x [col D] x 1,000 + (standard no load losses) + [col D]^2 x (standard full load losses minus standard no load losses))
L	= [col B] x [col E] x 1,000 ÷ ([col B] x [col E] x 1,000 + (standard no load losses) + [col E]^2 x (standard full load losses minus standard no load losses))
M	= ([col B] x [col D] x [col J] ÷ [col K] - [col B] x [col D] x [col J])
N	= ([col B] x [col E] x [col J] ÷ [col L] - [col B] x [col E] x [col J])
O	= [col M] x [col F] + [col N] x [col G]
P	= [col M] x [col H] + [col N] x [col I]
Q	= [col C] x [col D] x 1,000 ÷ ([col C] x [col D] x 1,000 + (esaver no load losses) + [col D]^2 x (esaver full load losses minus esaver no load losses))
R	= [col C] x [col E] x 1,000 ÷ ([col C] x [col E] x 1,000 + (esaver no load losses) + [col E]^2 x (esaver full load losses minus esaver no load losses))
S	= ([col C] x [col D] x [col J] ÷ [col Q] - [col C] x [col D] x [col J])
T	= ([col C] x [col E] x [col J] ÷ [col R] - [col C] x [col E] x [col J])
U	= [col S] x [col F] + [col T] x [col G]
V	= [col S] x [col H] + [col T] x [col I]
W	= [col M] - [col S]
X	= [col O] - [col U]
Y	= [col P] -[col V]

ESAVER-C3L loss calculator

kVA	No Loads (W)	full load losses (w)
5	25	500
9	45	700
15	55	851
20	70	836
25	101	883
30	115	989
40	137	1233
45	124	1654
50	140	1644
75	187	1956
100	198	2882
112.5	219	2926
150	303	3251
200	394	4435
225	440	5026
300	462	6477
400	632	7755
500	706	8907
750	1094	11026

Standard AL 115C loss table

kVA	No Load (W)	Full load (W)
5	125	675
9	225	875
15	325	985
20	380	1063
25	490	1218
30	490	1218
40	500	1629
45	680	1835
50	690	1967
75	856	2789
100	1046	3559
113	1046	3559
150	1327	4620
200	1942	6033
225	2250	6740
300	2860	7160
400	3345	8495
500	3830	9830
750	3980	16800

City of Bristol, CT
Police Court & Parking Garag
Transformer Replacemen

	Existing Transformer Details															Proposed Transformer Details						Savings		
Location	Existing Unit Size (kVA)	New Unit Size (kVA)	Occ. Hours % Load	UnOcc. Hours % Load	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Load Power Factor	Existing Occ. Efficiency	Existing UnOcc. Efficiency	Existing Occ. kW Losses	Existing UnOcc. kW Losses	Existing Annual Peak Losses (kWh)	Existing Annual Off-Peak Losses (kWh)	Proposed Occ. Efficiency	Proposed UnOcc. Efficiency	Proposed Occ. kW Losses	Proposed UnOcc. kW Losses	Proposed Annual Peak Losses (kWh)	Proposed Annual Off-Peak Losses (kWh)	Monthly Demand Savings (kW)	Annual Peak Electric Energy Savings (kWh)	Annual Off-Peak Electric Energy Savings (kWh)
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
INV	45.0	45.0	15.0%	10.0%	2,694	0	4,445	1,622	100.0%	90.5%	86.7%	0.71	0.69	1,902	4,259	97.7%	97.0%	0.16	0.14	427	930	0.55	1,475	3,329
Main Elec Rm	75.0	50.0	15.0%	10.0%	2,694	0	4,445	1,622	100.0%	92.6%	89.5%	0.90	0.88	2,423	5,417	97.7%	97.0%	0.17	0.16	468	1,024	0.73	1,955	4,393
1st Fl Elec "D"	75.0	50.0	15.0%	10.0%	2,694	0	4,445	1,622	100.0%	92.6%	89.5%	0.90	0.88	2,423	5,417	97.7%	97.0%	0.17	0.16	468	1,024	0.73	1,955	4,393
1st Fl Elec A	75.0	50.0	15.0%	10.0%	2,694	0	4,445	1,622	100.0%	92.6%	89.5%	0.90	0.88	2,423	5,417	97.7%	97.0%	0.17	0.16	468	1,024	0.73	1,955	4,393
2nd Fl by Break Rm	75.0	50.0	15.0%	10.0%	2,694	0	4,445	1,622	100.0%	92.6%	89.5%	0.90	0.88	2,423	5,417	97.7%	97.0%	0.17	0.16	468	1,024	0.73	1,955	4,393
2nd Fl	75.0	50.0	15.0%	10.0%	2,694	0	4,445	1,622	100.0%	92.6%	89.5%	0.90	0.88	2,423	5,417	97.7%	97.0%	0.17	0.16	468	1,024	0.73	1,955	4,393
Totals	**420.0**	**295.0**	**15.0%**	**10.0%**								**5.20**	**5.07**	**14,017**	**31,346**			**1.03**	**0.91**	**2,768**	**6,050**	**4.18**	**11,249**	**25,296**

Cell Ref.	Comment
A	Location of Transformer
B	Existing Transformer Nameplate Rating - kVA
C	New Transformer Nameplate Rating - kVA
D - E	Estimated existing transformer loading as a percent of nameplate rating
F - I	Facility operating hours from EMS calculation
J	Estimated load powerfactor seen at the transformer - output
K	= [col B] x [col D] x 1,000 ÷ ([col B] x [col D] x 1,000 + (standard no load losses) + [col D]^2 x (standard full load losses minus standard no load losses))
L	= [col B] x [col E] x 1,000 ÷ ([col B] x [col E] x 1,000 + (standard no load losses) + [col E]^2 x (standard full load losses minus standard no load losses))
M	= ([col B] x [col D] x [col J] ÷ [col K] - [col B] x [col D] x [col J])
N	= ([col B] x [col E] x [col J] ÷ [col L] - [col B] x [col E] x [col J])
O	= [col M] x [col F] + [col N] x [col G]
P	= [col M] x [col H] + [col N] x [col I]
Q	= [col C] x [col D] x 1,000 ÷ ([col C] x [col D] x 1,000 + (esaver no load losses) + [col D]^2 x (esaver full load losses minus esaver no load losses))
R	= [col C] x [col E] x 1,000 ÷ ([col C] x [col E] x 1,000 + (esaver no load losses) + [col E]^2 x (esaver full load losses minus esaver no load losses))
S	= ([col C] x [col D] x [col J] ÷ [col Q] - [col C] x [col D] x [col J])
T	= ([col C] x [col E] x [col J] ÷ [col R] - [col C] x [col E] x [col J])
U	= [col S] x [col F] + [col T] x [col G]
V	= [col S] x [col H] + [col T] x [col I]
W	= [col M] - [col S]
X	= [col O] - [col U]
Y	= [col P] -[col V]

ESAVER-C3L loss calculator

kVA	No Loads (W)	full load losses (w)
5	25	500
9	45	700
15	55	851
20	70	836
25	101	883
30	115	989
40	137	1233
45	124	1654
50	140	1644
75	187	1956
100	198	2882
112.5	219	2926
150	303	3251
200	394	4435
225	440	5026
300	462	6477
400	632	7755
500	706	8907
750	1094	11026

Standard AL 115C loss table

kVA	No Load (W)	Full load (W)
5	125	675
9	225	875
15	325	985
20	380	1063
25	490	1218
30	490	1218
40	500	1629
45	680	1835
50	690	1967
75	856	2789
100	1046	3559
113	1046	3559
150	1327	4620
200	1942	6033
225	2250	6740
300	2860	7160
400	3345	8495
500	3830	9830
750	3980	16800

City of Bristol, CT
Main Library
Transformer Replacemen

	Existing Transformer Details															Proposed Transformer Details						Savings		
Location	Existing Unit Size (kVA)	New Unit Size (kVA)	Occ. Hours % Load	UnOcc. Hours % Load	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Load Power Factor	Existing Occ. Efficiency	Existing UnOcc. Efficiency	Existing Occ. kW Losses	Existing UnOcc. kW Losses	Existing Annual Peak Losses (kWh)	Existing Annual Off-Peak Losses (kWh)	Proposed Occ. Efficiency	Proposed UnOcc. Efficiency	Proposed Occ. kW Losses	Proposed UnOcc. kW Losses	Proposed Annual Peak Losses (kWh)	Proposed Annual Off-Peak Losses (kWh)	Monthly Demand Savings (kW)	Annual Peak Electric Energy Savings (kWh)	Annual Off-Peak Electric Energy Savings (kWh)
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
Main Elec rm	300.0	225.0	15.0%	10.0%	2,273	0	3,054	3,434	100.0%	93.8%	91.2%	2.96	2.90	6,719	18,997	98.4%	97.9%	0.54	0.49	1,234	3,327	2.41	5,485	15,670
Totals	**300.0**	**225.0**	**15.0%**	**10.0%**								**2.96**	**2.90**	**6,719**	**18,997**			**0.54**	**0.49**	**1,234**	**3,327**	**2.41**	**5,485**	**15,670**

Cell Ref.	Comment
A	Location of Transformer
B	Existing Transformer Nameplate Rating - kVA
C	New Transformer Nameplate Rating - kVA
D - E	Estimated existing transformer loading as a percent of nameplate rating
F - I	Facility operating hours from EMS calculation
J	Estimated load powerfactor seen at the transformer - output
K	= [col B] x [col D] x 1,000 ÷ ([col B] x [col D] x 1,000 + (standard no load losses) + [col D]^2 x (standard full load losses minus standard no load losses))
L	= [col B] x [col E] x 1,000 ÷ ([col B] x [col E] x 1,000 + (standard no load losses) + [col E]^2 x (standard full load losses minus standard no load losses))
M	= ([col B] x [col D] x [col J] ÷ [col K] - [col B] x [col D] x [col J])
N	= ([col B] x [col E] x [col J] ÷ [col L] - [col B] x [col E] x [col J])
O	= [col M] x [col F] + [col N] x [col G]
P	= [col M] x [col H] + [col N] x [col I]
Q	= [col C] x [col D] x 1,000 ÷ ([col C] x [col D] x 1,000 + (esaver no load losses) + [col D]^2 x (esaver full load losses minus esaver no load losses))
R	= [col C] x [col E] x 1,000 ÷ ([col C] x [col E] x 1,000 + (esaver no load losses) + [col E]^2 x (esaver full load losses minus esaver no load losses))
S	= ([col C] x [col D] x [col J] ÷ [col Q] - [col C] x [col D] x [col J])
T	= ([col C] x [col E] x [col J] ÷ [col R] - [col C] x [col E] x [col J])
U	= [col S] x [col F] + [col T] x [col G]
V	= [col S] x [col H] + [col T] x [col I]
W	= [col M] - [col S]
X	= [col O] - [col U]
Y	= [col P] -[col V]

ESAVER-C3L loss calculator

kVA	No Loads (W)	full load losses (w)
5	25	500
9	45	700
15	55	851
20	70	836
25	101	883
30	115	989
40	137	1233
45	124	1654
50	140	1644
75	187	1956
100	198	2882
112.5	219	2926
150	303	3251
200	394	4435
225	440	5026
300	462	6477
400	632	7755
500	706	8907
750	1094	11026

Standard AL 115C loss table

kVA	No Load (W)	Full load (W)
5	125	675
9	225	875
15	325	985
20	380	1063
25	490	1218
30	490	1218
40	500	1629
45	680	1835
50	690	1967
75	856	2789
100	1046	3559
113	1046	3559
150	1327	4620
200	1942	6033
225	2250	6740
300	2860	7160
400	3345	8495
500	3830	9830
750	3980	16800

City of Bristol, CT
City Yard
Transformer Replacemen

	Existing Transformer Details														Proposed Transformer Details						Savings		
Location	Existing Unit Size (kVA)	New Unit Size (kVA)	Occ. Hours % Load	UnOcc. Hours % Load	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Load Power Factor	Existing Occ. Efficiency	Existing UnOcc. Efficiency	Existing Occ. kW Losses	Existing UnOcc. kW Losses	Existing Annual Peak Losses (kWh)	Existing Annual Off-Peak Losses (kWh)	Proposed Occ. Efficiency	Proposed UnOcc. Efficiency	Proposed Occ. kW Losses	Proposed UnOcc. kW Losses	Proposed Annual Peak Losses (kWh)	Proposed Annual Off-Peak Losses (kWh)	Monthly Demand Savings (kW)	Annual Peak Electric Energy Savings (kWh)	Annual Off-Peak Electric Energy Savings (kWh)
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
Garage	37.5	37.5	15.0%	10.0%	2,087	0	259	6,414	100.0%	91.7%	88.3%	0.51	0.50	1,057	3,321	97.7%	96.8%	0.13	0.12	281	829	0.37	776	2,492
Stock Room	50.0	37.5	15.0%	10.0%	2,087	0	259	6,414	100.0%	91.3%	87.7%	0.72	0.70	1,500	4,694	97.7%	96.8%	0.13	0.12	281	829	0.58	1,219	3,865
Totals	**87.5**	**75.0**	**15.0%**	**10.0%**								**1.23**	**1.20**	**2,557**	**8,014**			**0.27**	**0.25**	**562**	**1,657**	**0.96**	**1,995**	**6,357**

Cell Ref.	Comment
A	Location of Transformer
B	Existing Transformer Nameplate Rating - kVA
C	New Transformer Nameplate Rating - kVA
D - E	Estimated existing transformer loading as a percent of nameplate rating
F - I	Facility operating hours from EMS calculation
J	Estimated load powerfactor seen at the transformer - output
K	= [col B] x [col D] x 1,000 ÷ ([col B] x [col D] x 1,000 + (standard no load losses) + [col D]^2 x (standard full load losses minus standard no load losses))
L	= [col B] x [col E] x 1,000 ÷ ([col B] x [col E] x 1,000 + (standard no load losses) + [col E]^2 x (standard full load losses minus standard no load losses))
M	= ([col B] x [col D] x [col J] ÷ [col K] - [col B] x [col D] x [col J])
N	= ([col B] x [col E] x [col J] ÷ [col L] - [col B] x [col E] x [col J])
O	= [col M] x [col F] + [col N] x [col G]
P	= [col M] x [col H] + [col N] x [col I]
Q	= [col C] x [col D] x 1,000 ÷ ([col C] x [col D] x 1,000 + (esaver no load losses) + [col D]^2 x (esaver full load losses minus esaver no load losses))
R	= [col C] x [col E] x 1,000 ÷ ([col C] x [col E] x 1,000 + (esaver no load losses) + [col E]^2 x (esaver full load losses minus esaver no load losses))
S	= ([col C] x [col D] x [col J] ÷ [col Q] - [col C] x [col D] x [col J])
T	= ([col C] x [col E] x [col J] ÷ [col R] - [col C] x [col E] x [col J])
U	= [col S] x [col F] + [col T] x [col G]
V	= [col S] x [col H] + [col T] x [col I]
W	= [col M] - [col S]
X	= [col O] - [col U]
Y	= [col P] -[col V]

ESAVER-C3L loss calculator

kVA	No Loads (W)	full load losses (w)
5	25	500
9	45	700
15	55	851
20	70	836
25	101	883
30	115	989
40	137	1233
45	124	1654
50	140	1644
75	187	1956
100	198	2882
112.5	219	2926
150	303	3251
200	394	4435
225	440	5026
300	462	6477
400	632	7755
500	706	8907
750	1094	11026

Standard AL 115C loss table

kVA	No Load (W)	Full load (W)
5	125	675
9	225	875
15	325	985
20	380	1063
25	490	1218
30	490	1218
40	500	1629
45	680	1835
50	690	1967
75	856	2789
100	1046	3559
113	1046	3559
150	1327	4620
200	1942	6033
225	2250	6740
300	2860	7160
400	3345	8495
500	3830	9830
750	3980	16800

City of Bristol, CT
Water Pollution Control Parl
Transformer Replacemen

	Existing Transformer Details															Proposed Transformer Details						Savings		
Location	Existing Unit Size (kVA)	New Unit Size (kVA)	Occ. Hours % Load	UnOcc. Hours % Load	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Load Power Factor	Existing Occ. Efficiency	Existing UnOcc. Efficiency	Existing Occ. kW Losses	Existing UnOcc. kW Losses	Existing Annual Peak Losses (kWh)	Existing Annual Off-Peak Losses (kWh)	Proposed Occ. Efficiency	Proposed UnOcc. Efficiency	Proposed Occ. kW Losses	Proposed UnOcc. kW Losses	Proposed Annual Peak Losses (kWh)	Proposed Annual Off-Peak Losses (kWh)	Monthly Demand Savings (kW)	Annual Peak Electric Energy Savings (kWh)	Annual Off-Peak Electric Energy Savings (kWh)
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
Headworks	15.0	15.0	15.0%	10.0%	2,080	0	6,680	0	100.0%	86.9%	81.9%	0.34	0.33	707	2,270	96.9%	96.0%	0.07	0.06	152	487	0.27	555	1,783
Headworks	15.0	15.0	15.0%	10.0%	2,080	0	6,680	0	100.0%	86.9%	81.9%	0.34	0.33	707	2,270	96.9%	96.0%	0.07	0.06	152	487	0.27	555	1,783
Sludge	15.0	15.0	15.0%	10.0%	2,080	0	6,680	0	100.0%	86.9%	81.9%	0.34	0.33	707	2,270	96.9%	96.0%	0.07	0.06	152	487	0.27	555	1,783
Sludge	15.0	15.0	15.0%	10.0%	2,080	0	6,680	0	100.0%	86.9%	81.9%	0.34	0.33	707	2,270	96.9%	96.0%	0.07	0.06	152	487	0.27	555	1,783
Compost	30.0	30.0	15.0%	10.0%	2,080	0	6,680	0	100.0%	89.9%	85.8%	0.51	0.50	1,053	3,383	97.1%	96.0%	0.13	0.12	280	900	0.37	773	2,483
Compost	15.0	15.0	15.0%	10.0%	2,080	0	6,680	0	100.0%	86.9%	81.9%	0.34	0.33	707	2,270	96.9%	96.0%	0.07	0.06	152	487	0.27	555	1,783
Operations	30.0	30.0	15.0%	10.0%	2,080	0	6,680	0	100.0%	89.9%	85.8%	0.51	0.50	1,053	3,383	97.1%	96.0%	0.13	0.12	280	900	0.37	773	2,483
Operations	30.0	30.0	15.0%	10.0%	2,080	0	6,680	0	100.0%	89.9%	85.8%	0.51	0.50	1,053	3,383	97.1%	96.0%	0.13	0.12	280	900	0.37	773	2,483
Pump House	15.0	15.0	15.0%	10.0%	2,080	0	6,680	0	100.0%	86.9%	81.9%	0.34	0.33	707	2,270	96.9%	96.0%	0.07	0.06	152	487	0.27	555	1,783
Pump House	15.0	15.0	15.0%	10.0%	2,080	0	6,680	0	100.0%	86.9%	81.9%	0.34	0.33	707	2,270	96.9%	96.0%	0.07	0.06	152	487	0.27	555	1,783
Blower	15.0	15.0	15.0%	10.0%	2,080	0	6,680	0	100.0%	86.9%	81.9%	0.34	0.33	707	2,270	96.9%	96.0%	0.07	0.06	152	487	0.27	555	1,783
Blower	15.0	15.0	15.0%	10.0%	2,080	0	6,680	0	100.0%	86.9%	81.9%	0.34	0.33	707	2,270	96.9%	96.0%	0.07	0.06	152	487	0.27	555	1,783
Totals	**225.0**	**225.0**	**15.0%**	**10.0%**								**4.58**	**4.48**	**9,522**	**30,580**			**1.06**	**0.94**	**2,205**	**7,082**	**3.52**	**7,317**	**23,498**

Cell Ref.	Comment
A	Location of Transformer
B	Existing Transformer Nameplate Rating - kVA
C	New Transformer Nameplate Rating - kVA
D - E	Estimated existing transformer loading as a percent of nameplate rating
F - I	Facility operating hours from EMS calculation
J	Estimated load powerfactor seen at the transformer - output
K	= [col B] x [col D] x 1,000 ÷ ([col B] x [col D] x 1,000 + (standard no load losses) + [col D]^2 x (standard full load losses minus standard no load losses))
L	= [col B] x [col E] x 1,000 ÷ ([col B] x [col E] x 1,000 + (standard no load losses) + [col E]^2 x (standard full load losses minus standard no load losses))
M	= ([col B] x [col D] x [col J] ÷ [col K] - [col B] x [col D] x [col J])
N	= ([col B] x [col E] x [col J] ÷ [col L] - [col B] x [col E] x [col J])
O	= [col M] x [col F] + [col N] x [col G]
P	= [col M] x [col H] + [col N] x [col I]
Q	= [col C] x [col D] x 1,000 ÷ ([col C] x [col D] x 1,000 + (esaver no load losses) + [col D]^2 x (esaver full load losses minus esaver no load losses))
R	= [col C] x [col E] x 1,000 ÷ ([col C] x [col E] x 1,000 + (esaver no load losses) + [col E]^2 x (esaver full load losses minus esaver no load losses))
S	= ([col C] x [col D] x [col J] ÷ [col Q] - [col C] x [col D] x [col J])
T	= ([col C] x [col E] x [col J] ÷ [col R] - [col C] x [col E] x [col J])
U	= [col S] x [col F] + [col T] x [col G]
V	= [col S] x [col H] + [col T] x [col I]
W	= [col M] - [col S]
X	= [col O] - [col U]
Y	= [col P] -[col V]

ESAVER-C3L loss calculator

kVA	No Loads (W)	full load losses (w)
5	25	500
9	45	700
15	55	851
20	70	836
25	101	883
30	115	989
40	137	1233
45	124	1654
50	140	1644
75	187	1956
100	198	2882
112.5	219	2926
150	303	3251
200	394	4435
225	440	5026
300	462	6477
400	632	7755
500	706	8907
750	1094	11026

Standard AL 115C loss table

kVA	No Load (W)	Full load (W)
5	125	675
9	225	875
15	325	985
20	380	1063
25	490	1218
30	490	1218
40	500	1629
45	680	1835
50	690	1967
75	856	2789
100	1046	3559
113	1046	3559
150	1327	4620
200	1942	6033
225	2250	6740
300	2860	7160
400	3345	8495
500	3830	9830
750	3980	16800

Appendix for ESM 13: Transformer Replacement

II. Manufacturer Specification Sheets

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

E-Saver™ Transformer

APPLICATIONS

The E-Saver transformer is available with multiple efficiency ratings to deliver the lowest lifecycle cost to a wide variety of applications. E-Saver's reduce transformer losses by as much as 74%, providing consistent predictable electricity savings for decades in commercial and institutional environments.

DESCRIPTION

Since its introduction in 2002, the E-Saver transformer has set the benchmark for environmental protection, energy efficiency and reliability. Unlike standard and K-rated off-the-shelf transformers, E-Savers provide very high efficiency over broad load profiles including electronic loads. To ensure longer life and reduced environmental impact, E-Saver incorporates a Class 220 Nomex based insulation system with an organic epoxy impregnant.

QUIET OPERATION

Workplace productivity can be compromised when noisy transformers are located close to people. To meet this challenge, E-Saver has embedded structural and acoustic treatments that combine to ensure quiet-operation; noise tests are part of our ISO9001 procedures for every transformer. Extra low-noise models are also available for sensitive environments.

INTEGRATED METERING OPTIONS

E-Saver transformers can be ordered with integrated SMART™ meters to acquire energy, power and efficiency measurements. Integrating meters helps lower the cost of commissioning and performance validation, by eliminating the need to open transformer enclosures to acquire measurements. A variety of meters are available including web-accessible meters that can be connected to Powersmiths WOW sustainability management system or third party building management systems to support ongoing accountability of energy use over time.



ROTATABLE INFRARED VIEWING PORT OPTION

Powersmiths Rotatable IR (Infrared) Viewing Port enables safe, non-invasive thermographic imaging of live equipment, without exposing personnel to electrical hazards like Arc-Flash. It is available as a factory installed option on all Powersmiths transformers.

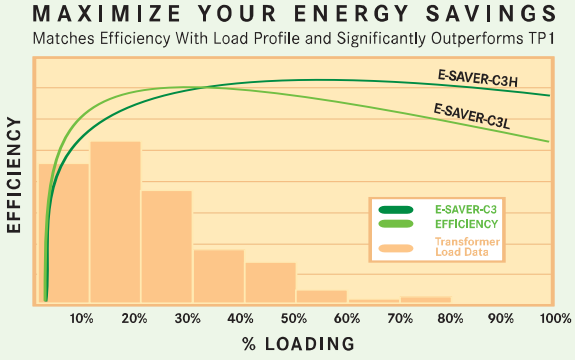
ENVIRONMENT & QUALITY

A continuous improvement "lean green" strategy guides Powersmiths' product design and manufacturing. Initiatives such as increasing transformer efficiency, the Easy Skid, use of biodegradable product packaging and the reduction of harmful volatile organic compounds in production processes, are just a few examples of the extent to which Powersmiths takes its values seriously. Through these efforts Powersmiths has earned both ISO 14001 certification for its environmental management system and ISO 9001 for its quality management system.

TESTING AND WARRANTY

The E-Saver is subjected to extensive performance validation including efficiency under real world operating conditions. E-Saver's long life and dependable performance is backed up by Powersmiths' industry leading 25 year pro-rated warranty.

KEY FEATURES



- **Provides best available efficiency on the market**
- **K-rated for real world electronic loads**
- **Minimizes electricity waste**
- **Optimized for cool and quiet operation**
- **Significantly exceeds NEMA TP-1 (C-802) efficiency**
- **Provides the lowest life cycle cost for your energy rate**

STANDARD CONFIGURATION

The Powersmiths E-Saver is a high efficiency k-rated 60Hz dry-type distribution transformer available in 3-phase and single phase models with either aluminum or copper windings.

The E-Saver-C3L is optimized for light loading with copper (k7) or aluminum (k4).
The E-Saver-C3H is optimized for heavy loading with copper (k13).

Standard temperature rise for the C3L model is 130C, for the C3H, C4, C5 it is 115C or lower. Under the static NEMA TP2 test, the C3L and C3H have up to 35% less losses than a TP1* (C802), but deliver over 50% less losses in real world conditions, as validated by extensive field testing.

The C4 and C5 models deliver additional incremental savings – up to 45% and 55% respectively compared to TP1 (C802), to satisfy the need for higher efficiencies and improved ROI (*) where higher energy rates prevail, including solar applications.

CERTIFICATIONS

The E-Saver is certified to UL1561 and CSA-C22.2-47-M90 for distribution class transformers and meets applicable ANSI and IEEE standards; primary and secondary terminals and voltage taps are readily accessible by removing the front cover plate; 10kV BIL, 220C class insulation.

SELECT

Efficiency class: C3L, C3H, C4, C5
kVA: Rating of unit (15-1000 kVA, up to 5000 kVA)
PV: Primary voltage (600, 480, 415, 400, 380, 208, up to 15kV)
SV: Secondary voltage (208/120V, 480/277V, 600/347V, others available)
Options as listed

SAMPLE PART NUMBER

ESAVER-C3L-75-480-208

ESAVER-C5-225-208-600-K9

Winding Configurations: Delta-wye, Y-Y, split-phase, other

* FEDERAL REGISTER – US DOE, Office of Energy Efficiency and Renewable Energy. 10 CFR Part 430, July 29, 2004. Energy Conservation Program for Commercial and Industrial Equipment: Energy Conservation Standards for Distribution Transformers; Proposed Rule

TECHNICAL DATA

kVA	Impedance (%Z)	C3L Weight (lbs)	C3H Weight (lbs)	Case Size (Inches)
15	3.0 - 6.0%	200 - 250	210 - 260	A (18W x 17D x 27H)
30	3.0 - 6.0%	320 - 400	350 - 430	B (26W x 18D x 30H)
45	3.0 - 6.0%	400 - 500	420 - 520	B (26W x 18D x 30H)
75	3.0 - 6.0%	570 - 670	610 - 710	C (32W x 22D x 40H)
112.5	3.0 - 6.0%	850 - 950	880 - 1000	C (32W x 22D x 40H)
150	3.0 - 6.0%	1100 - 1300	1150 - 1350	D (38W x 27D x 48H)
225	3.0 - 6.0%	1550 - 1750	1700 - 1900	D+ (38W x 32D x 52H)
300	3.0 - 6.0%	1850 - 2050	1950 - 2150	D+ (38W x 32D x 52H)
500	3.0 - 6.0%	2500 - 2700	2900 - 3100	E+ (52W x 38D x 61H)
750	3.0 - 6.0%	3700 - 4300	4000 - 4400	F (64W x 47D x 67H)

The above data applies to configurations up to 600V, with NEMA 1enclosure and standard temperature rise. Selection of some options may change enclosure size and weight. Consult factory for detailed product data sheet for these and other configurations.
*Specific case used determined by factory unless specified. Special designs available to meet custom requirements.

AVAILABLE OPTIONS

SMART1: Integrated metering port

SMART2: Integrated Power & Energy Meter

SMART3: Integrated Meter with Web access

CYBERHAWK-TX: Efficiency & Power Meter

ROTATABLE IR PORT: 2", 3", 4"

TEMPERATURE RISE: 115 or 80 deg. C

FREQUENCY: 50Hz

K-RATING: K4, K9, K13, K20

ELECTROSTATIC SHIELDING: Single, dual, triple

SPD: 7 mode 80kA, 120kA, 160kA

LUG KIT: Screw-type compression

THERMAL SENSORS: 170C, 200C

SENSITIVE ENVIRONMENT: Extra low noise

WINDINGS: Copper, Aluminum

ENCLOSURE TYPES: N3R sprinkler proof, outdoor padmount, hinged doors, totally enclosed (75kVA Max), stainless steel

SEISMIC CERTIFICATIONS: OSHPD, IBC 2006/2009

ISO 9001
ISO 14001

Technical specification subject to change without notice.

Copyright 2011, Powersmiths International Corp. All rights reserved. E-Saver-C3™ and Powersmiths WOW are trademarks of Powersmiths International Corp.

POWERSMITHS

POWERSMITHS INTERNATIONAL CORP. 10 Devon Road, Brampton, Ontario L6T 5B5 Canada
Phone: (905) 791-1493 Toll-free: (800) 747-9627 Fax: (905) 791-8870 Email: info@powersmiths.com
www.powersmiths.com

807-000431-121-A05

ESM 14:
Steam Trap Replacement

ESM Overview

Ameresco proposes to replace steam traps at the Central High School and Eastern High School. The proposed replacement and/or repair of steam traps will improve the overall steam use and heating system efficiencies. Steam distribution is accomplished at low pressure with thermal energy wasted due to failing traps. Properly functioning steam traps pass air and drain condensate formed in the steam distribution system and prevent live steam from exiting. This measure will address approximately 588 existing steam traps, and the improvement will result in energy and maintenance cost savings for the City.



Figure 14.1: Existing trap located at the Central High School.

ESM Detail

Existing System

The Central High School and Eastern High School utilize steam boilers to heat the buildings. The steam boilers at Central High currently fire on oil while the Eastern High boilers fire on natural gas and are both coupled with a steam and condensate distribution system to heat sections of the buildings. Failed open steam traps permit steam to enter the condensate plumbing. This wasted steam is then vented through the condensate receivers. Steam traps that fail in the closed position restrict the flow of condensate to the return piping.

At the Central and Eastern High Schools, the majority of traps observed are currently SteamLoc orifice type traps, where a plate keeps live steam from flowing, and the hole or orifice allows either condensate or a small amount of live steam to escape. Properly sized orifice plate steam traps can function properly, but they are not suitable for all applications. Steam will escape when no condensate is present, and condensate backups can occur at start up and during periods of high demand. Orifice plate steam traps are best suited for situations where the pressure difference across the plate and the condensate load remain constant. Based on conversations with personnel for the schools it was reported the orifice traps are not functioning properly in some areas, and have been causing clogs in the system and rotting out pipes.

Leaking steam traps typically go unnoticed because they have little effect on the terminal heating units. A typical problem report is for a failed closed, or cold, steam trap. This results in a high failure rate for the steam traps in the open position, resulting in substantial steam losses.

"Page content is subject to Confidentiality Restrictions"

Properly functioning steam traps pass air and drain condensate formed in the steam distribution systems and prevent live steam from exiting. The condensate is trapped and removed via various types of steam traps, each with a specific function and range of applications. Steam traps of differing design perform the task of removing condensate from various components such as drip legs, heating coils and converters. These traps require periodic maintenance to assure proper operation.

Please refer to the following table for a list of steam traps to be replaced. The inventory is based on a steam trap survey performed during the IGEA by Ameresco.

NOTE: The trap survey of the two High Schools was conducted after the steam boilers had been turned off, so physical testing of each trap was not conducted at this time. Also note, not all areas were accessed therefore additional traps may be present which were not included below. The tunnels were not entered, so steam trap estimates were made for these confined spaces.

*Table 14.1: **Central High School** Existing Steam Trap Count*

Trap Size	TT	FT	FO
1 / 2 "	13	-	-
3 / 4 "	124	8	102
1 "	13	13	20
Total	**150**	**21**	**122**

FT=Float & Thermostatic; TT=Thermostatic; FO=Fixed Orifice/Venturi Traps

*Table 14.2: **Eastern High School** Existing Steam Trap Count*

Trap Size	TT	FT	FO
1 / 2 "	18	-	-
3 / 4 "	128	5	109
1 "	10	2	21
1 – 1 / 2 "	-	2	-
Total	**156**	**9**	**130**

FT=Float & Thermostatic; TT=Thermostatic; FO=Fixed Orifice/Venturi Traps

Proposed System

Ameresco proposes to replace or repair (in certain cases) the steam traps at the Central and Eastern High School to improve the overall steam use and heating system efficiencies. The scope of work will consist of replacing all of the existing traps with new or retrofit traps. With this method, all failed traps are assured to be replaced. The malfunctioning F&T traps will be repaired where possible or replaced with properly sized equivalents, while the malfunctioning thermostatic traps will be fitted with new components. Steam trap housings will be reused wherever possible with only the critical parts being retrofitted with new elements. All existing in-line orifice style traps will be replaced with in-line float & thermostatic steam traps. Thermostatic traps will be replaced with new drop-in elements. If repairs to the existing thermostatic traps are not feasible, at Ameresco's discretion, the trap will be replaced with a new trap.

"Page content is subject to Confidentiality Restrictions"

Ameresco did not observe any major issues that would merit a significant allowance for piping repair. A small budget was included to make repairs to pipe and/or valves within twelve (12) inches of the steam traps. Major repairs to the existing steam and condensate piping are excluded from the scope.

Excluded from the scope of work is any asbestos abatement and repair of existing steam/condensate piping. Based on visual inspections, asbestos surrounding the steam traps was not present.

During construction a complete steam trap survey will be conducted including testing of each trap at Eastern High School to be eligible for the 50% incentive offered by Eversource. Central High School is heated by oil so there would not be an incentive from Eversource.

>Equipment, Design and Construction Documentation

Equipment will be identified in submittals provided for approval prior to procurement. Documents will be submitted to the facilities department for their review and comment. Upon approval, these will constitute the construction documents. Upon completion of the construction phase, the documents will be revised as needed to reflect "As-Built" conditions and submitted in multiple for record.

>Impact on Facility Operations and Performance

The new steam traps will improve the existing steam system's efficiency. The new steam traps will reduce maintenance cost and energy savings will result due to fewer failures.

"Page content is subject to Confidentiality Restrictions"

This page is intentionally left blank.

Appendix for ESM 14: Steam Trap Replacement

I. Energy Savings Calculations

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

City of Bristol, CT	
Energy and Demand Savings Summary	
Measure ID:	**14**
Measure Name:	**Steam Trap Replacement**
Measure Location:	
Engineers:	

Site Name:		**Central_High**	**Eastern_High**	**Summary**
Item	Units	Savings	Savings	
Electricity				
Energy On-Peak	kWh			0
Energy Off-Peak	kWh			0
Energy Total	kWh	0	0	0
Demand On-Peak, Monthly	kW			0.0
Demand On-Peak, Annual	kW			0.0
Demand Off-Peak, Monthly	kW			0.0
Demand Off-Peak, Annual	kW			0.0
Fossil Fuel				0
Natural Gas (NG)	CCF		4,520	4,520
Liquid Propane Gas (LPG)	Gallons			0
Steam	Mlbs			0
Fuel Oil, #2	Gallons	4,498		4,498
Fuel Oil, #4	Gallons			0
Fuel Oil, #6	Gallons			0
Max Daily Demand (Natural Gas)	CCF (Demand)			0
Water				0
Water Savings	CF			0
Sewer				0
Sewer Savings	CF			0

AMERESCO

City of Bristol, CT
Bristol Central High School
Steam Trap Replacement

Function	Trap Type	Quantity	Trap Orifice Diameter (Inches)	Steam Pressure (Psig)	Quantity of Traps Failed Open	Quantity of Traps Leaking Open	Failed Trap Steam Loss (lbs/hr)	Leaking Trap Steam Loss (lbs/hr)	Heating System Operating Hours	Blow-by Steam (Mlb/yr)	Blow-by Steam (MMBTU)
[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
Drip	Bucket		5/32	9	0.0	0.0	0.0	0.0	3,166	0	0
Drip	FT		17/78	9	0.0	0.0	0.0	0.0	3,166	0	0
Process	Bucket		3/16	9	0.0	0.0	0.0	0.0	3,166	0	0
Hvac	1" FT	21	17/78	9	0.8	0.4	19.1	2.4	3,166	34	44
Hvac	1-1/4" FT		5/16	9	0.0	0.0	0.0	0.0	3,166	0	0
Hvac	1-1/2" FT		16/41	9	0.0	0.0	0.0	0.0	3,166	0	0
Hvac	2" FT		1/2	9	0.0	0.0	0.0	0.0	3,166	0	0
Rad	Thermo.	150	1/4	9	6.0	3.0	179.5	22.4	3,166	320	410
Venturi	Venturi	102	3/16	9	4.1	2.0	68.7	8.6	3,166	122	157
Venturi	Venturi	20	1/8	9	0.8	0.4	6.0	0.7	3,166	11	14
Totals		**293**			**11.7**	**5.9**	**273.2**	**34.2**		**487**	**624**

Item	Value	Units	Cell Ref	Remarks
Failed Trap Discharge Coefficient	0.50		**[D22]**	A function of hole size and geometry
Leaking Trap Discharge Coefficient	0.25		**[D23]**	A function of hole size and geometry
% of Failed Steam Traps	4%		**[D24]**	Estimated
% of Leaking Steam Traps	2%		**[D25]**	Estimated
% of Time Blow-by	50%		**[D26]**	Estimated
Heating System Efficiency	78%		**[D27]**	From Baseline
Enthalpy of Steam	1,000.0	Btu/lb	**[D28]**	Based on operating steam pressure

Cell Ref.	Comment
A	Equipment steam trap serves
B	Type of trap
C	Quantity of traps
D	Diameter of trap orifice
E	Operating steam pressure at steam trap
F	Quantity of traps failed
G	Quantity of traps leaking
H	= 3600 ÷ 70 x PI() ÷ 4 x [D22] x [D] ^2 x ([E) + 14.7) x [F]
I	= 3600 ÷ 70 x PI() ÷ 4 x [D22] x [D23] x [D] ^2 x ([E) + 14.7) x [F]
J	Hours the heating system is on.
K	= ([H] + [I]) x [J] x [D26] ÷ 1,000
L	= [K] x 1,000 x [D28] ÷ 1,000,000 ÷ [D27]

Page content is subject to Confidentiality Restrictions

City of Bristol, CT
Bristol Eastern High School
Steam Trap Replacement

Function	Trap Type	Quantity	Trap Orifice Diameter (Inches)	Steam Pressure (Psig)	Quantity of Traps Failed Open	Quantity of Traps Leaking Open	Failed Trap Steam Loss (lbs/hr)	Leaking Trap Steam Loss (lbs/hr)	Heating System Operating Hours	Blow-by Steam (Mlb/yr)	Blow-by Steam (MMBTU)
[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
Drip	Bucket		5/32	8	0.0	0.0	0.0	0.0	3,017	0	0
Drip	FT		17/78	8	0.0	0.0	0.0	0.0	3,017	0	0
Process	Bucket		3/16	8	0.0	0.0	0.0	0.0	3,017	0	0
Hvac	1" FT	7	17/78	8	0.2	0.1	4.6	0.8	3,017	8	11
Hvac	1-1/4" FT		5/16	8	0.0	0.0	0.0	0.0	3,017	0	0
Hvac	1-1/2" FT	2	16/41	8	0.1	0.0	4.2	0.7	3,017	7	10
Hvac	2" FT		1/2	8	0.0	0.0	0.0	0.0	3,017	0	0
Rad	Thermo.	156	1/4	8	4.7	3.1	134.1	22.3	3,017	236	310
Venturi	Venturi	109	3/16	8	3.3	2.2	52.7	8.8	3,017	93	122
Venturi	Venturi	21	1/8	8	0.6	0.4	4.5	0.8	3,017	8	10
Totals		**295**			**8.9**	**5.9**	**200.1**	**33.3**		**352**	**463**

Item	Value	Units	Cell Ref	Remarks
Failed Trap Discharge Coefficient	0.50		**[D22]**	A function of hole size and geometry
Leaking Trap Discharge Coefficient	0.25		**[D23]**	A function of hole size and geometry
% of Failed Steam Traps	3%		**[D24]**	Estimated
% of Leaking Steam Traps	2%		**[D25]**	Estimated
% of Time Blow-by	50%		**[D26]**	Estimated
Heating System Efficiency	76%		**[D27]**	From Baseline
Enthalpy of Steam	1,000.0	Btu/lb	**[D28]**	Based on operating steam pressure

Cell Ref.	Comment
A	Equipment steam trap serves
B	Type of trap
C	Quantity of traps
D	Diameter of trap orifice
E	Operating steam pressure at steam trap
F	Quantity of traps failed
G	Quantity of traps leaking
H	= 3600 ÷ 70 x PI() ÷ 4 x [D22] x [D] ^2 x ([E) + 14.7) x [F]
I	= 3600 ÷ 70 x PI() ÷ 4 x [D22] x [D23] x [D] ^2 x ([E) + 14.7) x [F]
J	Hours the heating system is on.
K	= ([H] + [I]) x [J] x [D26] ÷ 1,000
L	= [K] x 1,000 x [D28] ÷ 1,000,000 ÷ [D27]

Page content is subject to Confidentiality Restrictions

Appendix for ESM 14: Steam Trap Replacement

II. Manufacturer Specification Sheets

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

www.tunstall-inc.com

Tunstall®

Est. 1958

Steam Products



Tunstall Capsule®



Thermostatic Radiator Steam Traps



Thermal-Disc Steam Traps



Float & Thermostatic Steam Traps



Inverted Bucket Steam Traps



Pressure Action Pumps

Distributed By:

Tunstall Associates, Inc. • 118 Exchange Street • Chicopee, MA 01013 • Phone: (413) 594-8695 • Fax: (413) 598-8109

Tunstall®

Established 1958

Thermostatic Radiator Steam Traps

Series TA

Operation

Tunstall Associates, Inc. produces a complete line of thermostatic radiator steam traps with ratings up to 125 psi. Each unit is tested and inspected before leaving the factory guaranteeing years of trouble free service. All units are "normally open" to expel air and water and will "close" at saturated steam temperature thereby preventing steam from entering into condensate return lines. Each Tunstall Steam Trap features the Tunstall Capsule® which has become the best steam trap replacement bellows available today.





Tunstall Capsule®

Features

- Chrome-plated heavy duty forged brass
- TIG welded stainless steel Tunstall Capsule® with balanced pressure stainless steel bellows
- Calibrated, inspected and tested
- Ratings from 25" Hg vacuum to 125 psi
- Available in 1/2" & 3/4" straight or angle, 1/2" x 3/4" angle, 1/2" vertical and 1" angle patterns

Benefits

- Simple installation
- Corrosion resistant stainless steel internals
- Extended life on low pressure applications

Applications

- Cast Iron Radiators
- Finned Tube Radiation
- Convectors
- Air Coils
- Sterilizers
- Drips

Typical Specification

Furnish and install Tunstall Thermostatic Steam Traps as shown or as specified on plans and in accordance with manufacturer's instructions, sizes 1/2", 3/4" or 1". The trap body and cover shall be forged brass and provided with an entirely stainless steel Tunstall Capsule®. Rating shall be _____ lbs/hr at _____ PSIG pressure differential. Each unit shall be guaranteed for 2 years from date of installation.

The Tunstall Capsule® professionally upgrades all thermostatic steam traps. Refer to catalog #795 or www.tunstall-inc.com for more detailed information.

Tunstall Associates, Inc.
118 Exchange Street · Chicopee, MA 01013

Tunstall

Phone (413) 594-8695 · Fax (413) 598-8109
www.tunstall-inc.com

© June 2002

TUNSTALL THERMOSTATIC STEAM TRAPS SERIES "TA"

Engineering Specifications

CAPACITIES*

			DIFFERENTIAL PRESSURE (PSI)									
			Square Feet EDR**							lbs Condensate per hour***		
Model	Size NPT	PSIG Orifice	1/2	1	1-1/2	2	5	10	25	50	75	125
TA-1/2-A	1/2"	5/16	120	165	200	230	3320	500	825	1400	1700	1950
TA-3/4-A	3/4"	5/16	230	330	400	465	730	1050	1700	2375	2680	3300
TA-1-A	1"	1/4	430	590	700	760	1200	1750	4100	4050	4700	5500
TA-1/2x3/4-A	1/2"x3/4"	5/16	230	330	400	465	730	1050	1700	2375	2680	3300
TA-1/2-S	1/2"	5/16	120	165	200	230	320	500	825	1400	1700	1950
TA-3/4-S	3/4"	5/16	230	330	400	465	730	1050	1700	2375	2680	3300
TA-1/2-V	1/2"	5/16	120	165	200	230	320	500	825	1400	1700	1950

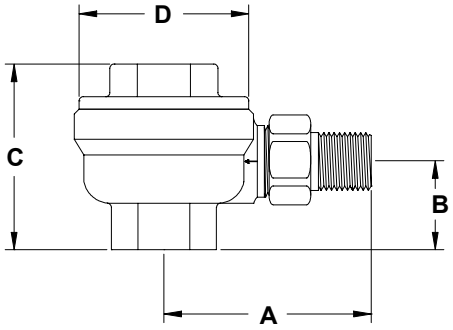
*Ratings are in accordance with standards established by The Steam Heating Equipment Manufacturers Association (SHEMA). No safety factor required.

**To convert Square Feet EDR to pounds of condensate per hour: Divide the square foot ratings by 4.

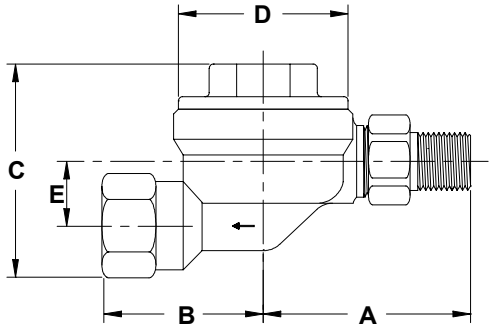
One Square Foot EDR is equivalent to net emission of 240 BTU per hour with 215°F steam in the radiator surrounded by 70°F air temperature.

***Basic ratings for trap pressures greater than 25psi are given in lbs of condensate per hour.

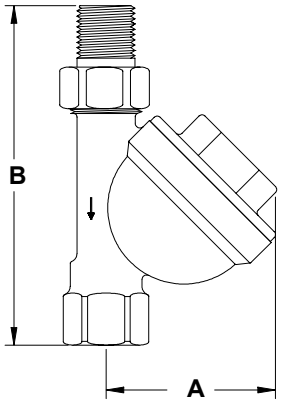
One pound of condensate is equivalent to approximately 1000 BTU; 1000 BTU is equivalent to approximately 4 square feet EDR.



Angle Pattern (A)



Straight Pattern (S)



Vertical Pattern (V)

Model No.	Pipe Size	A	B	C	D	E	Weight
TA-1/2-A	1/2" Angle	3.00	1.25	2.57	2.56	--	1.75 lbs
TA-3/4-A	3/4" Angle	3.38	1.37	2.87	2.56	--	1.84 lbs
TA-1-A	1" Angle	4.13	2.00	4.12	2.08	--	2.50 lbs
TA-1/2-S	1/2" Straight	3.00	2.15	3.00	2.50	1.00	1.94 lbs
TA-3/4-S	3/4" Straight	3.38	2.15	3.00	2.50	1.00	2.05 lbs
TA-1/2X3/4-A	1/2" X 3/4" Angle	3.38	1.25	2.57	2.56	--	1.75 lbs
TA-1/2-V	1/2" Vertical	2.50	4.85	--	--	--	1.65 lbs

Tunstall Associates, Inc.
118 Exchange Street · Chicopee, MA 01013

Phone (413) 594-8695 · Fax (413) 598-8109
www.tunstall-inc.com

Tunstall Assoc., Inc. Reserves the right to change the design and/or materials of its products without notice.

Tunstall®

Established 1958

Thermal-Disc™ Steam Traps

Series TA-TD

Operation

Tunstall Associates, Inc. produces a full line of Thermal-Disc™ Steam Traps. Available in 3/8", 1/2", 3/4" and 1" NPT connections, all the internal parts are stainless steel for long service life.

The Tunstall Thermal-Disc™ operates using Bernoulli's Theorem; as condensate enters the Thermal-Disc™ Trap, it lifts the thermal disc and discharges through outlet ports. Multiple outlet ports assure that the lift of the disc is parallel to the seat for efficient operation. Once the condensate reaches its flash point, the pressure on the top of the disc increases, due to higher velocity steam, causing the disc to snap closed. As the steam above the disc condenses, pressure above the disc will lower, and allow the disc to lift again and repeat the process.



Features

- In-Line Connection
- Compact Size
- High Strength Stainless Steel Construction
- Low Maintenance (Only one moving part)
- Can be installed Vertically for "Freeze Proof" installation

Applications

- Steam Main Drainage
- High Pressure Drips
- Tracer Lines
- Process Equipment
- Laundry Equipment
- Kitchen Equipment
- Superheated Steam applications
- Outdoor installations subject to freezing

Materials of Construction	
Body	Stainless Steel AISI 420F
Cap	Stainless Steel AISI 416
Disc	Stainless Steel AISI 420

Tunstall Associates, Inc.
118 Exchange Street · Chicopee, MA 01013

Phone (413) 594-8695 · Fax (413) 598-8109
www.tunstall-inc.com

© December 2003

THERMAL-DISC™ STEAM SERIES "TA-TD"

Engineering Specifications

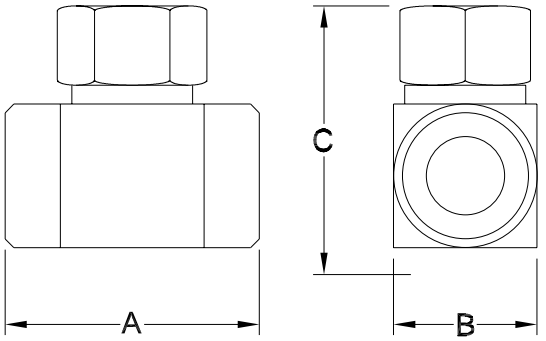
Pressure/ Temperature Rating

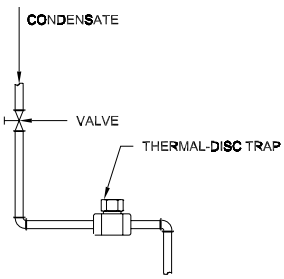
PMA - Max. Allowable Pressure: 600 psi
TMA - Max. Allowable Temperature: 800° F
PMO - Max. Operating Pressure: 600 psi
TMO - Max. Operating Temperature: 800° F

Dimensions and Weights

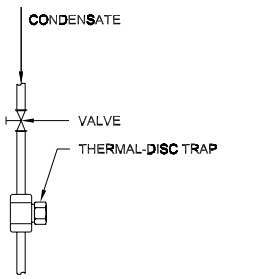
Model	Size	A	B	C	Weight
TA-TD-38	3/8"	1-3/8	2	1-11/16	.75
TA-TD-50	1/2"	1-1/2	2-11/16	2	1.25
TA-TD-75	3/4"	1-3/4	2-13/16	2-3/8	2
TA-TD-100	1"	2-1/8	3-3/16	2-13/16	3

Note: Dimensions in inches & Weights in pounds





TYPICAL INSTALLATION



FREEZE-PROOF INSTALLATION

Capacities - lbs. of condensate/hr

Inlet (psig)	TA-TD-38	TA-TD-50	TA-TD-75	TA-TD-100
3.5	180	300	415	650
5	185	315	430	680
10	190	350	475	740
15	195	380	520	815
20	200	415	565	885
25	215	440	610	940
30	220	470	650	1000
40	230	515	720	1080
50	250	580	825	1225
75	310	710	1020	1500
100	375	825	1185	1800
150	500	1020	1480	2215
200	620	1165	1710	2625
250	710	1300	1950	2935
300	800	1440	2110	3300
350	825	1565	2265	3600
400	900	1670	2490	3875
450	1070	1775	2625	4120
500	1120	1880	2780	4350
550	1185	1960	2985	4560
600	1290	2060	3140	4840

Note: Max. back pressure should not exceed 80% of the inlet pressure under any conditions of operation, otherwise the trap may not shut.

Installation

Valve installation is typically in the horizontal position as close to the equipment being drained as possible. A 20 mesh strainer is recommended upstream of the trap as is an isolation valve. Piping to and from the trap should be equal to the trap connection (one size larger is acceptable). Body material is not suitable for welding.

Freeze proof installation is achieved by installing the trap vertically, discharging downward. All drains must be pitched towards the trap. Discharge piping must be self-draining.

Tunstall Associates, Inc.
118 Exchange Street · Chicopee, MA 01013
Phone (413) 594-8695 · Fax (413) 598-8109
www.tunstall-inc.com

Tunstall Assoc., Inc. Reserves the right to change the design and/or materials of its products without notice.

Tunstall®

Established 1958

Float & Thermostatic Steam Traps

Series TA-FT

Operation

Tunstall Associates, Inc. produces a full line of Float & Thermostatic Steam Traps containing a float valve mechanism which modulates to discharge condensate continuously, while non-condensable gases are released by a separate internal balanced pressure thermostatic air vent (The Tunstall Capsule®).

The "H" pattern body on all ¾", 1" (15, 30, 75 & 125 psig) and 1-1/4" (15 & 30 psig) has been designed to offer maximum installation flexibility.

For larger sizes 1-1/2", 2" (15, 30, 75 & 125 psig) and 1-1/4" (75 & 125 psig), the inlet and outlet taps are located in the cover. This design allows for higher capacities and direct retrofits for older piping systems. All Tunstall float and thermostatic traps can be serviced without disturbing system piping.



Features

- Variety of piping connections.
- Stainless steel balanced pressure thermostatic air vent (Tunstall Capsule®).
- All stainless steel internal components
- Wide selection ¾"-2" @ 15, 30 , 75 & 125 psig differential pressures.
- Designed to withstand water hammer & high load demands.
- Designed for In-line repair.
- Made in the U.S.A.

Construction

Tunstall float and thermostatic traps feature all stainless steel interiors, heavy duty trap housings, easy access to internal parts and convenient piping connections.

Materials of Construction	
Body & Cover	Cast Iron-ASTMA 126CI B
Valve Head	Stainless Steel
Valve Seat	Stainless Steel
Valve Seat Gasket	Stainless Steel
Float	Stainless Steel
Bracket & Lever Assembly	Stainless Steel
Thermostatic Air Vent	Tunstall Capsule® Stainless Steel
Cover Bolts	Carbon Steel Grade 5
Cover Gasket	Non-Asbestos
Draining Plug	Stainless Steel

Tunstall Associates, Inc.
118 Exchange Street · Chicopee, MA 01013
Phone (413) 594-8695 · Fax (413) 598-8109
www.tunstall-inc.com

© December 2003

FLOAT & THERMOSTATIC STEAM TRAPS SERIES "TA-FT"

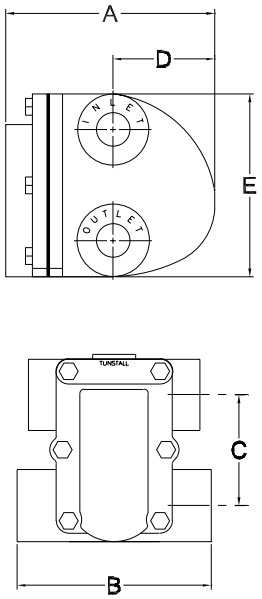
Engineering Specifications

CAPACITIES*

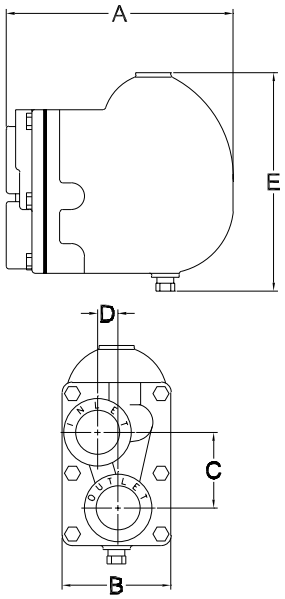
lbs. Condensate per hour

Model	Size NPT	PSIG Orifice	DIFFERENTIAL PRESSURE (PSI) ¼	½	1	2	5	10	15	20	25	30	40	50	75	100	125
TA-FT3-15	¾"	.218	279	369	489	650	785	1000	1075								
TA-FT4-15	1"	.218	279	369	489	650	785	1000	1075								
TA-FT5-15	1¼"	.312	600	770	980	1240	1640	2000	2340								
TA-FT6-15	1½"	.500	1100	1700	2400	3300	5000	6600	7600								
TA-FT8-15	2"	.625	2300	2800	3600	4650	6900	9000	10900								
TA-FT3-30	¾"	.218	279	369	489	650	785	1000	1075	1210	1300	1370					
TA-FT4-30	1"	.218	279	369	489	650	785	1000	1075	1210	1300	1370					
TA-FT5-30	1¼"	.228	375	500	690	910	1200	1500	1680	1800	1900	2000					
TA-FT6-30	1½"	.390	1000	1300	1700	2300	3400	4600	5500	6000	6600	7000					
TA-FT8-30	2"	.500	1300	1800	2500	3400	5200	6800	7800	8600	9300	10000					
TA-FT3-75	¾"	.166	160	213	280	365	520	700	795	875	930	970	1120	1230	1450		
TA-FT4-75	1"	.166	160	213	280	365	520	700	795	875	930	970	1120	1230	1450		
TA-FT5-75	1¼"	.312	550	725	960	1300	1900	2650	3050	3400	3700	4000	4400	4750	5400		
TA-FT6-75	1½"	.312	550	725	960	1300	1900	2650	3050	3400	3700	4000	4400	4750	5400		
TA-FT8-75	2"	.421	850	1100	1500	2000	3100	4150	4750	5200	5500	5800	6400	6800	7700		
TA-FT3-125	¾"	.125	100	135	175	230	330	415	500	585	620	685	750	830	970	1110	1190
TA-FT4-125	1"	.125	100	135	175	230	330	415	500	585	620	685	750	830	970	1110	1190
TA-FT5-125	1¼"	.246	400	520	680	890	1300	1700	2050	2300	2500	2700	3000	3200	3800	4200	4500
TA-FT6-125	1½"	.246	400	520	680	890	1300	1700	2050	2300	2500	2700	3000	3200	3800	4200	4500
TA-FT8-125	2"	.332	550	675	880	1225	1950	2600	3000	3250	3500	3800	4200	4600	5500	6100	6600

All ¾", 1", 1¼", TA-FT-15, TA-FT-30



All 1½", 2", 1¼", TA-FT-75, TA-FT-125



Model	Size	DIMENSIONS (Inches) A	B	C	D	E	Weight (lbs.)
TA-FT3-15	¾"	6.25	5.50	3.31	3.00	5.75	9
TA-FT4-15	1"	6.25	5.50	3.31	3.00	5.75	9
TA-FT5-15	1¼"	6.25	5.75	3.00	3.81	5.75	9½
TA-FT6-15	1½"	8.50	4.25	3.00	0.70	8.40	18
TA-FT8-15	2"	9.81	4.94	4.94	0.12	9.12	26
TA-FT3-30	¾"	6.25	5.50	3.31	3.00	5.75	9
TA-FT4-30	1"	6.25	5.50	3.31	3.00	5.75	9
TA-FT5-30	1¼"	6.25	5.75	3.00	3.81	5.75	9½
TA-FT6-30	1½"	8.50	4.25	3.00	0.70	8.40	18
TA-FT8-30	2"	9.81	4.94	4.94	0.12	9.12	26
TA-FT3-75	¾"	6.25	5.50	3.31	3.00	5.75	9
TA-FT4-75	1"	6.25	5.50	3.31	3.00	5.75	9
TA-FT5-75	1¼"	8.50	4.25	3.00	0.70	8.40	18
TA-FT6-75	1½"	8.50	4.25	3.00	0.70	8.40	18
TA-FT8-75	2"	9.81	4.94	4.94	0.12	9.12	26
TA-FT3-125	¾"	6.25	5.50	3.31	3.00	5.75	9
TA-FT4-125	1"	6.25	5.50	3.31	3.00	5.75	9
TA-FT5-125	1¼"	8.50	4.25	3.00	0.70	8.40	18
TA-FT6-125	1½"	8.50	4.25	3.00	0.70	8.40	18
TA-FT8-125	2"	9.81	4.94	4.94	0.12	9.12	26

Tunstall Associates, Inc.
118 Exchange Street · Chicopee, MA 01013

Phone (413) 594-8695 · Fax (413) 598-8109
www.tunstall-inc.com

Tunstall Assoc., Inc. Reserves the right to change the design and/or materials of its products without notice.

Tunstall®

Established 1958

Float & Thermostatic Steam Traps

Series TA-FTH (High Capacity)

Operation

Tunstall Associates, Inc. produces a full line of Float & Thermostatic Steam Traps containing a float valve mechanism which modulates to discharge condensate continuously, while non-condensable gases are released by a separate internal balanced pressure thermostatic air vent (The Tunstall Capsule®).

The "FTH" series traps are designed for use in systems that produce an exceptionally large amount of condensate (625 to 24,000 lbs. of condensate per hour). Two sizes (1-1/2" & 2") available for low, medium and high pressure applications with a "H" pattern piping connection for maximum installation flexibility.

All Tunstall float and thermostatic traps can be serviced without disturbing system piping.



Features

- Rapid condensate removal.
- Stainless steel balanced pressure thermostatic air vent (Tunstall Capsule®).
- All stainless steel internal components
- Variety of piping connections.
- Designed to withstand water hammer & high load demands.
- Designed for In-line repair.
- Made in the U.S.A.

Construction

Tunstall float and thermostatic traps feature all stainless steel interiors, heavy duty trap housings, easy access to internal parts and convenient piping connections.

Materials of Construction	
Body & Cover	Cast Iron-ASTMA 126CI B
Valve Head	Stainless Steel
Valve Seat	Stainless Steel
Valve Seat Gasket	Non-Asbestos
Float	Stainless Steel
Bracket & Lever Assembly	Stainless Steel
Thermostatic Air Vent	Tunstall Capsule® Stainless Steel
Cover Bolts	Carbon Steel Grade 5
Cover Gasket	Non-Asbestos
Draining Plug	Steel (Grade 2)

Tunstall Associates, Inc. • 118 Exchange Street • Chicopee, MA 01013
Phone (413) 594-8695 • Fax (413) 598-8109
www.Tunstall-Inc.com

© September 2000

FLOAT & THERMOSTATIC STEAM TRAPS SERIES "TA-FTH"

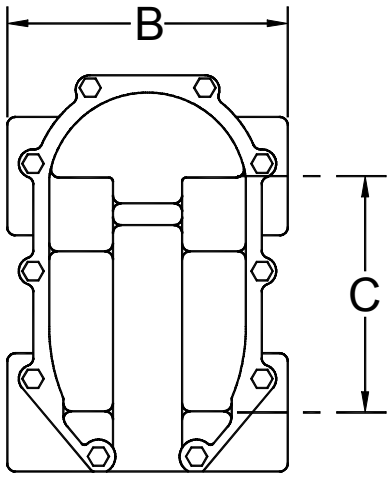
Engineering Specifications

CAPACITIES

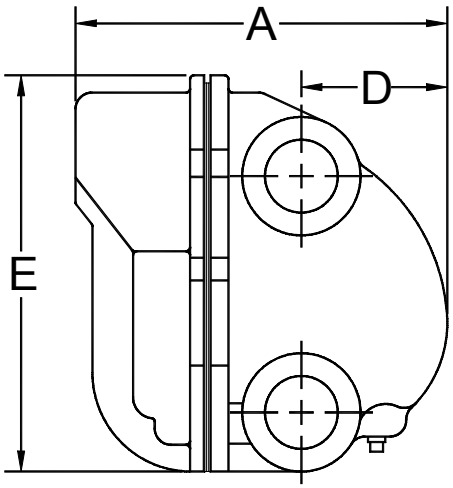
lbs. Condensate per hour

			DIFFERENTIAL PRESSURE (PSI)														
Model	**Size NPT**	**PSIG Orifice**	**1/4**	**1/2**	**1**	**2**	**5**	**10**	**15**	**20**	**25**	**30**	**40**	**50**	**75**	**100**	**125**
TA-FTH6-15	1½"	1.032	6400	7500	9300	13000	16500	21000	24000								
TA-FTH8-15	2"	1.032	6400	7500	9300	13000	16500	21000	24000								
TA-FTH6-30	1½"	.762	2575	4500	5650	8750	11800	14500	17500	19500	20600	21600					
TA-FTH8-30	2"	.762	2575	4500	5650	8750	11800	14500	17500	19500	20600	21600					
TA-FTH6-75	1½"	.500	1500	2750	3500	4750	6300	7750	9250	10500	12250	12500	13500	14500	17000		
TA-FTH8-75	2"	.500	1500	2750	3500	4750	6300	7750	9250	10500	12250	12500	13500	14500	17000		
TA-FTH6-125	1½"	.328	625	825	1100	1550	2100	3000	3500	3900	4200	4400	5000	5500	6750	7750	8700
TA-FTH8-125	2"	.328	625	825	1100	1550	2100	3000	3500	3900	4200	4400	5000	5500	6750	7750	8700

ALL 1½" & 2" SERIES "TA-FTH" F&T TRAPS



Front View



Side View

	DIMENSIONS (Inches)						Weight
Model	**Size**	**A**	**B**	**C**	**D**	**E**	**(lbs.)**
TA-FTH6-15	1½"	11.00	8.50	7.00	4.25	12.00	48
TA-FTH8-15	2"	11.00	8.50	7.00	4.25	12.00	48
TA-FTH6-30	1½"	11.00	8.50	7.00	4.25	12.00	48
TA-FTH8-30	2"	11.00	8.50	7.00	4.25	12.00	48
TA-FTH6-75	1½"	11.00	8.50	7.00	4.25	12.00	48
TA-FTH8-75	2"	11.00	8.50	7.00	4.25	12.00	48
TA-FTH6-125	1½"	11.00	8.50	7.00	4.25	12.00	48
TA-FTH8-125	2"	11.00	8.50	7.00	4.25	12.00	48

Tunstall Associates, Inc.
118 Exchange Street · Chicopee, MA 01013

Phone (413) 594-8695 · Fax (413) 598-8109
www.tunstall-inc.com

Tunstall Assoc., Inc. Reserves the right to change the design and/or materials of its products without notice.

Tunstall®

Established 1958

Inverted Bucket Steam Traps
Series TA-IB (Models 8080 & 8181)

Operation

Tunstall Associates, Inc. produces a full line of Inverted Bucket Steam Traps containing a stainless steel bucket and valve mechanism which are either in a full closed position, or a full open position to discharge condensate.

As the system starts, air and non-condensable gases vent through the orifice in the bucket; condensate also enters through the standpipe which forms a water seal in the bottom of the bucket. As steam enters the trap a simple lever mechanism attached to the inverted bucket snaps shut; then as the steam condenses the buoyancy of the bucket changes thus opening the lever mechanism, and allowing pressure to force the condensate out of the trap. This process repeats itself exactly and continuously to maximize the efficient use of energy. No cooling leg required. Refer to capacity charts when ordering.



Features

- In-Line Connection
- High Strength Cast Iron Body
- Hardened Stainless Steel Valve & Seat
- Stainless Steel Bucket
- Test Plug
- Low Maintenance

Applications

- Converters
- Dryers
- High-Pressure Drip
- Laundry Equipment
- Oil Preheaters
- Pressing Machinery
- Process Equipment
- Steam Cookers
- Steam Heated Vats
- Unit Heaters

Materials of Construction	
Body & Cover	Cast Iron-ASTM-A-126-7/Class B
Bucket & Linkage	Stainless Steel
Valve & Seat	Hardened Stainless Steel
Standpipe	Steel Pipe
Cover Gasket	Non-Asbestos

Model 8080

Max. Operating Pressure: 150 PSIG
Max. Allowable Temperature: 366°F

Model 8181

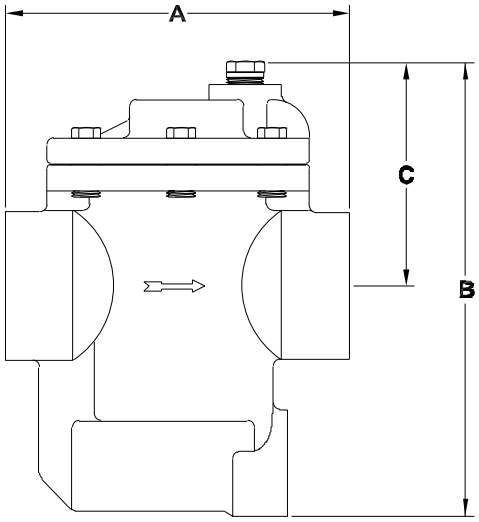
Max. Operating Pressure: 250 PSIG
Max. Allowable Temperature: 450°F

Tunstall Associates, Inc.
118 Exchange Street · Chicopee, MA 01013
Phone (413) 594-8695 · Fax (413) 598-8109
www.tunstall-inc.com

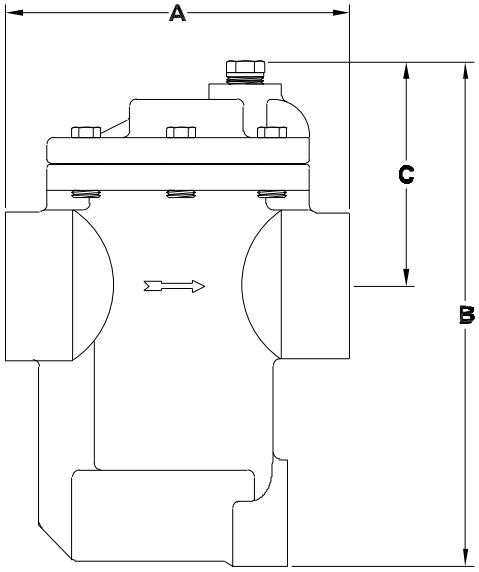
© December 2003

INVERTED BUCKET STEAM TRAPS SERIES "TA-IB"

Engineering Specifications



Model 8080



Model 8181

Capacity Chart (8080)

Differential Pressure PSI	Orifice Size (In.)	Model 8080
1/4		139
1/2		200
3/4		240
1		270
2		340
3		390
4		425
5		450
10		560
15		640
20	3/16	690
25		460
30		500
40		550
50		580
60		635
70		660
80	1/8	690
100		500
125		550
150	#38	570
180		--
200		--
225		--
250		--

Capacity Chart (8181)

Differential Pressure PSI	Orifice Size (In.)	Model 8181
1/4		191
1/2		300
3/4		395
1		450
2		590
3		680
4		750
5		830
10		950
15	1/4	1060
20		585
25		655
30		710
40		770
50		840
60		900
70	5/32	950
80		800
100		860
125	1/8	950
150		660
180		670
200		700
225		730
250	#38	760

Capacities given are in pounds of hot condensate per hour at differential indicated.

Weights and Dimensions

Model Number	Size (in.) NPT	Weight (lbs.)	Dimensions A	B	C
8080	1/2	5	5.000	5.875	3.125
8080	3/4	5	5.000	5.875	3.125
8181	1/2	6	5.000	6.875	2.625
8181	3/4	6	5.000	6.875	2.625
8181	1	6	5.000	6.875	2.625

Tunstall Associates, Inc.
118 Exchange Street · Chicopee, MA 01013
Phone (413) 594-8695 · Fax (413) 598-8109
www.tunstall-inc.com

Tunstall Assoc., Inc. Reserves the right to change the design and/or materials of its products without notice.

ESM 15: Pipe & Jacket Insulation

ESM Overview

Ameresco proposes to insulate bare hot water, domestic hot water, steam and condensate piping in unconditioned mechanical spaces at Central High School, Eastern High School, and Chippens Middle School. Uninsulated piping results in high distribution energy losses and consequentially heats the unoccupied spaces. Installing insulation on the existing pipes sill improve the overall system efficiencies at these buildings.



Figure 15.1: the large bare steam valves at Eastern High School will be insulated under this ESM.

ESM Detail

Existing System

Central High School is provided with low pressure steam by three space heating boilers. The two primary boilers used are HB Smith Series 28A-18, rated at 4,629 MBH output each, with dual fuel burners currently only using Oil. One Cleaver Brooks CR655-200 steam boiler with 8,375 MBH input installed in 1966 is used as back-up. There are a number of large uninsulated steam valves located on the main supply header in the boiler room. Domestic Hot Water is provided by two (2) Duramax gas-fired atmospheric boilers each with 840 MBH input, serving a 350 gallon A.O. Smith indirect storage tank. The domestic hot water distribution system is almost completely bare in the boiler room.

Eastern High School is provided with low pressure steam by two space heating boilers. The two primary boilers used are Smith Mills 400A cast iron sectional, rated at 5,093 MBH output each, with dual fuel burners currently using gas. There are a number of large uninsulated steam valves identified in the boiler room and the basement pipe corridor. Domestic hot water is produced by an indirect system consisting of the space heating boilers and an A.O. Smith custom model HWG350 indirect storage tank. The domestic hot water system in the boiler room is almost completely bare as well. Ten (10) AHU's serve areas such as the Small gym, locker rooms, and offices. Heating and ventilation units (HVs) serve various areas such as the old gym, locker rooms, wrestling room, music room, cafeteria, band room, halls, and rifle range (HV-1 thru HV-9). Much of the steam distribution systems in the HV and AHU mechanical rooms are lacking insulation on both pipes and valves.

At Chippens Middle School heating hot water is generated by two H.B. Smith Series 28A-16 dual-fuel boilers, each with an input capacity of 5,189 MBH. Two 20 HP pumps distribute heating hot water throughout the building to the radiation loop and terminal units. The two 4" triple duty valves on the discharge lines of each hot water pump are not insulated. Domestic hot water is generated by a PVI water heater with a 400 gallon

"Page content is subject to Confidentiality Restrictions"

tank capacity. The copper piping that distributes the domestic hot water is completely bare throughout the boiler room.

The following tables indicate the approximate lengths of piping and quantity of valves affected by this ESM.

Table 15.1: Central High School Pipe Insulation

System	Pipe Size (in)	Pipe Length (LF)
DHW	¾	40
DHW	1	40
DHW	1 ½	10
COND	1 ½	110
Total		**200**

Table 15.2: Eastern High School Pipe Insulation

System	Pipe Size (in)	Pipe Length (LF)
DHW	1	75
DHW	1 ½	40
LPS	1 ½	102
COND	1 ½	198
LPS	2	110
COND	2	30
LPS	2 ½	45
LPS	3	12
LPS	4	22
COND	4	70
Total		**704**

Table 15.3: Chippens Hill Middle School Pipe Insulation

System	Pipe Size (in)	Pipe Length (LF)
DHW	½	50
DHW	¾	100
DHW	1	100
DHW	1 ½	30
HW	4	20
Total		**300**

Table 15.4: Central High School Valve Jackets

System	Valve Size (in)	Type	Quantity
LPS	4	Gate	2
LPS	4	Flange	2
LPS	6	Gate	4
LPS	8	Gate	4
Total			**12**

Table 15.5: Eastern High School Valve Jackets

System	Valve Size (in)	Type	Quantity
LPS	4	Gate	3
LPS	12	Gate	10
Total			**13**

Table 15.6: Chippens Middle School Valve Jackets

System	Valve Size (in)	Type	Quantity
HW	4	Gate	4
HW	4	Strainer	1
Total			**5**

Proposed System

Ameresco proposes to install a combined total of approximately 1,204 linear feet of insulation as detailed in the tables above. The proposed insulation will be a fibrous glass type with a factory applied fire retardant vapor barrier jacket. The insulation will have a K-factor of at least 0.27 at 75°F mean temperature. Typical manufacturers include Owens-Corning, Certain-Teed, Manville or Knauf. Heating system efficiency will improve as less heat is lost to the unoccupied and unconditioned mechanical spaces.

The scope of work includes the following;

- Remove any existing pipe insulation and dispose according to EPA requirements.
- Provide and install pipe insulation and removable/reusable valve jackets. Seal at locations where pipe penetrates walls.
- Pipe insulation thickness should meet the requirements in ASHRAE Standard 90.1 2010 table 6.8.3A.
- Use the pipe sizes and lengths provided in the following table for estimating.
- Provide and install any accessories (mounts, supports etc.) required during installation.
- Scope to include all fittings, elbows, etc.
- Label all new pipe insulation with appropriate distribution type and direction of flow.
- Clean up after installation.

>Equipment, Design and Construction Documentation

Equipment will be identified in submittals provided for approval prior to procurement. Documents will be submitted to the facilities department for their review and comment. Upon approval, these will constitute the construction documents. Upon completion of the construction phase, the documents will be revised as needed to reflect "As-Built" conditions and submitted in multiple for record.

>Impact on Facility Operations and Performance

The newly installed insulation will reduce distribution heat loss, improving the overall heating systems efficiencies. Cost savings from the reduction of natural gas and oil usage will result from the implementation of this measure.

"Page content is subject to Confidentiality Restrictions"

This page is intentionally left blank.

Appendix for ESM 15: Pipe & Jacket Insulation

I. Energy Savings Calculations

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

City of Bristol, CT	
Energy and Demand Savings Summary	
Measure ID:	**15**
Measure Name:	**Pipe & Jacket Insulation**
Measure Location:	
Engineers:	

Site Name:		**Central_High**	**Eastern_High**	**Chippens**	**Summary**
Item	Units	Savings	Savings	Savings	
Electricity					
Energy On-Peak	kWh				0
Energy Off-Peak	kWh				0
Energy Total	kWh	0	0	0	0
Demand On-Peak, Monthly	kW				0.0
Demand On-Peak, Annual	kW				0.0
Demand Off-Peak, Monthly	kW				0.0
Demand Off-Peak, Annual	kW				0.0
Fossil Fuel					0
Natural Gas (NG)	CCF		4,657	883	5,540
Liquid Propane Gas (LPG)	Gallons				0
Steam	Mlbs				0
Fuel Oil, #2	Gallons	1,301			1,301
Fuel Oil, #4	Gallons				0
Fuel Oil, #6	Gallons				0
Max Daily Demand (Natural Gas)	CCF (Demand)				0
Water					0
Water Savings	CF				0
Sewer					0
Sewer Savings	CF				0

City of Bristol, CT
Bristol Central High School
Pipe & Jacket Insulation

AMERESCO

	Existing Piping Details												Existing Insulation Details			Proposed Insulation Details					
Location	Pipe Size (inches)	Fluid Type (Water or Steam)	Fluid Temperature (°F)	Heating Hours	Fluid Velocity (ft/s)	Length (ft)	Inside Pipe Diameter (inches)	Outside Pipe Diameter (inches)	Piping Emissivity	Pipe Conductivity (Btu/hr-ft-°F)	Cold Fluid Temperature - Air (°F)	Cold Fluid Conductivity - Air (Btu/hr-ft2-°F)	Insulation Thickness (inches)	Insulation Emissivity	Insulation Conductivity (Btu/hr-ft-°F)	Insulation Thickness (inches)	Insulation Emissivity	Insulation Conductivity (Btu/hr-ft-°F)	Existing Heat Loss (MBtu)	Proposed Heat Loss (MBtu)	Savings (MBtu)
[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]	[P]	[Q]	[R]	[S]	[T]	[U]	[V]
DHW Supply	1 1/2	Water	120.0	8,760	5.0	10.0	1.61	1.90	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	1.5	0.93	0.0225	4,913	1,471	3,442
DHW Supply	1	Water	120.0	8,760	5.0	40.0	1.05	1.32	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	1.0	0.93	0.0225	13,602	5,740	7,862
DHW Return	3/4	Water	105.0	8,760	5.0	40.0	0.82	1.05	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	1.0	0.93	0.0225	7,468	3,502	3,966
Condensate	1 1/2	Water	180.0	3,166	5.0	110.0	1.61	1.90	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	2.0	0.93	0.0225	46,307	11,159	35,147
Totals						**200.0**													**72,289**	**21,872**	**50,417**

Cell Ref.	Comment
A	Location of Pipe
B - K	Piping properties
L - M	Cold fluid properties, typically air
N - P	Existing insulation details
Q - S	Proposed insulation details
T	= (Existing Transmission + Radiation Heat Loss) x [col E] ÷ [P65] ÷ 1,000
U	= (Proposed Transmission + Radiation Heat Loss) x [col E] ÷ [P65] ÷ 1,000
V	= [col T] - [col U]

Item	Value	Units	Cell Ref	Remarks
Heating System Efficiency	78.0%		**[P65]**	From Baseline

City of Bristol, CT
Bristol Eastern High School
Pipe & Jacket Insulation

AMERESCO

	Existing Piping Details												Existing Insulation Details			Proposed Insulation Details					
Location	Pipe Size (inches)	Fluid Type (Water or Steam)	Fluid Temperature (°F)	Heating Hours	Fluid Velocity (ft/s)	Length (ft)	Inside Pipe Diameter (inches)	Outside Pipe Diameter (inches)	Piping Emissivity	Pipe Conductivity (Btu/hr-ft-°F)	Cold Fluid Temperature - Air (°F)	Cold Fluid Conductivity - Air (Btu/hr-ft2-°F)	Insulation Thickness (inches)	Insulation Emissivity	Insulation Conductivity (Btu/hr-ft-°F)	Insulation Thickness (inches)	Insulation Emissivity	Insulation Conductivity (Btu/hr-ft-°F)	Existing Heat Loss (MBtu)	Proposed Heat Loss (MBtu)	Savings (MBtu)
[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]	[P]	[Q]	[R]	[S]	[T]	[U]	[V]
Boiler Rm - DHW Supply	1	Water	120.0	8,760	5.0	75.0	1.05	1.32	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	1.0	0.93	0.0225	26,174	11,045	15,129
Boiler Rm - DHW Supply	1 1/2	Water	120.0	8,760	5.0	40.0	1.61	1.90	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	1.5	0.93	0.0225	20,169	6,039	14,130
Mech Rm B-13 - HV-4 LPS	2 1/2	Steam	230.0	3,017	5.0	21.0	2.47	2.88	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	2.5	0.93	0.0225	20,337	3,458	16,878
Aud Mech Rm - HV-6 LPS	1 1/2	Steam	230.0	3,017	5.0	63.0	1.61	1.90	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	2.5	0.93	0.0225	40,321	8,151	32,170
Aud Mech Rm - LPS	2	Steam	230.0	3,017	5.0	30.0	2.07	2.38	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	2.5	0.93	0.0225	24,000	4,405	19,596
Aud Mech Rm - LPS	4	Steam	230.0	3,017	5.0	10.0	4.03	4.50	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	3.0	0.93	0.0225	15,158	1,969	13,188
Aud Mech Rm - HV-7 LPS	1 1/2	Steam	230.0	3,017	5.0	30.0	1.61	1.90	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	2.5	0.93	0.0225	19,200	3,881	15,319
Mech Rm 246 - HV-8 LPS	2	Steam	230.0	3,017	5.0	8.0	2.07	2.38	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	2.5	0.93	0.0225	6,400	1,175	5,226
Mech Rm 246 - HV-8 COND	1 1/2	Water	180.0	3,017	5.0	8.0	1.61	1.90	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	2.0	0.93	0.0225	3,293	794	2,500
Mech Rm 246- HV-7 LPS	1 1/2	Steam	230.0	3,017	5.0	9.0	1.61	1.90	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	2.5	0.93	0.0225	5,760	1,164	4,596
Mech Rm 246- HV-7 COND	1 1/2	Water	180.0	3,017	5.0	8.0	1.61	1.90	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	2.0	0.93	0.0225	3,293	794	2,500
		Water	180.0	3,017	5.0	0.0	0.00	0.00	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	1.5	0.93	0.0225	0	0	0
Mech Rm 251F- AHU-3 COND	1 1/2	Water	180.0	3,017	5.0	25.0	1.61	1.90	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	2.0	0.93	0.0225	10,292	2,480	7,812
Mech Rm 251F- AHU-4 COND	1 1/2	Water	180.0	3,017	5.0	25.0	1.61	1.90	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	2.0	0.93	0.0225	10,292	2,480	7,812
Mech Rm 251F- AHU-5 COND	1 1/2	Water	180.0	3,017	5.0	25.0	1.61	1.90	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	2.0	0.93	0.0225	10,292	2,480	7,812
Mech Rm 251F - COND	1 1/2	Water	180.0	3,017	5.0	25.0	1.61	1.90	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	2.0	0.93	0.0225	10,292	2,480	7,812
Mech Rm 140 - HV-9 LPS	2	Steam	230.0	3,017	5.0	12.0	2.07	2.38	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	2.5	0.93	0.0225	9,600	1,762	7,838
Mech Rm 140 - HV-9 COND	1 1/2	Water	180.0	3,017	5.0	12.0	1.61	1.90	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	2.0	0.93	0.0225	4,940	1,190	3,750
		Water	180.0	3,017	5.0	0.0	0.00	0.00	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	1.5	0.93	0.0225	0	0	0
H&V-4 LPS	2	Steam	230.0	3,017	5.0	24.0	2.07	2.38	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	2.5	0.93	0.0225	19,200	3,524	15,677
H&V-5 LPS	2 1/2	Steam	230.0	3,017	5.0	12.0	2.47	2.88	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	2.5	0.93	0.0225	11,621	1,976	9,645
H&V-5 LPS	3	Steam	230.0	3,017	5.0	6.0	3.07	3.50	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	2.5	0.93	0.0225	7,074	1,119	5,954
Gym Pent - AU-1 LPS	2	Steam	230.0	3,017	5.0	18.0	2.07	2.38	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	2.5	0.93	0.0225	14,400	2,643	11,757
Gym Pent - AU-2 LPS	2	Steam	230.0	3,017	5.0	18.0	2.07	2.38	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	2.5	0.93	0.0225	14,400	2,643	11,757
		Water	180.0	3,017	5.0	0.0	0.00	0.00	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	1.5	0.93	0.0225	0	0	0
H&V-5 LPS	2 1/2	Steam	230.0	3,017	5.0	12.0	2.47	2.88	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	2.5	0.93	0.0225	11,621	1,976	9,645
H&V-5 LPS	3	Steam	230.0	3,017	5.0	6.0	3.07	3.50	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	2.5	0.93	0.0225	7,074	1,119	5,954
Pipe Alley-LPS	4	Steam	230.0	3,017	5.0	12.0	4.03	4.50	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	3.0	0.93	0.0225	18,189	2,363	15,826
Boiler Rm - COND	1 1/2	Water	180.0	3,017	5.0	70.0	1.61	1.90	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	2.0	0.93	0.0225	28,817	6,945	21,872
Boiler Rm - COND	4	Water	180.0	3,017	5.0	70.0	4.03	4.50	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	2.0	0.93	0.0225	68,238	12,188	56,050
Boiler Rm - COND	2	Water	180.0	3,017	5.0	30.0	2.07	2.38	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	2.0	0.93	0.0225	15,437	3,402	12,035
Totals						**704.0**													**455,885**	**95,647**	**360,238**

Cell Ref.	Comment
A	Location of Pipe
B - K	Piping properties
L - M	Cold fluid properties, typically air
N - P	Existing insulation details
Q - S	Proposed insulation details
T	= (Existing Transmission + Radiation Heat Loss) x [col E] ÷ [P65] ÷ 1,000
U	= (Proposed Transmission + Radiation Heat Loss) x [col E] ÷ [P65] ÷ 1,000
V	= [col T] - [col U]

Item	Value	Units	Cell Ref	Remarks
Heating System Efficiency	76.0%		[P65]	From Baseline

City of Bristol, CT
Chippens Hill Middle School
Pipe & Jacket Insulation

AMERESCO

	Existing Piping Details												Existing Insulation Details			Proposed Insulation Details					
Location	Pipe Size (inches)	Fluid Type (Water or Steam)	Fluid Temperature (°F)	Heating Hours	Fluid Velocity (ft/s)	Length (ft)	Inside Pipe Diameter (inches)	Outside Pipe Diameter (inches)	Piping Emissivity	Pipe Conductivity (Btu/hr-ft-°F)	Cold Fluid Temperature - Air (°F)	Cold Fluid Conductivity - Air (Btu/hr-ft2-°F)	Insulation Thickness (inches)	Insulation Emissivity	Insulation Conductivity (Btu/hr-ft-°F)	Insulation Thickness (inches)	Insulation Emissivity	Insulation Conductivity (Btu/hr-ft-°F)	Existing Heat Loss (MBtu)	Proposed Heat Loss (MBtu)	Savings (MBtu)
[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]	[P]	[Q]	[R]	[S]	[T]	[U]	[V]
DHW Supply	1 1/2	Water	120.0	8,760	5.0	30.0	1.61	1.90	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	1.5	0.93	0.0225	14,739	4,413	10,326
DHW Supply	1	Water	120.0	8,760	5.0	100.0	1.05	1.32	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	1.0	0.93	0.0225	34,004	14,350	19,655
DHW Supply	1/2	Water	120.0	8,760	5.0	50.0	0.62	0.84	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	1.0	0.93	0.0225	10,861	5,534	5,327
DHW Supply	3/4	Water	120.0	8,760	5.0	100.0	0.82	1.05	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	1.0	0.93	0.0225	27,153	12,544	14,609
HW Supply	4	Water	180.0	2,942	5.0	20.0	4.03	4.50	0.65	227.0	70.0	1.00	0.0	0.93	0.0225	2.0	0.93	0.0225	18,527	3,309	15,218
Totals						**300.0**													**105,283**	**40,150**	**65,134**

Cell Ref.	Comment
A	Location of Pipe
B - K	Piping properties
L - M	Cold fluid properties, typically air
N - P	Existing insulation details
Q - S	Proposed insulation details
T	= (Existing Transmission + Radiation Heat Loss) x [col E] ÷ [P65] ÷ 1,000
U	= (Proposed Transmission + Radiation Heat Loss) x [col E] ÷ [P65] ÷ 1,000
V	= [col T] - [col U]

Item	Value	Units	Cell Ref	Remarks
Heating System Efficiency	78.0%		**[P65]**	From Baseline

Appendix for ESM 15: Pipe & Jacket Insulation

II. Manufacturer Specification Sheets

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

Submittal Sheet

Fiberglas® Pipe Insulation



☐ **SSL II® All-Service Jacket (ASJ), Self-Sealing Lap**
☐ **SSL® I ASJ**
☐ **No-Wrap**

Description

Owens Corning Fiberglas® pipe insulations are molded of heavy density resin bonded inorganic glass fibers. These one-piece, 36" (914mm) long, hinged sections are opened, placed over the pipe, closed and secured by means specific to the type as described below.

Fiberglas SSL II® Pipe Insulation is jacketed with a smooth, reinforced, wrinkle-resistant all-service (ASJ) vapor retarder jacket. Factory applied DOUBLESURE† double pressure sensitive adhesive closure provides positive mechanical and vapor sealing of the longitudinal jacket seam. Pressure sensitive butt strip seals complete the positive closure. Available in the most popular sizes.

In larger sizes *Fiberglas* Pipe Insulation is furnished with SSL® I, a single adhesive lap seal.

Fiberglas "No-Wrap" Pipe Insulation is also available without a jacket. It is intended for field installation of jacketing appropriate to the vapor control, damage or corrosion resistance requirements of the application.

Uses

Insulation of hot, cold, concealed and exposed piping operating at temperatures from 0°F (-18°C) to 850°F (454°C) in commercial buildings, industrial facilities and process or power plants.

†DOUBLESURE is a registered trademark of Morgan Adhesives Company.

Features/Benefits

SSL II Positive Closure System

Effective long-term vapor sealing of both longitudinal and butt joints. With double-adhesive lap seal, plus two-part butt strip seal, positive closure is fast, neat and foolproof. No need for staples and mastic, promoting unexcelled jobsite productivity.

Jacket and Lap Shipped Adhered

Short pieces of insulation can be cut without jacket loss; it won't come apart in handling. No "dog-ears" in or out of the carton. Dust and moisture can't reach the seal. Butt strips come in sealed bags inside the carton, staying clean until the moment of use.

Excellent Thermal Performance

Fiberglas Pipe Insulation's low thermal conductivity contributes to lower operating costs of heating and cooling equipment.

Meets Model Code Fire Ratings

Flame spread rating of 25 or less, and smoke developed rating of 50 or less, usually means that *Fiberglas* Pipe Insulation will be granted immediate building code approval.

Availability

Fiberglas Pipe Insulations are available in thicknesses and for pipe sizes as follows:

Insulation Thickness,		Nominal Pipe Sizes, NPS, in. (DN, mm)					
		SSL II		SSL I*		No-Wrap**	
in.	(mm)	Pipe Insulation		Pipe Insulation*		Pipe Insulation**	
½	(13)	½-6	(15-150)			½-6	(15-150)
1	(25)	½-15	(15-375)	16-33	(400-825)	½-33	(15-825)
1½	(38)	½-14	(15-350)	15-33	(375-825)	½-33	(15-825)
2	(51)	½-12	(15-300)	14-33	(350-825)	½-33	(15-825)
2½	(64)	2-11	(50-275)	12-26	(300-650)	½-32	(15-800)
3	(76)	3-10	(75-250)	11-26, 30	(275-650, 750)	½-31	(15-900)
3½	(89)	4½-9	(115-225)	10-18, 20-22, 24	(250-450, 500-550, 600)	½-30	(15-750)
4	(102)	4½-8	(115-200)	9-21, 24, 25	(225-525, 600, 625)	½-29	(15-725)
4½	(114)	6-7	(150-175)	8-10, 12, 14, 16, 18, 20, 24	(200-250, 300, 350, 400, 450, 500, 600)	½-28	(15-700)
5	(127)	6	(150)	7-14, 16-24	(175-350, 400-600)	½-27	(15-675)
5½	(140)					6-26	(150-650)
6	(152)					6-25	(150-625)

* SSL I all made-to-order except 14" x 2" (350mm x 51mm) and 16" x 1", 11/2" and 2" (400mm x 25mm, 38mm and 51mm).
** Consult Packaging Data Supplement (PP1.P5) available upon request for standard and made-to-order sizes.

Specification Compliance

- ASTM C 547, Mineral Fiber Pre-Formed Pipe Insulation, Type I to 850˚F (454˚C)
- ASTM C 1136, Flexible Low Permeance Vapor Retarders for Thermal Insulation: All Types
- ASTM C 795, Thermal Insulation for Use Over Austenitic Stainless Steel*
- Mil. Spec. MIL-I-22344D, Insulation, Pipe, Thermal, Fibrous Glass
- Nuclear Regulatory Commission Guide 1.36, Non-Metallic Thermal Insulation*
- U.S. Coast Guard Approval No. 164.009, Noncombustible Materials (no-wrap)
- New York City MEA No. 344-83
- CAN/CGSB-51.9 – Type 1, Class 2
- NFPA 90A

* Preproduction qualification testing complete and on file. Chemical analysis of each production lot required for total conformance.

Fiberglas® Pipe Insulation

Physical Property Data

Property	Test Method	Value	
Operating temperature range	ASTM C 411	0 to 850˚F* (-18˚C to 454˚C)*	
Jacket temperature limitation	ASTM C 1136	-20˚F to 150˚F (-29˚C to 66˚C)	
Jacket permeance	ASTM E 96, Proc.A	0.02 perm	
Puncture resistance	ASTM D 781	50 units	
Composite surface burning characteristics	UL 723,** ASTM E 84** or CAN/ULC-S102-M**	Flame spread Smoke developed	25** 50

*Limited to single layer applications above 650˚F (343˚C), but not greater than 6" (152mm) thickness.
** The surface burning characteristics of these products have been determined in accordance with UL 723, ASTM E 84 or CAN/ULC-S102-M. These standards should be used to measure and describe the properties of materials, products or assemblies in response to heat and flame under controlled laboratory conditions and should not be used to describe or appraise the fire hazard or fire risk of materials, products or assemblies under actual fire conditions. However, results of this test may be used as elements of a fire risk assessment which takes into account all of the factors which are pertinent to an assessment of the fire hazard of a particular end use. Values are reported to the nearest 5 rating.

Thermal Performance, ASTM C 680

Insulation NPS x Thk. (DN x Thk. in.	mm)	Pipe Operating Temperature, ˚F (˚C) 300 (149) HL	ST	500 (280) HL	ST	700 (371) HL	ST
2 x 1½	(50 x 13)	77 (74)	128 (53)				
4 x 1	(100 x 25)	78 (75)	109 (43)				
8 x 1	(200 x 25)	140 (135)	112 (44)				
12 x 1	(300 x 25)	199 (191)	113 (45)				
2 x 1½	(50 x 38)			88 (85)	116 (47)		
4 x 1½	(100 x 38)			142 (137)	123 (51)		
8 x 1½	(200 x 38)			242 (233)	128 (53)		
12 x 1½	(300 x 38)			330 (317)	129 (54)		
2 x 2	(50 x 51)					139 (134)	127 (53)
4 x 2½	(100 x 64)					188 (181)	125 (52)
8 x 2½	(200 x 64)					295 (284)	129 (54)
12 x 3	(300 x 76)					359 (345)	125 (52)

Heat Loss (HL), Btu/hr•ft (W/m); Surface Temperature (ST), °F (°C).
Design Conditions: Horizontal piping, 80°F (27°C) average ambient temperature, 0 mph wind speed, ASJ jacket.

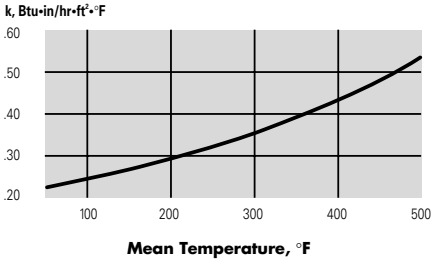
Thickness to Prevent Surface Condensation

Owens Corning ASJ Jacket for up to 16" NPS (400mm DN)(1), in. (mm)

Ambient Temperature, ˚F	(˚C)	Relative Humidity(2)	System Operating Temperatures 35˚F (2˚C)	45˚F (7˚C)	55˚F (13˚C)
110	(43)	50%-70%	1 (25)	1 (25)	1 (25)
		80%	1½ (38)	1½ (38)	1 (25)
		90%	3½ (89)	3 (76)	2½ (64)
100	(38)	50%-70%	1 (25)	1 (25)	1 (25)
		80%	1½ (38)	1½ (38)	1 (25)
		90%	3 (76)	3 (76)	2½ (64)
90	(32)	50%-70%	1 (25)	1 (25)	1 (25)
		80%	1½ (38)	1 (25)	1 (25)
		90%	3 (76)	2½ (64)	2 (51)
80	(27)	50%-80%	1 (25)	1 (25)	1 (25)
		90%	2½ (64)	2 (51)	1½ (38)
70	(21)	50%-80%	1 (25)	1 (25)	1 (25)
		90%	1½ (38)	1½ (38)	1 (25)

(1) For NPS (DN) greater than 16" (400mm), please contact your local Owens Corning Representative.
(2) If humidity exceeds 90%, some condensation is to be expected; therefore, a coating of a mastic or PVC jacket overwrap is recommended as repeated or continual wetting of the ASJ jacket will degrade its vapor retarder performance.

Thermal Conductivity



Apparent thermal conductivity curve determined in accordance with ASTM Practice C 1045 with data obtained by ASTM Test Method C 335. Values are nominal, subject to normal testing and manufacturing tolerances.

Mean Temp. ˚F	k Btu•in/hr•ft²•°F	Mean Temp. ˚C	λ W/m•˚C
50	0.22	10	0.032
75	0.23	25	0.034
100	0.24	50	0.037
150	0.27	100	0.043
200	0.29	125	0.047
250	0.32	150	0.051
300	0.35	175	0.056
350	0.39	200	0.062
400	0.43	225	0.068
450	0.48	250	0.075
500	0.54	275	0.082

Application Recommendations

The hinged sections of *Fiberglas* Pipe Insulation are opened, placed over the pipe, carefully aligned, and sealed or jacketed as required by the form of the insulation and the application.

Fiberglas SSL II Pipe Insulation is shipped with the jacket and longitudinal lap closed, the two adhesives separated by a release strip. The insulation is opened by pulling the release strip from between the two adhesive strips. The insulation is placed on the pipe, carefully aligned, and the two adhesives rubbed firmly together to close and seal. The two part butt strip seal completes the positive closure. Application may be at ambient temperatures from 25°F (-4°C) to 110°F (43°C).

Fiberglas "No-Wrap" Pipe Insulation is designed for field-jacketing with pipe covering secured by wires or bands, vapor sealed where required.

Outdoor applications must be protected from weather. If painting is required, use only water base latex paint.

OWENS CORNING WORLD HEADQUARTERS
ONE OWENS CORNING PARKWAY
TOLEDO, OHIO, USA 43659

1-800-GET-PINK
www.owenscorning.com

Fiberglas,® SSL II® and SSL® are registered trademarks of Owens Corning.

Pub. No. 5-IN-20547-D Printed in USA, June 2001

Copyright © 2001 Owens Corning.

Zeston® 2000 PVC

Insulated Fitting Covers and Jacketing

Description

Zeston 2000 fitting covers are designed to insulate and to provide a protective covering for pipe fittings. The fitting covers are supplied with Hi-Lo® Temp Formaldehyde-free™ fiber glass insulation inserts from the factory. Zeston PVC jacketing provides a protective covering for insulated or bare pipes. Zeston 2000 PVC fitting covers and jacketing are manufactured from high-impact, gloss white, UV-resistant, polyvinyl chloride which provides a simple, quickly installed system.

Available Shapes and Sizes

Fitting Covers. Zeston 2000 Series PVC fitting covers are available for the following: 45° and 90° (0.8 and 1.6 rad.) short and long radius elbows, tees and valves, flanges, reducers, end caps, soil pipe hubs, traps and mechanical groove-type fittings.

Jacketing. Zeston PVC jacketing is available in rolls in thicknesses of 10, 15, 20 and 30 mil (0.3, 0.4, 0.5 and 0.8 mm).

Cut & Curled™ Jacketing. Zeston PVC Cut & Curled jacketing is available in thicknesses of 20 or 30 mil (0.5 mm or 0.8 mm) (30 mil [0.8 mm] recommended for outdoor applications). It is available in factory-cut sizes to fit up to 30" (762 mm) O.D. All sections of Zeston PVC Cut & Curled jacketing are 48" (1219 mm) in length and are factory curled to fit snugly.

Uses

Zeston 2000 PVC fitting covers and jacketing are ideally suited for indoor or outdoor use on chilled water, hot water, steam and other piping systems in commercial, institutional, and industrial applications. The fitting covers, when combined with Zeston PVC jacketing and Perma-Weld® solvent welding adhesive, form a completely sealed system which meets the requirements of the USDA and FDA for applications in food, beverage, and pharmaceutical facilities.

Qualifications for Use

General

- Install the appropriate Hi-Lo Temp fiber glass insert by wrapping it completely around the pipe fitting without overly compressing it or leaving any voids. Ensure that the insulation insert covers all exposed surfaces. The Zeston PVC fitting cover should then be installed over the pipe fitting and fiber glass insert by securing the throat using either serrated tacks, Perma-Weld adhesive or Zeston Z-Tape.

Hot Systems

- PVC covers must be kept below 150°F (66°C) by use of proper insulation thickness.
- PVC covers should be kept away from contact with, or exposure to, sources of direct or radiated heat.
- For fittings where operating temperatures exceed 250°F (121°C), or where pipe insulation thickness is greater than 1½" (38 mm), two or more layers of Hi-Lo Temp insulation inserts are required beneath fitting cover.

Cold Systems

- An approved vapor retarder mastic compatible with PVC must be applied between pipe insulation and fitting cover, and on fitting cover throat overlap seam.



Operating Temperature Limits:
PVC: Up to 150°F (66°C)
Insert: 0°F to 450°F (-18°C to +232°C)
Flame Spread: 25 or less (up to 30 mil [0.8 mm])
Smoke Developed: 50 or less (up to 30 mil [0.8 mm])
Grade: Weatherable
Color: White
Finish: Gloss

- For fittings where operating temperature is below 45°F (7°C) or where the pipe insulation thickness is greater than 1½" (38 mm), two or more layers of Hi-Lo Temp insulation inserts are required beneath fitting cover.

Refrigerant Systems and Cold Systems in Severe Ambient Conditions

- Mitered pipe insulation segments. Fabricated or premolded insulation shapes may be used in lieu of Hi-Lo Temp insulation inserts.
- An intermediate vapor retarder compatible with PVC is required to completely seal the insulation prior to installing the Zeston 2000 PVC fitting cover. Care should be taken to ensure that the vapor barrier mastic is applied between the pipe insulation and the fitting cover, and on fitting cover throat overlap seam.

Totally Sealed Systems (USDA Approval)

- System requires that 20 or 30 mil (0.5 mm or 0.8 mm) Zeston PVC jacketing is applied to pipe insulation in conjunction with Zeston PVC fitting covers.
- All circumferential and longitudinal seams of jackets and fitting covers should be sealed with Zeston Perma-Weld solvent welding adhesive. Circumferential seams should be a minimum 1" (25 mm) overlap, and longitudinal seams should be 1½" to 2" (38 mm to 51 mm) overlap.
- Upon completion, all seams should visually be checked for seal and touched up, if necessary.
- Slip joints are required periodically between fixed supports and on continuous long runs of straight piping. Slip joints are achieved by increasing circumferential overlap to 8 to 10 inches (203 mm to 254 mm) and applying a flexible white caulking in the overlap area to maintain a sealed system.

Zeston® 2000 PVC

Insulated Fitting Covers and Jacketing

Physical Properties of Zeston 2000 PVC

Property	Value	ASTM Test Method
Specific Gravity	1.48	D 792
Tensile Strength at Yield, psi (kPa)	6,000 (41,370)	D 638
Elongation at Yield (MD), %	3.0	D 638
Tensile Modulus,psi (kPa)	470,000 (3,240,650)	D 638
Flexural Strength,psi (kPa)	11,600 (79,982)	D 638 (min. 0.125" [3 mm] thick specimen)
Flexural Modulus, psi (kPa)	460,000 (3,171,700)	D 790
Flame Spread	25 or less (up to 30 mil [0.8 mm])	E 84
Smoke Developed	50 or less (up to 30 mil [0.8 mm])	E 84
Electrical Conductance	Non-Conductor	D 257
Gardner—SPI Impact, in. lb./mil by Ductile Failure	10 mil (0.3 mm) 1.3 15 mil (0.4 mm) 1.4 20 mil (0.5 mm) 1.5 30 mil (0.8 mm) 1.6	D 3679 (4 lb. [1.8 kg] weight; 8 lb. [3.6 kg] for 30 mil [0.8 mm])

Note: Chemical resistance data available on request.

General Properties of Hi-Lo® Temp Formaldehyde-free™ Fiber Glass Insulation Insert

Thermal conductivity	Mean Temperature °F	Mean Temperature °C	"k" Btu•in/(hr•ft²•°F)	"k" W/m•°C
	75	24	.28	.040
	150	66	.34	.049
	300	149	.45	.065
Temperature limits	0°F to 450°F (-18°C to +232°C)			
Sanitary	Odorless. Will not absorb odors. Provides no food for insects, rodents, or mildew.			
Vibration resistant	Will not settle or separate.			
Fire safety	Meets most requirements of federal, state and local codes. Accepted for commercial, institutional, industrial, and residential projects in all parts of U.S. The fiber glass inserts have UL 25/50 rating and are non-combustible per ASTM E 136.			

Specification Compliance

USDA, Agriculture Canada
New York City MEA #7-87
ICBO
SBCCI
BOCA
ASTM D 1784, Class 16354-C
L-P-535E*, Composition A, Type II, Grade GU
L-P-1035A*, Composition A, Type II, Grade GU
Canada: CGSB 51-GP-53M
CAN/ULC S102-M88

** Impact strength determined by Gardner-SPI test method rather than Izod, since Gardner is more appropriate for PVC sheeting materials.*

View MSDS

Johns Manville

717 17th St.
Denver, CO 80202
(800) 654-3103
specJM.com

North American Sales Offices, Insulation Systems

Eastern Region
P.O. Box 158
Defiance, OH 43512
(800) 334-2399
Fax: (419) 784-7866

Western Region & Canada
P.O. Box 5108
Denver, CO 80217
(800) 368-4431
Fax: (303) 978-4661

The physical and chemical properties of Zeston® Insulated Fitting Covers and Jacketing listed herein represent typical, average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice. Numerical flame spread and smoke developed ratings are not intended to reflect hazards presented by these or any other materials under actual fire conditions. Check with the Regional Sales Office nearest you to assure current information. **All Johns Manville products are sold subject to Johns Manville's standard Terms and Conditions including Limited Warranty and Limitation of Remedy. For a copy of the Johns Manville standard Terms and Conditions, Limited Warranty and Limitation of Remedy, and information on other Johns Manville thermal insulations and systems, call (800) 654-3103.**

CI-55 8-08 (Replaces 5-08)

Printed on recycled paper.

Copyright ©2008 Johns Manville
Printed in USA

ESM 18: Window Replacements

ESM Overview

Ameresco proposes to replace the existing single-glazed windows at City Hall. The windows at City Hall have aluminum frames that are not thermally broken. The windows identified in this measure have poor insulating properties and add to occupant discomfort in addition to the building heating and cooling loads. Ameresco will replace these windows with new, double-glazed units having aluminum frames with thermal breaks, low-E coatings, and argon fill. The colors will match the existing design and will improve comfort as well as save heating and cooling energy.



Figure 18.1: The existing windows at City Hall will be replaced with a new high efficiency windows.

ESM Detail

Existing System

The Bristol City Hall is a four story building constructed in 1963. The building contains 58,289 sq. ft. of space consisting of offices and meeting space serving departments such as the Mayor's Office, City Treasurer, Clerk, Building and Parks Department, and Council Chambers. The building's exterior is concrete and brick veneer with window walls located at each column. The window walls span the entire height of the building and consist of pivoting and fixed vision windows and fixed non-vision spandrel glass windows with ceramic backing. The spandrel glass windows are not visible from inside the building because they are located above the plenum space and behind the induction units. The window systems have aluminum frames that are not thermally isolated and single pane glazing with exterior storms.

Proposed System

Ameresco proposes to replace the existing inefficient operable windows with new high efficiency windows. All aluminum frames will remain fastened to the concrete and masonry walls and existing spandrel glass panels will remain in place. New double glazed windows will be installed in all vision areas and new insulated panels will be installed at all opaque, spandrel glass sections. Insulation will be installed at the perimeter frames of new windows as well as sealant along the interior and exterior perimeters.

The following is the detailed scope of work.

- Demo and remove existing window sash from frames listed in table below.
- Existing frames and spandrel panels will be left intact.

"Page content is subject to Confidentiality Restrictions"

- Install windows with extended perimeter flange frame into cleared openings.
- New windows to be bronze color, aluminum frame window systems with double pane glazing and thermal breaks in place of the existing single pane, vision area window sashes. The bottom 50% of the newly installed vision windows will be a projection style operable section (bottom projected, open out) and the upper 50% section of vision window to be fixed. New windows to be Peerless G205 or equal thermal project out window. New double pane glazing to have U-factor of 0.363, low-e coating, and argon fill.
- Fixed insulated panels to be Mapes Industries with Kynar embossed aluminum finish. Panels to have 1" ISO foam core with total R-value of 6.4.
- Insulate the perimeter of new windows.
- Install new insulated panels with required receptor system over existing panels.
- Install interior perimeter snap trim around new windows.
- Install exterior mullion covers as required.
- Caulk new system on the interior and exterior.
- All material removed will be disposed based on EPA requirements.
- All freight, storage, and all associated transportation is included.
- Exclusions: All removal and installation of blinds/shades and furniture moving. Repair of any sills, headers, rot and mortar work. Exterior doors and double pane storefront window systems at building entrances are excluded from the scope.
- Asbestos abatement of the removed window sashes is included. Any remaining asbestos caulking on the existing frames to remain will be encapsulated behind the newly installed window systems and flashing.

Table 18.1: Proposed square feet of window replacements at City Hall

Window Type	Description	W (in.)	H (in.)	Quantity	Total Area (sq. ft.)
1	Operable Vision Window	34	78	190	3,448
2	Basement Operable Vision Window	34	59	29	397
3	Fixed Vision Window	40	116	4	128
4	Spandrel Glass with Ceramic Backing	34	30	76	535
5	Spandrel Glass with Ceramic Backing	34	66	162	2,487
6	Spandrel Glass with Ceramic Backing	34	20	16	74
7	Spandrel Glass with Ceramic Backing	34	55	2	25
TOTAL					**7,094**

"Page content is subject to Confidentiality Restrictions"

>Equipment, Design and Construction Documentation

Equipment will be identified in submittals provided for approval prior to procurement. Documents will be submitted to the facilities department for their review and comment. Upon approval, these will constitute the construction documents. Upon completion of the construction phase, the documents will be revised as needed to reflect "As-Built" conditions and submitted in multiple for record.

>Impact on Facility Operations and Performance

The new high efficiency window systems will greatly improve the thermal performance of the building envelope. New windows will reduce maintenance cost resulting from failing components in the existing window systems. Occupant comfort will be greatly improved due to new weather sealing at operable windows and along the perimeter frame.

"Page content is subject to Confidentiality Restrictions"

This page is intentionally left blank.

Appendix for ESM 18: Window Replacements

I. Energy Savings Calculations

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

City of Bristol, CT	
Energy and Demand Savings Summary	
Measure ID:	**18**
Measure Name:	**Window Replacements**
Measure Location:	
Engineers:	

Site Name:		**City_Hall**	**Summary**
Item	Units	Savings	
Electricity			
Energy On-Peak	kWh	639	639
Energy Off-Peak	kWh		0
Energy Total	kWh	639	639
Demand On-Peak, Monthly	kW		0.0
Demand On-Peak, Annual	kW		0.0
Demand Off-Peak, Monthly	kW		0.0
Demand Off-Peak, Annual	kW		0.0
Fossil Fuel			0
Natural Gas (NG)	CCF		0
Liquid Propane Gas (LPG)	Gallons		0
Steam	Mlbs		0
Fuel Oil, #2	Gallons	2,800	2,800
Fuel Oil, #4	Gallons		0
Fuel Oil, #6	Gallons		0
Max Daily Demand (Natural Gas)	CCF (Demand)		0
Water			0
Water Savings	CF		0
Sewer			0
Sewer Savings	CF		0

City of Bristol, CT
City Hall & Annex
Energy Savings Analysis

TMY-3 Weather Data for Hartford, CT								Existing Occupancy Schedule				Proposed EMS Operating Hours				Existing							Proposed							Savings			
Amb. Temp Bin deg. F	Ave Temp deg. F	M.C.W.B deg. F	M.C. Enthalpy Btu/lbma	01-08 Hours	09-16 Hours	17-24 Hours	Total Bin Hours	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ Window Trans. Cool/ Heat Load (MBH)	UnOcc Window Trans. Cool/ Heat Load (MBH)	UA (BTU/hr-deg. F)	Occ Window Infiltration Load (MBH)	UnOcc Window Infiltration Load (MBH)	Occ Cooling/Heating Energy Consump. (MMBTU)	UnOcc Cooling/Heating Energy Consump. (MMBTU)	Occ Window Trans. Cool/ Heat Load (MBH)	UnOcc Window Trans. Cool/ Heat Load (MBH)	UA (BTU/hr deg. F)	Occ Window Infiltration Load (MBH)	UnOcc Window Infiltration Load (MBH)	Occ Cooling/Heating Energy Consump. (MMBTU)	UnOcc Cooling/Heating Energy Consump. (MMBTU)	Occ. Cooling Savings (MMBTU)	UnOcc. Cooling Savings (MMBTU)	Occ. Heating Savings (MMBTU)	UnOcc. Heating Savings (MMBTU)
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH
Cooling																																	
105 to 110	107.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	152	102	4,549	28	19	0	0	92	62	2,734	7	5	0	0	0	0		
100 to 105	102.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	130	80	4,549	24	15	0	0	78	48	2,734	6	4	0	0	0	0		
95 to 100	97.5	75.8	39.4	0	4	0	4	1	0	0	3	1	0	1	2	107	57	4,549	20	10	0	0	64	34	2,734	5	3	0	0	0	0		
90 to 95	92.5	74.9	38.7	0	34	9	43	6	4	4	28	11	0	8	24	84	34	4,549	15	6	0	0	51	21	2,734	4	2	0	0	0	0		
85 to 90	87.5	72.8	36.9	0	105	22	127	19	11	13	84	31	0	24	72	61	11	4,549	11	2	1	0	37	7	2,734	3	1	0	0	0	0		
80 to 85	82.5	69.0	33.5	4	247	105	356	53	32	37	234	88	0	66	202	39	0	4,549	7	0	2	0	23	0	2,734	2	0	1	0	1	0		
75 to 80	77.5	66.7	31.7	55	243	158	456	68	41	48	300	112	0	85	258	16	0	4,549	3	0	1	0	10	0	2,734	1	0	0	0	0	0		
70 to 75	72.5	64.6	30.0	137	208	183	528	79	47	55	347	130	0	98	299	0	0	4,549	0	0	0	0	0	0	2,734	0	0	0	0	0	0		
65 to 70	67.5	61.1	27.5	199	231	248	678	101	61	71	446	167	0	126	384	0	0	4,549	0	0	0	0	0	0	2,734	0	0	0	0	0	0		
60 to 65	62.5	56.0	24.0	306	300	310	916	136	82	95	602	226	0	171	519	0	0	4,549	0	0	0	0	0	0	2,734	0	0	0	0	0	0		
Heating																																	
55 to 60	57.5	51.2	21.1	270	226	289	785	117	70	82	516	194	0	146	445	(57)	(7)	4,549	(21)	(2)	0	11	(34)	(4)	2,734	(5)	(1)	0	7			0	4
50 to 55	52.5	46.7	18.6	291	186	261	738	110	66	77	485	182	0	138	418	(80)	(30)	4,549	(29)	(11)	3	26	(48)	(18)	2,734	(7)	(3)	1	15			1	11
45 to 50	47.5	41.8	16.1	210	129	187	526	78	47	55	346	130	0	98	298	(102)	(52)	4,549	(37)	(19)	7	34	(62)	(31)	2,734	(9)	(5)	4	19			4	16
40 to 45	42.5	38.1	14.4	282	188	155	625	93	56	65	411	154	0	117	354	(125)	(75)	4,549	(46)	(27)	15	59	(75)	(45)	2,734	(11)	(7)	8	32			7	28
35 to 40	37.5	33.1	12.2	288	296	306	890	132	80	93	585	220	0	166	504	(148)	(98)	4,549	(54)	(36)	30	111	(89)	(59)	2,734	(13)	(9)	15	59			15	52
30 to 35	32.5	28.5	10.3	252	222	251	725	108	65	76	477	179	0	135	411	(171)	(121)	4,549	(62)	(44)	32	112	(103)	(72)	2,734	(16)	(11)	16	59			16	53
25 to 30	27.5	24.1	8.6	182	160	177	519	77	46	54	341	128	0	97	294	(193)	(143)	4,549	(71)	(52)	28	95	(116)	(86)	2,734	(18)	(13)	14	50			14	46
20 to 25	22.5	20.3	7.2	231	89	177	497	74	44	52	327	123	0	93	282	(216)	(166)	4,549	(79)	(61)	32	106	(130)	(100)	2,734	(20)	(15)	16	55			16	51
15 to 20	17.5	15.5	5.6	135	42	57	234	35	21	24	154	58	0	44	133	(239)	(189)	4,549	(87)	(69)	17	57	(144)	(113)	2,734	(22)	(17)	9	29			9	28
10 to 15	12.5	10.9	4.1	44	7	24	75	11	7	8	49	18	0	14	43	(262)	(212)	4,549	(95)	(77)	6	20	(157)	(127)	2,734	(24)	(19)	3	11			3	10
5 to 10	7.5	6.4	2.7	23	3	1	27	4	2	3	18	7	0	5	15	(284)	(234)	4,549	(104)	(86)	3	8	(171)	(141)	2,734	(26)	(21)	1	4			1	4
0 to 5	2.5	2.4	1.5	11	0	0	11	2	1	1	7	3	0	2	6	(307)	(257)	4,549	(112)	(94)	1	4	(185)	(154)	2,734	(28)	(23)	1	2			1	2
-5 to 0	(2.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	(330)	(280)	4,549	(120)	(102)	0	0	(198)	(168)	2,734	(30)	(26)	0	0			0	0
-10 to -5	(7.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	(353)	(303)	4,549	(129)	(110)	0	0	(212)	(182)	2,734	(32)	(28)	0	0			0	0
-15 to -10	(12.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	(375)	(325)	4,549	(137)	(119)	0	0	(226)	(195)	2,734	(34)	(30)	0	0			0	0
-20 to -15	(17.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	(398)	(348)	4,549	(145)	(127)	0	0	(239)	(209)	2,734	(36)	(32)	0	0			0	0
-25 to -20	(22.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	(421)	(371)	4,549	(154)	(135)	0	0	(253)	(223)	2,734	(38)	(34)	0	0			0	0
				2,920	2,920	2,920	8,760	1,304	783	913	5,761	2,161	0	1,634	4,965						177	645						90	342	2	0	86	303

Cell Ref.	Comment
A-H	TMY-3 Weather Data for Hartford, CT
I - L	Occupied hours after installation of EMS
M - P	Operating hours after installation of EMS
Q	Cooling = [col S] ÷ 1,000 x ([col B] - AA59)), Heating = [col S] ÷ 1,000 x (AC59 - [col B]))
R	Cooling = [col S] ÷ 1,000 x ([col B] - AA60)), Heating = [col S] ÷ 1,000 x (AC60 - [col B]))
S	= AC44 x AC45
T	Existing occupied window infiltration heating loads (MBH)
U	Existing unoccupied window infiltration heating loads (MBH)
V	Cooling = ([col Q] + [col T]) x ([col I] + [col K]) ÷ 1,000 ÷ AC55 x AC53
	Heating = MIN([col I] + [col K] , [col M] + [col O]) x MIN([col Q] + [col T] + internal gains , 0) + IF([col I] + [col K] > [col M]+[col O] , (([col I] + [col K]) - ([col M] + [col O])) x MIN([col R] + [col U] + internal gains , 0) , 0) ÷ 1,000 ÷ AC52
W	Cooling = ([col R] + [col U]) x ([col J] + [col L]) ÷ 1,000 ÷ AC55 x AC53
	Heating = ([col N] + [col P]) x MIN([col R] + [col U] + internal gains , 0) + IF([col I] + [col K] < [col M] + [col O] , (([col M] + [col O]) - ([col I] + [col K])) x MIN([col Q] + [col T] + internal gains , 0)) ÷ 1,000 ÷ AC52
X	= ([col Q] ÷ [col S] x [col Z])
Y	= ([col R] ÷ [col S] x [col Z])
Z	= AC44 x AC46
AA	Proposed occupied window infiltration heating loads (MBH)
AB	Proposed unoccupied window infiltration heating loads (MBH
AC	Cooling = ([col X] + [col AA]) x ([col I] + [col K]) ÷ 1,000 ÷ AC55 x AC53
	Heating = MIN([col I] + [col K] , [col M] + [col O]) x MIN([col X] + [col AA] + internal gains , 0) + IF([col I] + [col K] > [col M]+[col O] , (([col I] + [col K]) - ([col M] + [col O])) x MIN([col Y] + [col AB] + internal gains , 0) , 0) ÷ 1,000 ÷ AC52
AD	Cooling = ([col Y] + [col AB]) x ([col J] + [col L]) ÷ 1,000 ÷ AC55 x AC5
	Heating = ([col N] + [col P]) x MIN([col Y] + [col AB] + internal gains , 0) + IF([col I] + [col K] < [col M] + [col O] , (([col M] + [col O]) - ([col I] + [col K])) x MIN([col X] + [col AA] + internal gains , 0)) ÷ 1,000 ÷ AC52
AE	= [col V] - [col AC]
AF	= [col W] - [col AD]
AG	= [col V] - [col AC]
AH	= [col W] - [col AD]

Assumptions:	Value	Unit	CELL REF	Description
Total Window Area	5,996	SF	**AC43**	
Window Replacement Area	5,996	SF	**AC44**	
Existing Window Uvalue	0.76	BTU/deg F-S	**AC45**	
Proposed Window Uvalue	0.46	BTU/deg F-S	**AC46**	
Existing Window Crack Area	17.45	SF	**AC47**	
Proposed Window Crack Area	4.36	SF	**AC48**	
Crack Area Windward Diversity	25.0%		**AC49**	
Average Summer Wind Speed	2.0	MPH	**AC50**	
Average Winter Wind Speed	4.0	MPH	**AC51**	
Proposed Heating Plant Efficiency	78.0%		**AC52**	
Percent Buidling Cooled	95.0%		**AC53**	
Cooling Plant Efficiency	8.5	EER	**AC54**	
Cooling Plant Efficiency	2.49	COP	**AC55**	= AC54 / 3.413

Average Space Temperatures	Cooling		Heating		Description
Occupied	74.0	**AA59**	70.0	**AC59**	
UnOccupied	85.0	**AA60**	59.0	**AC60**	

Page content is subject to Confidentiality Restrictions

Appendix for ESM 18: Window Replacements

II. Manufacturer Specification Sheets

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

Peerless G201

Project Out/Awning
Thermal Aluminum Window

AW-PG100-AP

PRODUCT FEATURES

Frame depth	3-1/4"
Typical wall thickness	.080"
Thermal break design	Polyamide strut
Maximum glass thickness	1"
Ext./Int. glazing material	Santoprene/Santoprene
U Value	.363



Peerless Project Out Series

Peerless has developed the cutting edge ENERGSAVE Aluminum framed windows and doors, which provide all of the advantage of Aluminum products while increasing the energy efficiency. The ENERGSAVE products reduce heat flow and air leakage in the overall design which includes — the Framing System, Glass System and Spacer system. The G200 series has been designed for energy efficiency, ease of operation and building security.

Energy Innovation from the Heartland of America

Peerless
ARCHITECTURAL WINDOWS & DOORS

ENERGSAVE

Peerless G201

G201 AW-PG100-AP

Project Out Awning Thermal Aluminum Window

BENEFITS

ARCHITECT

Energy Savings

- Unique .363 U Value for an AW project out window
- Less than many aluminum thermal project out windows

Third Party Certifications

- AAMA – certified window for performance
- IGCC – certified insulating glass for long life

Design Flexibility

- Unique frame design allows for multiple selection of glass types to meet low U values

Finish and Color Choices

- Exterior and interior colors can be different
- Standard or anodize paint colors

BUILDING OWNER

Building Security

- One handle engages all vent perimeter locks
- Optional key-operated handle equals no opening

Low Maintenance

- Vent hardware easy to adjust, if necessary
- Durable metal handles and hinges for long life

INSTALLER

Frame Choices

- Continuous head/sill/jamb eliminate mullions
- Flange designs can eliminate field trimming

Field Labor Reductions

- Easy-to-remove glass film keeps glass clean
- Dry exterior gaskets ensures interior reglazing

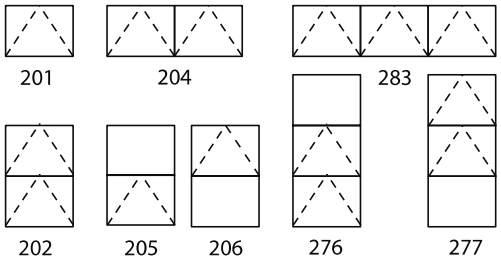


CERTIFICATION	G201
AAMA standard/specification	A440-08
Minimum test size	60" x 36"
Air infiltration rate @6.24 psf	.1 cfm/sf
Water test pressure	15 psf
Structural load test pressure	150 psf
*U Value	.363

*Test glass – 1/4" soft Low E x Argon x 1/4"

TYPICAL CONFIGURATIONS

For Project Out Windows



Energy Innovation from the Heartland of America

Peerless
ARCHITECTURAL WINDOWS & DOORS

Peerless Architectural Windows and Doors, 2403 S. Main, Fort Scott, KS 66701
Phone: 620-223-4610 • www.Peerless-USA.com

ESM 21:
Boiler Replacement

ESM Overview

Ameresco proposes to replace the oil-fired hot water boiler serving the Fire Headquarters with a new high efficiency gas-fired equivalent boiler. Ameresco proposes as an option for the Police Court Building to replace the existing oil-fired steam boilers with new gas-fired equivalent steam boilers. A new natural gas service will be provided by Eversource to serve the new boilers. As part of the measure, the existing underground oil tanks will be removed along with all other fuel oil auxiliaries. The proposed measure will provide the buildings with higher efficiency systems as well as a less expensive fuel source for space heating and domestic hot water.

During the preliminary energy audit Ameresco identified additional boiler replacement measures which were not selected by the City.



Figure 21.1: Ameresco proposes to convert the existing boiler at the Fire HQ to natural gas.

ESM Detail

Existing System

>Police Court Building

The Police Court building is served by two (2) HB Smith 350 Mills sectional, cast iron, oil-fired boilers producing low pressure steam. Steam is passed through (2) heat exchangers to create heating hot water distributed throughout the building by zone pumps for terminal units and reheats. The remaining steam produced is distributed to four (4) steam coils serving four (4) AHUs located in the 2nd floor mechanical rooms. Additional hot water used for supplemental heating of the cell area and summer reheat is produced by a Weil-McLain 478, oil-fired boiler located in the boiler room.

>Fire Headquarters Building

Heating for the Fire Headquarters building is provided by an HB Smith oil-fired hot water boiler. Domestic hot water is currently provided by an A.O. Smith ProMax electric storage heater and a 75-gallon TriangleTube storage tank for supplemental storage. Fuel oil for the boiler is stored in a 4,000 gallon underground storage tank.

"Page content is subject to Confidentiality Restrictions"

Proposed System

>Police Court Building

As one option, Ameresco proposes to replace the existing oil-fired steam boiler serving the Police Court building with two (2) new gas-fired Weil-McLain 1088 steam boilers, or approved equal. Natural gas service will be brought to the building by Eversource and piped to the new boilers. The existing Weil-McLain 78 series hot water boiler in the boiler room will be converted from oil to gas.

The scope of work for this ESM includes all demolition, mechanical, and electrical work required to replace the existing HB Smith oil-fired boilers at the Police Court with a new gas-fired boilers. The scope of work details are:

Demolition

- Disable, drain, and legally dispose two (2) existing HB Smith 350 Mills boilers and burners, fuel oil piping, and burner control panels.
  - Disable and drain
  - Demo and dispose of steam supply pipe from existing boilers to the existing steam header, reuse existing isolation valves where possible
  - Close boiler isolation valves
  - Disconnect existing electrical service to breaker.
- Remove existing oil-fired burner serving Weil-McLain 78 Series Boiler.
- Existing Steam Header to be reused
- Remove existing boiler feed water tank and vacuum condensate receiver (located in boiler room in between boilers).
- Drain, demo, and remove the existing 8,000 gallon oil storage tank
  - Remove all associated piping
  - Insulate and seal all exterior penetrations left by removal of piping

Abatement

- Abatement of asbestos containing material that Ameresco has been made aware of in the boiler room includes piping elbows of existing steam piping. Any additional material proven to contain asbestos will require revised numbers.
- Based on the information provided a containment using Plastic sheeting, duct tape or similar to secure the sheeting, and all work will be performed under negative air pressure.
- When the work is completed there will be a final visual inspection and a PCM re-occupancy air test administered by a third party licensed asbestos Project Monitor.
- All asbestos containing material will be disposed of following state and federal guidelines for disposal of asbestos containing material.

Mechanical

- Provide and install two (2) Weil McLain 1088 Gas-fired Steam boilers on one of the existing 4" (5'x11') concrete housekeeping pad.

- Provide and install new 500 MBH Input gas-fired burner for existing Weil McLain 78 Series Hot Water Boiler
- Provide and install a new boiler feed water system sized for the new boilers and connect to new boilers per manufacture's specification, including electrical service.
- Provide and install a new duplex, vacuum type condensate transfer unit discharging to the boiler feed water unit tank. Provide and install the electric control panel with the control power switching relay and selector switches.
    - New unit to have a tank capacity of approximately 100 gallons
- Provide and install all isolation valves, pressure and temperature gauges, temperature probes, etc. to complete the near boiler piping as shown in manufacturer's installation layout.
- Provide and install boiler room piping, fittings, flanges, unions, and valves as needed to connect to each new boiler to existing supply header.
- Modify existing combustion air system as necessary to accommodate code requirements for the new steam boilers, including motorized dampers, louvers, and ducts, as required.
- Provide and install Owens Corning Fiberglass pipe insulation or equal per Connecticut energy code for all new cold water, heating steam supply, and heating condensate return piping, elbows, valves, fittings (except unions), and piping connections. Seal exposed fiberglass ends with white mastic waterproofing paint.
- Provide test and balance services within the boiler plant, and coordinate start-up with boiler manufacturer's representative.
- Provide Boiler 1st year service and maintenance per manufacturer's recommendations

Plumbing-Gas

- Run new 4" gas line to new boilers, approx.. 40 ft from new meter to boiler room. Provide isolation valves at each boiler.
- Provide new gas train to each boiler including Weil McLain 78 Series hot water boiler per manufacturer's piping diagram.
- Label all gas piping.

Electrical and Controls

- Reuse existing electric panel.
- Install power conduit and conductors to new boilers and accessories.
- Provide and install in the boiler room a Carbon Monoxide detector on the same circuit as the boilers, with a relay that disables the boilers in the event Carbon Monoxide is detected.
- Provide and install controls to two (2) new Weil McLain 1088 boilers as follows:

Steam Boilers – Mechanical Room

Point Name	Point Type	Count	Notes
Steam Pressure Setpoint	AO	1	Adjustable per sequence
Main Steam Supply Pressure	AI	1	Install Well Sensor
Boiler Start/Stop	DO	2	
Boiler Status	DI	2	Status from panel
Boiler Alarm	DI	2	Alarm relay from boiler control panel

"Page content is subject to Confidentiality Restrictions"

Condensate Pump Status	DI	2	Current Transducer
Condensate Pump start/stop	DO	2	
Combustion Air Fan	DO	1	Relay
Sub-Total Points		13	
Control Sequences: Steam Pressure Reset; Boiler Start/Stop			

>Fire Headquarters Building

Ameresco proposes to replace the existing oil-fired boiler serving the Fire Headquarters with a new gas-fired high-efficiency Lochinvar Knight hot water boiler, or approved equal. Natural gas service will be brought to the building by Eversource and piped to the new boiler. The existing electric storage heater will be removed and a new indirect Superstor Ultra (or approved equal) indirect tank will be installed and piped to the new boiler. The existing oil system will be removed including the underground oil tank and fuel oil pumps and piping.

The scope of work for this ESM includes all demolition, mechanical, and electrical work required to replace the existing HB Smith oil-fired boiler and electric domestic hot water storage heater at the Fire Headquarters with a new gas-fired boiler and indirect storage tank. The scope of work details are:

Demolition

- Demolish, remove and legally dispose of the existing HB Smith oil-fired hot water boiler and all associated equipment made obsolete by new work.
- Demolish, remove and legally dispose of existing A.O. Smith ProMax electric hot water heater and Triangle Tube storage tank and all associated equipment made obsolete by new work.
- Disable and remove existing fuel oil supply lines and equipment in the boiler room
- Disposal of remaining fuel oil and storage tank to be priced separately (see below).
- The existing circulator pumps shall be reused.

Mechanical

- Provide and install one (1) new Lochinvar Knight XL KBN601 boiler in place of existing HB Smith boiler on newly poured concrete pad.
    - Pour new 4" concrete housekeeping pad, dimensions - 48" x 28".
- Provide and install boiler room piping, fittings, flanges, unions, and valves as needed to connect to the existing supply and return headers.
- Provide and install condensate neutralizers and pipe boiler condensate to nearest floor drain.
- Provide and install approximately 15 LF of 4" PVC combustion air duct. Supply air ducts shall terminate through the sidewall of the boiler room.
- Provide and install 15 LF of 4" CPVC exhaust duct from the boiler to the sidewall reusing the existing hole from the existing exhaust pipe.
- Provide and install an air and dirt separator, Amtrol AX 60(V) expansion tank, and low water cutoff.
- Provide and install new testable backflow preventer in make-up water supply line.

"Page content is subject to Confidentiality Restrictions"

- Provide and install new Superstore Ultra indirect DHW tank, Model SSU-60 on new 4" housekeeping pad. Provide new B&G inline circulator sized for 30 gpm and 20' of head. Connect new DHW tank to boiler supply and return and to existing DHWS and CW/DHWR lines.
- Provide and install Owens Corning Fiberglass pipe insulation or equal per Connecticut energy code for all heating water supply and heating water return piping, elbows, valves, fittings (except unions), and piping connections. Seal exposed fiberglass ends with white mastic waterproofing paint.
- Fill new piping and coordinate start-up with boiler manufacturer's representative.
- Test and verify proper operation of all new equipment under all normal control sequences and alarm conditions, and make any corrections necessary for ongoing proper operation.

Plumbing-Gas

- New gas service will be provided outside existing boiler room.
- Bring gas service into boiler room through exterior wall.
- Run 10 LF new 1¼" gas line to new boiler/burner. Provide isolation valves at boiler.
- Provide new gas train to boiler per manufacturer's piping diagram.
- Label all gas piping.

Electrical and Controls

- Install power conduit and conductors to new boiler in mechanical room.
- Provide and install in the boiler room a Carbon Monoxide detector on the same circuit as the boiler, with a relay that disables the boiler in the event Carbon Monoxide is detected.
- New boiler to utilize built in controls.

Demo & Remove Fuel Oil Storage Tank

- Drain, demo, and remove the existing 4,000 gallon oil storage tank
- Remove all associated piping
- Insulate and seal all exterior penetrations left by removal of piping

Exclusions

The measure assumes the following:

- Existing isolation valves in steam/water piping are assumed to be in working order.
- Repair of existing valves and piping that shall be tied into as part of this scope of work is excluded.
- The existing building hot water distribution pumps shall remain and their replacement or repair is excluded.
- Work shall occur during normal business hours.
- Provision for temporary heat or other utilities is excluded.
- Additions or modifications to fire protection systems are excluded.

"Page content is subject to Confidentiality Restrictions"

- Any abatement or remediation of asbestos or other hazardous materials beyond that specifically called out to be included in the scope of work above is excluded from the scope and cost of the proposed work.
- Removal of any remaining oil left in the existing oil tanks is excluded. It is assumed that the City may transfer this oil to other facilities as needed and at their convenience.
- If oil leakage is discovered during removal of the underground oil tank Ameresco will stop all work and report back to the City. Remediation of any existing underground oil leaks is not included in the project.

>Equipment, Design and Construction Documentation

Equipment will be identified in submittals provided for approval prior to procurement. Documents will be submitted to the facilities department for their review and comment. Upon approval, these will constitute the construction documents. Upon completion of the construction phase, the documents will be revised as needed to reflect "As-Built" conditions and submitted in multiple for record.

>Impact on Facility Operations and Performance

Energy savings will be realized by the improved efficiency of the boilers and the reduced cost of natural gas in comparison to oil and electricity.

"Page content is subject to Confidentiality Restrictions"

Appendix for ESM 21: Boiler Replacement

I. Energy Savings Calculations

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

City of Bristol, CT	
Energy and Demand Savings Summary	
Measure ID:	**21**
Measure Name:	**Boiler Replacement**
Measure Location:	
Engineers:	

Site Name:		**Police**	**Fire_HQ**	**Summary**
Item	Units	Savings	Savings	
Electricity				
Energy On-Peak	kWh			0
Energy Off-Peak	kWh			0
Energy Total	kWh	0	0	0
Demand On-Peak, Monthly	kW			0.0
Demand On-Peak, Annual	kW			0.0
Demand Off-Peak, Monthly	kW			0.0
Demand Off-Peak, Annual	kW			0.0
Fossil Fuel				0
Natural Gas (NG)	CCF	-38,015	-6,179	-44,194
Liquid Propane Gas (LPG)	Gallons			0
Steam	Mlbs			0
Fuel Oil, #2	Gallons	29,894	5,347	35,241
Fuel Oil, #4	Gallons			0
Fuel Oil, #6	Gallons			0
Max Daily Demand (Natural Gas)	CCF (Demand)	-337	-56	-392
Water				0
Water Savings	CF			0
Sewer				0
Sewer Savings	CF			0

City of Bristol, CT
Police Court & Parking Garage
Boiler Replacement

TMY-3 Weather Data for Hartford, CT								Existing Occupancy Schedule				Proposed EMS Operating Hours								Proposed		Savings
Amb. Temp Bin deg. F	Ave Temp deg. F	M.C.W.B deg. F	M.C. Enthalpy Btu/lbma	01-08 Hours	09-16 Hours	17-24 Hours	Total Bin Hours	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Interacted Occ. Heat Load (MBH)	Interacted UnOcc. Heat Load (MBH)	Occ. Heat Usage (MMBTU)	UnOcc. Heat Usage (MMBTU)	Occ Cooling/Heating Energy Consump. (MMBTU)	UnOcc Cooling/Heating Energy Consump. (MMBTU)	Heating Energy Savings (MMBTU)
A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**Q**	**R**	**S**	**T**	**U**	**V**	**W**
Cooling																						
105 to 110	107.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0							
100 to 105	102.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0							
95 to 100	97.5	75.8	39.4	0	4	0	4	1	0	3	0	1	0	2	1							
90 to 95	92.5	74.9	38.7	0	34	9	43	10	0	33	0	13	0	22	8							
85 to 90	87.5	72.8	36.9	0	105	22	127	30	0	97	0	39	0	64	24							
80 to 85	82.5	69.0	33.5	4	247	105	356	85	0	271	0	109	0	181	66							
75 to 80	77.5	66.7	31.7	55	243	158	456	108	0	348	0	140	0	231	84							
70 to 75	72.5	64.6	30.0	137	208	183	528	125	0	403	0	162	0	268	98							
65 to 70	67.5	61.1	27.5	199	231	248	678	161	0	517	0	208	0	344	126							
60 to 65	62.5	56.0	24.0	306	300	310	916	217	0	699	0	282	0	465	170							
Heating																						
55 to 60	57.5	51.2	21.1	270	226	289	785	186	0	599	0	241	0	398	145	(360)	(48)	140	0	131	0	8
50 to 55	52.5	46.7	18.6	291	186	261	738	175	0	563	0	227	0	374	137	(495)	(134)	236	0	221	0	14
45 to 50	47.5	41.8	16.1	210	129	187	526	125	0	401	0	162	0	267	97	(630)	(220)	246	0	231	0	15
40 to 45	42.5	38.1	14.4	282	188	155	625	148	0	477	0	192	0	317	116	(766)	(306)	393	0	370	0	24
35 to 40	37.5	33.1	12.2	288	296	306	890	211	0	679	0	274	0	452	165	(901)	(393)	704	0	661	0	42
30 to 35	32.5	28.5	10.3	252	222	251	725	172	0	553	0	223	0	368	134	(1,036)	(479)	691	0	649	0	42
25 to 30	27.5	24.1	8.6	182	160	177	519	123	0	396	0	160	0	263	96	(1,171)	(565)	578	0	543	0	35
20 to 25	22.5	20.3	7.2	231	89	177	497	118	0	379	0	153	0	252	92	(1,306)	(651)	634	0	596	0	38
15 to 20	17.5	15.5	5.6	135	42	57	234	56	0	178	0	72	0	119	43	(1,441)	(738)	336	0	316	0	20
10 to 15	12.5	10.9	4.1	44	7	24	75	18	0	57	0	23	0	38	14	(1,576)	(824)	120	0	113	0	7
5 to 10	7.5	6.4	2.7	23	3	1	27	6	0	21	0	8	0	14	5	(1,712)	(910)	48	0	45	0	3
0 to 5	2.5	2.4	1.5	11	0	0	11	3	0	8	0	3	0	6	2	(1,847)	(996)	21	0	20	0	1
-5 to 0	(2.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	(2,017)	(1,083)	0	0	0	0	0
-10 to -5	(7.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	(2,154)	(1,169)	0	0	0	0	0
-15 to -10	(12.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	(2,292)	(1,255)	0	0	0	0	0
-20 to -15	(17.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	(2,429)	(1,341)	0	0	0	0	0
-25 to -20	(22.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	(2,567)	(1,428)	0	0	0	0	0
				2,920	2,920	2,920	8,760	2,080	0	6,680	0	2,694	0	4,445	1,622			4,146	0	3,897	0	250
								1,342	-	4,310	-											

Cell Ref.	Comment
A-H	TMY-3 Weather Data for Hartford, CT
I - L	Occupied hours as per the RFP data
M - P	Equipment operating hours after EMS is installed
Q	Interacted Occupied Heating loads (MBH)
R	Interacted Unoccupied Heating loads (MBH)
S	Heating = -(MIN([col I] + [col K],[col M] + [col O]) x MIN([col Q] + internal gains,0) + IF([col I] + [col K] > [col M] + [col O],(([col I] + [col K]) - ([col M] + [col O])) x MIN([col R] + internal gains,0),0)) ÷ 1,000 ÷ R43
T	Heating = -(([col N] + [col P]) x MIN([col R] + internal gains,0) + IF([col I] + [col K] < [col M] + [col O],(([col M] + [col O]) - ([col I] + [col K])) x MIN([col Q] + internal gains,0),0)) ÷ 1,000 ÷ R43
U	Heating = -(MIN([col I] + [col K],[col M] + [col O]) x MIN([col Q] + internal gains,0) + IF([col I] + [col K] > [col M] + [col O],(([col I] + [col K]) - ([col M] + [col O])) x MIN([col R] + internal gains,0),0)) ÷ 1,000 ÷ R44
V	Heating = -(([col N] + [col P]) x MIN([col R] + internal gains,0) + IF([col I] + [col K] < [col M] + [col O],(([col M] + [col O]) - ([col I] + [col K])) x MIN([col Q] + internal gains,0),0)) ÷ 1,000 ÷ R44
W	= [col S] + [col T] - [col U] - [col V]

Assumptions:	Value	Unit	CELL REF	Description
Existing Heating Plant Efficiency	78.0%		R43	Baseline Boiler Efficiency
Proposed Heating Plant Efficiency	83.0%		R44	Proposed Boiler Efficiency

Page content is subject to Confidentiality Restrictions

City of Bristol, CT
Fire Head Quarters
Boiler Replacement

TMY-3 Weather Data for Hartford, CT								Existing Occupancy Schedule				Proposed EMS Operating Hours								Proposed		Savings
Amb. Temp Bin deg. F	Ave Temp deg. F	M.C.W.B deg. F	M.C. Enthalpy Btu/lbma	01-08 Hours	09-16 Hours	17-24 Hours	Total Bin Hours	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Interacted Occ. Heat Load (MBH)	Interacted UnOcc. Heat Load (MBH)	Occ. Heat Usage (MMBTU)	UnOcc. Heat Usage (MMBTU)	Occ Cooling/Heating Energy Consump. (MMBTU)	UnOcc Cooling/Heating Energy Consump. (MMBTU)	Heating Energy Savings (MMBTU)
A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**Q**	**R**	**S**	**T**	**U**	**V**	**W**
Cooling																						
105 to 110	107.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0							
100 to 105	102.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0							
95 to 100	97.5	75.8	39.4	0	4	0	4	1	0	3	0	1	0	3	0							
90 to 95	92.5	74.9	38.7	0	34	9	43	10	0	33	0	10	0	33	0							
85 to 90	87.5	72.8	36.9	0	105	22	127	30	0	97	0	30	0	97	0							
80 to 85	82.5	69.0	33.5	4	247	105	356	85	0	271	0	85	0	271	0							
75 to 80	77.5	66.7	31.7	55	243	158	456	109	0	347	0	109	0	347	0							
70 to 75	72.5	64.6	30.0	137	208	183	528	126	0	402	0	126	0	402	0							
65 to 70	67.5	61.1	27.5	199	231	248	678	162	0	516	0	162	0	516	0							
60 to 65	62.5	56.0	24.0	306	300	310	916	218	0	698	0	218	0	698	0							
Heating																						
55 to 60	57.5	51.2	21.1	270	226	289	785	187	0	598	0	187	0	598	0	(51)	(1)	25	0	22	0	4
50 to 55	52.5	46.7	18.6	291	186	261	738	176	0	562	0	176	0	562	0	(72)	(12)	44	0	38	0	6
45 to 50	47.5	41.8	16.1	210	129	187	526	125	0	401	0	125	0	401	0	(93)	(32)	46	0	39	0	7
40 to 45	42.5	38.1	14.4	282	188	155	625	149	0	476	0	149	0	476	0	(113)	(52)	72	0	61	0	10
35 to 40	37.5	33.1	12.2	288	296	306	890	212	0	678	0	212	0	678	0	(134)	(72)	126	0	108	0	18
30 to 35	32.5	28.5	10.3	252	222	251	725	173	0	552	0	173	0	552	0	(155)	(93)	123	0	105	0	18
25 to 30	27.5	24.1	8.6	182	160	177	519	124	0	395	0	124	0	395	0	(176)	(113)	102	0	87	0	15
20 to 25	22.5	20.3	7.2	231	89	177	497	118	0	379	0	118	0	379	0	(197)	(133)	111	0	95	0	16
15 to 20	17.5	15.5	5.6	135	42	57	234	56	0	178	0	56	0	178	0	(218)	(154)	59	0	50	0	9
10 to 15	12.5	10.9	4.1	44	7	24	75	18	0	57	0	18	0	57	0	(239)	(174)	21	0	18	0	3
5 to 10	7.5	6.4	2.7	23	3	1	27	6	0	21	0	6	0	21	0	(259)	(194)	8	0	7	0	1
0 to 5	2.5	2.4	1.5	11	0	0	11	3	0	8	0	3	0	8	0	(280)	(215)	4	0	3	0	1
-5 to 0	(2.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	(301)	(235)	0	0	0	0	0
-10 to -5	(7.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	(322)	(255)	0	0	0	0	0
-15 to -10	(12.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	(343)	(276)	0	0	0	0	0
-20 to -15	(17.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	(364)	(296)	0	0	0	0	0
-25 to -20	(22.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	(384)	(316)	0	0	0	0	0
				2,920	2,920	2,920	8,760	2,087	0	6,673	0	2,087	0	6,673	0			742	0	633	0	108
								1,347	-	4,305	-											

Cell Ref.	Comment
A-H	TMY-3 Weather Data for Hartford, CT
I - L	Occupied hours as per the RFP data
M - P	Equipment operating hours after EMS is installed
Q	Interacted Occupied Heating loads (MBH)
R	Interacted Unoccupied Heating loads (MBH)
S	Heating = -(MIN([col I] + [col K],[col M] + [col O]) x MIN([col Q] + internal gains,0) + IF([col I] + [col K] > [col M] + [col O],(([col I] + [col K]) - ([col M] + [col O])) x MIN([col R] + internal gains,0),0)) ÷ 1,000 ÷ R43
T	Heating = -(([col N] + [col P]) x MIN([col R] + internal gains,0) + IF([col I] + [col K] < [col M] + [col O],(([col M] + [col O]) - ([col I] + [col K])) x MIN([col Q] + internal gains,0),0)) ÷ 1,000 ÷ R43
U	Heating = -(MIN([col I] + [col K],[col M] + [col O]) x MIN([col Q] + internal gains,0) + IF([col I] + [col K] > [col M] + [col O],(([col I] + [col K]) - ([col M] + [col O])) x MIN([col R] + internal gains,0),0)) ÷ 1,000 ÷ R44
V	Heating = -(([col N] + [col P]) x MIN([col R] + internal gains,0) + IF([col I] + [col K] < [col M] + [col O],(([col M] + [col O]) - ([col I] + [col K])) x MIN([col Q] + internal gains,0),0)) ÷ 1,000 ÷ R44
W	= [col S] + [col T] - [col U] - [col V]

Assumptions:	Value	Unit	CELL REF	Description
Existing Heating Plant Efficiency	76.0%		R43	Baseline Boiler Efficiency
Proposed Heating Plant Efficiency	89.0%		R44	Proposed Boiler Efficiency

Page content is subject to Confidentiality Restrictions

Appendix for ESM 21: Boiler Replacement

II. Manufacturer Specification Sheets

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

HIGH EFFICIENCY COMMERCIAL CONDENSING BOILERS

KNIGHT® COMMERCIAL BOILER XL

SMART SYSTEM
OPERATING CONTROL FEATURING
A BUILT-IN CASCADING SEQUENCER

5 MODELS: 399,000 – 800,000 BTU/HR

FIRING RATE MODULATION TO 5:1

LESS THAN 20 ppm NOx

DIRECT VENT FLEXIBILITY TO 100 FEET



LOW NOx Certified
PROTECTING THE ENVIRONMENT

94%
THERMAL EFFICIENCY

Lochinvar®
HIGH EFFICIENCY BOILERS & WATER HEATERS

Lochinvar.com

KNIGHT® COMMERCIAL BOILER XL

The Smartest Choice for Condensing Boiler Performance

The KNIGHT® XL, engineered with Lochinvar's exclusive SMART SYSTEM™ control and an array of other innovative features, places it far ahead of any commercial heating boiler in its class. It promises and delivers ultimate ease of installation and maintenance. With up to 94.6% thermal efficiency, low-NOx emissions and a fully modulating burner, it is the best "green choice" for today's environmentally focused market.

Five modulating/condensing stainless steel KNIGHT XL boilers are available with 399,000–800,000 Btu/hr inputs and remarkably small space-saving footprints. All are equipped for direct-vent installation with air intake and exhaust runs up to 100 feet using PVC, CPVC, Polypropylene or AL29-4C vent materials. This range of choices is ideal for light-duty applications such as small hotels, schools and office buildings. For higher-demand applications, up to eight KNIGHT XL units can be installed utilizing the built-in cascading sequencer to deliver up to 6.4 million Btu/hr heating capacity.

THE KNIGHT XL BOILER reflects Lochinvar's constant commitment to providing all the options you need to serve every application.

KNIGHT XLs installed and commissioned by Black & McDonald



Advanced Negative Regulation Technology

KNIGHT XL safely and reliably operates with supply gas pressure as low as 4 inches water column. Negative Regulation (Neg/Reg) technology automatically adjusts fan speed that ensures the correct volume and mix of fuel and air throughout the firing range.

Two-in-One Stainless Steel Heat Exchanger

A primary heat exchanger combined with a secondary heat exchanger captures flue gas heat and condenses to utilize available latent energy. The stainless steel, pH-tolerant design features a weld-sealed assembly with no O-rings or gaskets and does not require special glycol. ASME Section IV approved and stamped.

Fully Modulating Burner

The SMART SYSTEM allows fully modulating combustion with 5:1 turndown. The burner can fire as low as 20% of maximum input and modulates the firing rate up to 100% as demand increases. The burner is a single stainless steel assembly covered with woven steel mesh and fires in a 360° pattern along the entire length of the primary heat exchanger. This allows the compact KNIGHT XL to exceed the capacity of units with larger multiple burners.

Direct Venting up to 100 Feet



KNIGHT XL offers 7 venting options and tremendous flexibility for placement of units within the building, because it permits direct-vent air intake and exhaust runs up to 100 equivalent feet using either PVC, CPVC, Polypropylene or AL29-4C stainless steel vent pipe. A sidewall vent termination kit is shipped standard with every KNIGHT boiler.

Sidewall Vent Termination

Sidewall Vent Termination



Lochinvar SMART SYSTEM™

Refined Design Puts More Control and Information at your Fingertips



Advanced features include:

- Multi-Color Graphic LCD Display
- Navigation Dial
- USB Port
- Ability to control up to three different setpoint temperatures
- Compatibility with Copper-Fin II Non-Condensing Boiler to Create a Front-End Loading System
- Boilers with Different Inputs can be Cascaded Together to Maximize Boiler Plant Turndown
- Modbus Capability (Optional)
- DHW Modulation Limiting
- DHW Night Setback*
- 0-10 VDC Boiler Rate Output
- 0-10 VDC Signal to control variable speed boiler pump*
- 0-10 VDC System Pump Signal Input*
- Heat Demand from 0-10V Input
- Installer Can Program Name and Number into the Boiler
- Installer Adjustable Freeze Protection Parameters
- Separately adjustable SH/DHW Switching times*
- Installer access to BMS and ramp delay settings

**Exclusive to Lochinvar Smart System*

At-a-Glance Color Coding

Blue Screen
Normal system operation.

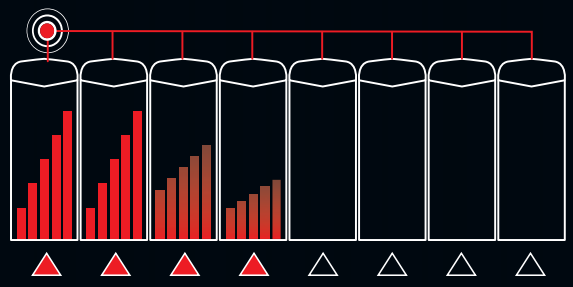
Yellow Screen
Maintenance due - shows the installer's name and number on the display.

Red Screen
Lockout mode.

New Selectable Cascade Options

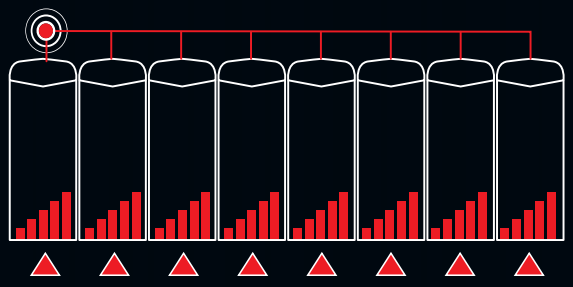
When multiple KNIGHT boilers are installed together, the SMART SYSTEM built-in sequencer can be set for "Lead-Lag" cascade or "Efficiency Optimized" cascade operation.

Lead-Lag Cascade



The "lead" boiler modulates with demand to capacity. As demand increases, additional boilers fire and modulate to capacity. This continues, with additional boilers firing and modulating to capacity until all units are operating. Every 24 hours, the SMART SYSTEM automatically shifts the lead boiler role to the next in the sequence, distributing lead-lag runtimes equally.

Efficiency Optimized Cascade

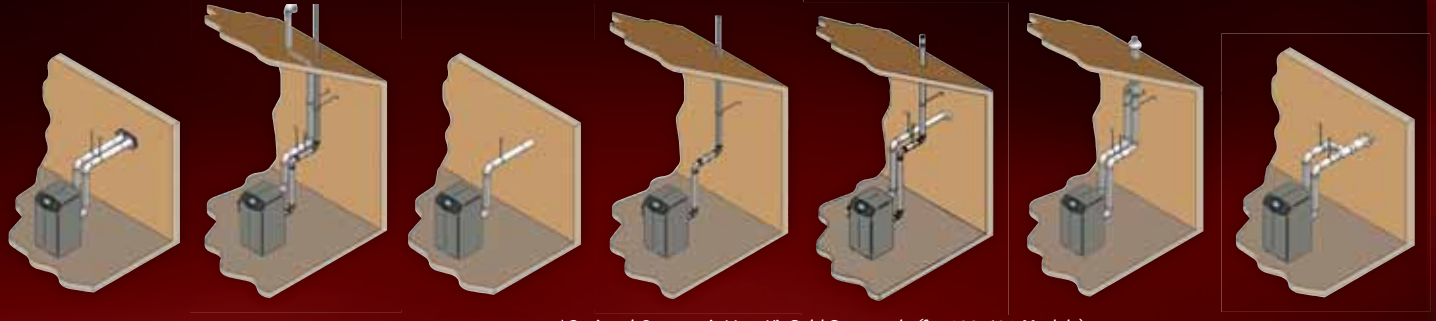


This feature optimizes the modulation capabilities of the Boiler Plant while evenly distributing run time across all cascaded boilers. Every 24 hours the SMART SYSTEM automatically shifts the 1st boiler on role to the next in the sequence, distributing run time equally.

SMART SYSTEM Cascade option allows 2 - 8 boilers to be sequenced.

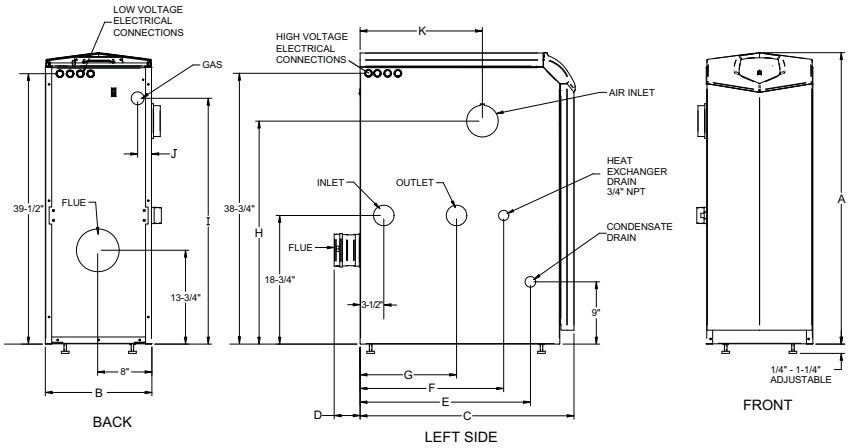
7 Flexible Venting Options

Direct Vent Sidewall | **Direct Vent Vertical** | **Room Air Sidewall** | **Room Air Vertical** | **Vertical w/Sidewall Air** | **Direct Vent Vertical*** | **Direct Vent Sidewall***



**Optional Concentric Vent Kit Sold Separately (for 400-601 Models)*

Knight® XL Boiler Dimensions and Specifications



Model Number Guide

KB	N	701	M13
Model	Natural Gas	Btu/hr Input	Firing Controls

***K**night XL **B**oiler,*
***N**atural Gas,*
***700**,000 Btu/hr input,*
***M13** firing controls*

Knight XL Heating Boiler

Model Number	Input Min MBH	Input Max MBH	Thermal Efficiency	Output MBH	Net AHRI Rating MBH
KBN400	80	399	94.0%	376	327
KBN501	100	500	94.0%	470	409
KBN601	120	600	94.0%	564	490
KBN701	140	700	94.0%	658	572
KBN801	160	800	94.0%	752	654

Dimensions and Specifications

A	B	C	D	E	F	G	H	I	J	K	Gas Conn.	Water Conn.	Air Inlet	Vent Size	Shipping Wt. (lbs.)
42-1/2"	15-1/2"	27-3/4"	3-3/4"	20-3/4"	21"	14"	34"	34"	2"	18-3/4"	1"	1-1/2"	4"	4"	280
42-1/2"	15-1/2"	31-1/2"	3-3/4"	25-1/2"	21"	14"	32-1/2"	36"	2"	18"	1"	1-1/2"	4"	4"	310
42-1/2"	15-1/2"	36-1/4"	3-3/4"	25"	21"	14"	36"	32-3/4"	5-1/2"	19-1/2"	1"	2"	4"	4"	340
42-1/2"	15-1/2"	40-1/4"	3-3/4"	29"	23"	17"	36"	32-3/4"	3-1/4"	23-1/2"	1"	2"	4"	6"	370
42-1/2"	15-1/2"	45-1/4"	3-3/4"	33-1/4"	23"	17"	36"	32-3/4"	3-1/4"	27-3/4"	1"	2"	4"	6"	405

Notes: Indoor installation only. All information subject to change. Change "N" to "L" for LP gas models.

Standard Features

- **94% Thermal Efficiency**
- **Modulating Burner with 5:1 Turndown**
  - Direct-Spark Ignition
  - Low NOx Operation
  - Sealed Combustion
  - Low Gas Pressure Operation
- **ASME Stainless Steel Heat Exchanger**
  - ASME Certified, "H" Stamped Gasketless Heat Exchanger
  - 160 psi Working Pressure
  - 50 psi ASME Relief Valve
  - Highly efficient, condensing design
- **Vertical & Horizontal Direct-Vent**
  - Category IV venting up to 100 feet
  - PVC, CPVC, Polypropylene or AL29-4C Venting up to 100 Feet
  - Factory Supplied Sidewall Vent Termination
- **Smart System Control**
- **Other Features**
  - On/Off Switch
  - Adjustable High Limit w/ Manual Reset
  - Automatic Reset High Limit
  - Flow Switch
  - Flue Temperature Sensor
  - Low Air Pressure Switch
  - Temperature & Pressure Gauge
  - Adjustable Leveling Legs
  - Condensate Trap
  - Zero Clearances to Combustible Material
  - 10 Year Limited Warranty (See Warranty)

Smart System Features

- **SMART SYSTEM Digital Operating Control**
  - Multi-Color Graphic LCD Display w/ Navigation Dial
  - **Three Reset Temperature Inputs with curves for three set point temperature inputs**
  - **Built in Cascading Sequencer for up to 8 Boilers**
  - Multiple Size Boiler Cascade
  - Front end loading capability with Copper Fin II
  - Lead Lag
  - Efficiency Optimization
  - **Outdoor Reset Control with Outdoor Air Sensor**
  - **Programmable System Efficiency Optimizers**
  - Night Setback
  - DHW Night Setback
  - Anti-Cycling
  - Outdoor Air Reset Curve
  - Ramp Delay
  - Boost Temperature & Time
  - **Three Pump Control**
  - System Pump With Parameter for Continuous Operation
  - Boiler Pump With Variable Speed Pump Control*
  - Domestic Hot Water Pump
  - **Domestic Hot Water Prioritization**
  - DHW tank piped with priority in the boiler loop
  - DHW tank piped as a zone in the system with the pumps controlled by the Smart System
  - DHW Modulation Limiting
  - Separately Adjustable SH/DHW Switching Times*
  - **Building Management System Integration**
  - 0-10 VDC Input to Control Modulation or Set Point
  - 0-10 VDC Input Signal from Variable Speed System Pump*
  - 0-10 VDC Modulation Rate Output
  - 0-10 VDC Input to Enable/Disable call for heat
  - Access to BMS Settings through Display
- **High Voltage Terminal Strip**
  - 120 VAC / 60 Hertz / 1 Phase Power Supply
  - Three sets of Pump Contacts with Pump Relays
- **Low Voltage Terminal Strip**
  - 24 VAC Device Relay
  - Proving Switch Contacts
  - Flow Switch Contacts
  - Alarm on Any Failure Contacts
  - Runtime Contacts
  - DHW Thermostat Contacts
  - 3 Space Heat Thermostat Contacts
  - System Sensor Contacts
  - DHW Tank Sensor Contacts
  - Outdoor Air Sensor Contacts
  - Cascade Contacts
  - 0-10 VDC BMS External Control Contact
  - 0-10 VDC Boiler Rate Output Contacts
  - 0-10 VDC Variable Speed System Pump Signal Input
  - 0-10 VDC Signal to Control Variable Speed Boiler Pump
  - Modbus Contacts
- **Time Clock**
- **Data Logging**
  - Hours Running, Space Heating
  - Hours Running, Domestic Hot Water
  - Ignition Attempts
  - Last 10 Lockouts
- **Other Features**
  - Low Water Flow Safety Control & Indication
  - Password Security
  - Inlet & Outlet Temperature Readout
  - Customizable Freeze Protection Parameters
  - Custom Maintenance Reminder with Contractor Info

**Exclusive feature, available only from Lochinvar*

Firing Codes

- M9 Standard Construction
- M7 California Code
- M13 CSD1 / FM / GE Gap (KB501-KB801)

Optional Equipment

- Alarm Bell
- Condensate Neutralization Kit
- Concentric Vent Kit (KB400-KB601)
- BMS Gateway to LON or BacNet
- High & Low Gas Pressure Switches w/ Manual Reset (KB501-KB801)
- Variable Speed Boiler Circulation Pump
- MODBUS Communication
- Multi Temperature Loop Control
- Low Water Cutoff w/Manual Reset & Test
- Constant Speed Boiler Circulation Pump
- SMART SYSTEM PC Software
- Stainless Steel Vent Kits (KB701-KB801)

Lochinvar®
HIGH EFFICIENCY BOILERS & WATER HEATERS

Lochinvar, LLC
300 Maddox Simpson Parkway
Lebanon, Tennessee 37090
P: 615-889-8900 / F: 615-547-1000
www.Lochinvar.com

Registered Under U.S. Patents #7824178 and 7506617

PDP-5M-4/14-Printed in U.S.A.

HTP

SUPERstor ULTRA Stainless Steel

Advanced Heating
& Hot Water Systems

Stainless Steel Indirect & Storage Tanks



WWW.HTPRODUCTS.COM

The SuperStor Ultra has been Recognized as the Market Leader for Over 25 Years

SUPERSTOR BUFFER TANK SSU-20B

The Buffer Tank

adds water volume to the heating system, smoothing out disturbances like short cycling, this will protect your heating system and make it more efficient



DOUBLE WALL

Provides additional protection against cross contamination



DOUBLE WALL

MODEL	180 DEG F BOILER WATER FIRST HOUR RATING		CIRCULATOR GPM	PRESSURE DROP (FEET)
	140 DEG F	115 DEG F		
SSU-45DW	70 GPH	108 GPH	6	8.2
SSU-60DW	90 GPH	144 GPH	7	12.8
SSU-80DW	138 GPH	215 GPH	10	13.6
SSU-119DW	210 GPH	326 GPH	12	15.9



Residential Indirect Double & Single Wall

7 Sizes Available (Single Wall)

4 Sizes Available (Double Wall)

High Output Heat Exchanger

May Be Eligible for Utility Rebates

Lightweight

Industry Best: Limited Lifetime Warranty on SSU Indirect Tanks

Industry Best Warranty

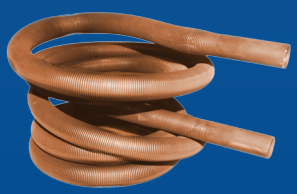
4 Versions Available:

Residential
Residential Double Wall
Commercial
Storage Tanks

4 Designs to Choose From:

Single Coil Indirect
Dual Coil for Solar Backup
Solar w/ Electric Backup
Storage Tank w/o Coil

HTP's Specially Designed Finned Cupronickel Heat Exchanger



SINGLE WALL

This heat exchanger provides a higher BTU output per foot than any other heat exchanger in the market.

SINGLE WALL

MODEL	180 DEG F BOILER WATER FIRST HOUR RATING		CIRCULATOR GPM	PRESSURE DROP (FEET)
	140 DEG F	115 DEG F		
SSU-20	121 GPH	168 GPH	8	6.0
SSU-30	154 GPH	212 GPH	8	6.0
SSU-30LB	169 GPH	234 GPH	8	6.0
SSU-45	212 GPH	292 GPH	10	7.9
SSU-60	266 GPH	370 GPH	10	7.9
SSU-80	330 GPH	440 GPH	12	9.1
SSU-119	423 GPH	564 GPH	14	11.3



MODEL	Dimensions		Floor to Drain	Floor to Inlet	Floor to Outlet	Weight (LBS)	Water Connection Sizes
	Height	Diameter					
SSU-30CB	39.5”	19.25”	4.5”	4.5”	33.75”	40	.75” NPT
SSU-45CB	52.5”	19.25”	4.5”	4.5”	45.75”	64	.75” NPT
SSU-60CB	52.5”	23.25”	4.5”	4.5”	45.75”	90	1” NPT
SSU-80CB	72”	23.25”	6”	16”	64.75”	129	1.5” NPT
SSU-119CB	73.5”	27”	7.25”	17.25”	66”	178	1.5” NPT

Storage Tanks

Low standby heat loss
316L stainless steel tank resists corrosion and eliminates the need for anode rods
Limited 10 Year Warranty on SSU Storage Tanks

SSU-119C



Commercial Indirects

4 Sizes Available
Ultra High Output Heat Exchanger
Lightweight
7 Year Limited Warranty on SSU Commercial Indirect Water Heaters

The Commercial SuperStor Ultra Consists of Two Heat Exchangers to Accommodate High Volume Needs



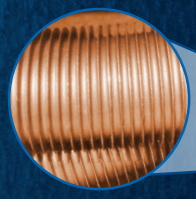
No Anode Rods Needed!
All HTP Stainless Steel Tanks are Laser Welded for a more Precise Welding

MODEL	180 DEG F BOILER WATER FIRST HOUR RATING		CIRCULATOR GPM	PRESSURE DROP (FEET)
	140 DEG F	115 DEG F		
SSU-45C	314 GPH	414 GPH	20	6.8
SSU-60C	354 GPH	467 GPH	22	9.2
SSU-80C	490 GPH	647 GPH	24	10.0
SSU-119C	637 GPH	841 GPH	28	12.7

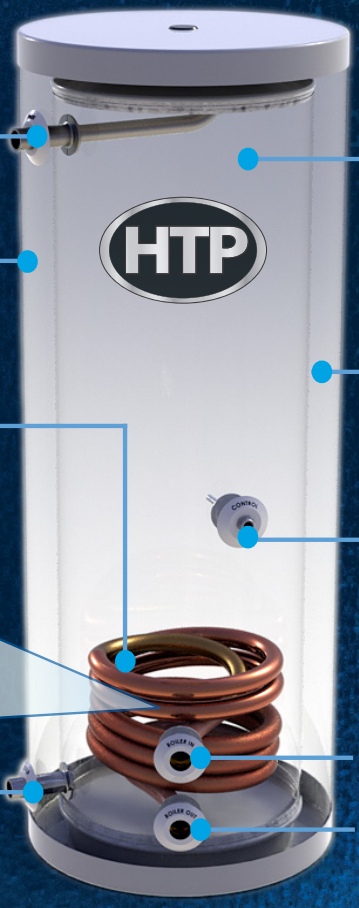
Stainless Steel Internal Bent Hot Water Outlet Tube – Extracts 5 – 7% more hot water off the top of the tank dome

Attractive silver finish cover that resists dents and corrosion

High Output Finned Cupronickel Heat Exchanger Provides Maximum Efficiency 11 Fins per inch



Stainless Steel Cold Water Inlet



316L Stainless Steel Tank for High Temperatures & Corrosion Resistance

Environmentally Safe, CFC Free Water Blown, 2" Thick Foam Insulation allows less than 1/2 Degree F heat loss per hour

Immersion Type Stainless Steel Control Well

1" Boiler Supply Connection

1" Boiler Return Connection

HTP Made in America

NSF

LEAD FREE
Safe Drinking Water Act
SDWA • Section 1417

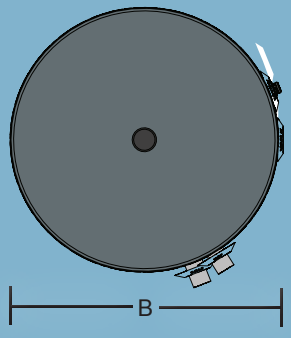
OPTIONAL EQUIPMENT

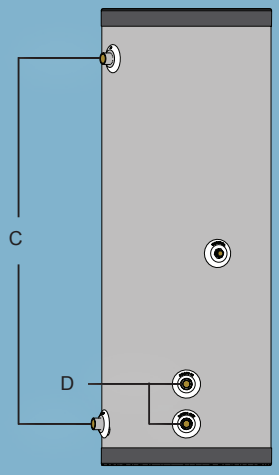
- Aquastat Control
- Thermostatic Mixing Valve
- Bronze Pump

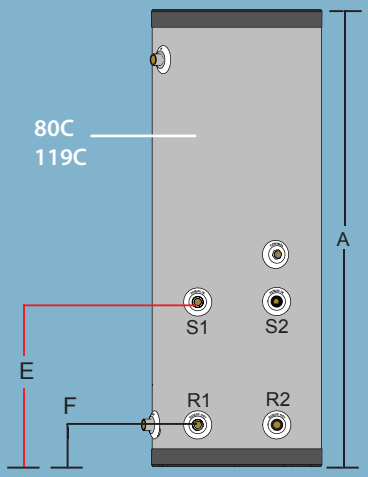
STANDARD FEATURES

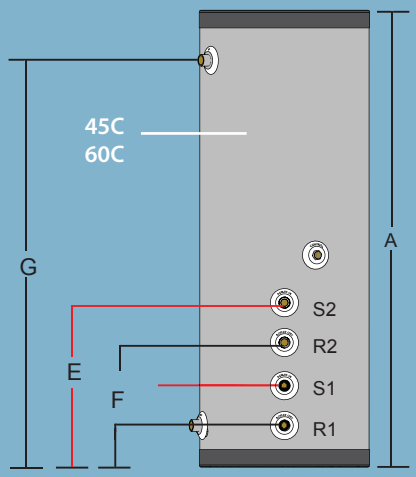
- 316L Stainless Steel
- Finned 90/10 Cupronickel Heat Exchanger
- Stainless Steel Aquastat Well

Dimensions & Specifications









Model	A Dimensions Ht	B Diameter	C Domestic Connections	D Boiler Connections	E Floor to Boiler Supply		F Floor to Boiler Return		G Floor to Domestic Out	Capacity	Heat Exchanger Surface	Shipping Weight
SSU-20	27"	19 1/4"	3/4"	1" NPT	S1- 9 3/4"		R1- 5 1/4"		22"	20	15 SQ FT	51 LBS
SSU-30	39 1/2"	19 1/4"	3/4"	1" NPT	S1- 9 3/4"		R1- 5 1/4"		34"	30	15 SQ FT	62 LBS
SSU-30LB	28 1/2"	23 1/4"	3/4"	1" NPT	S1- 9 3/4"		R1- 5 1/4"		22"	30	15 SQ FT	71 LBS
SSU-45	52 1/2"	19 1/4"	3/4"	1" NPT	S1- 9 3/4"		R1- 5 1/4"		46"	45	20 SQ FT	72 LBS
SSU-60	52 1/2"	23 1/4"	1"	1" NPT	S1- 9 3/4"		R1- 5 1/4"		46"	60	20 SQ FT	109 LBS
SSU-80	72"	23 1/4"	1 1/2"	1" NPT	S1- 29"		R1- 6"		64 3/4"	80	34 SQ FT	143 LBS
SSU-119	74"	27"	1 1/2"	1" NPT	S1- 30 1/4"		R1- 7 1/4"		66"	119	34 SQ FT	212 LBS
SSU-45C	42	23 1/4"	3/4"	1" NPT	S1- 9 3/4"	S2- 18 3/4"	R1- 5 1/4"	R2-14"	35"	45	40 SQ FT	106 LBS
SSU-60C	52 1/2"	23 1/4"	1"	1" NPT	S1- 9 3/4"	S2- 18 3/4"	R1- 5 1/4"	R2-14"	46"	60	40 SQ FT	126 LBS
SSU-80C	72"	23 1/4"	1 1/2"	1" NPT	S1- 29"	S2- 29"	R1- 6"	R2- 6"	64 3/4"	80	68 SQ FT	175 LBS
SSU-119C	74"	27"	1 1/2"	1" NPT	S1- 30 1/4"	S2- 30 1/4"	R1- 7 1/4"	R2- 7 1/4"	66"	119	68 SQ FT	242 LBS

© HTP • LP-81 • 08/2014

ESM 23:
Steam to Hot Water Conversion

ESM Overview

Ameresco proposes to convert the heating systems serving the City Hall and Police Court building from steam to hot water. At City Hall, the existing Columbia boilers will be converted from oil-fired boilers producing steam to gas-fired boilers producing hot water. The steam heating coils serving the existing air handling units will be replaced with hot water coils, sized to provide the same heating capacity. In addition the existing electric hot water storage heater providing domestic hot water (DHW) to City Hall will be replaced with a new gas-fired high efficiency storage heater.



Figure 23.1: Ameresco proposes to convert the existing boilers at the City Hall from Steam producing to Hot Water boilers.

The existing oil-fired steam boilers at the Police Court building will be replaced with new high-efficiency gas-fired hot water boilers. The steam heating coils serving the existing air handling units will be replaced with hot water coils, sized to provide the same heating capacity. New natural gas service will be provided by Eversource to serve the new boilers. As part of this measure, the existing underground oil tank at the Police Court will be removed along with all other fuel oil auxiliaries.

This measure will generate energy savings by enabling the Police Court building to utilize higher efficiency hot water boilers. Condensing hot water boilers can achieve up to 99% thermal efficiency compared to about 82% for newer Steam boilers. There will also be savings at the City Hall and Police Court by reducing distribution losses since steam boilers operate at a higher temperature and are more susceptible to heat loss. Failed steam traps are also a cause of system inefficiency. Steam is allowed to blow by failed traps and can unintentionally be distributed through condensate return lines causing overheating and occupant discomfort.

The proposed measure will provide the building with a higher efficiency system as well as a less expensive fuel source for space heating and domestic hot water.

"Page content is subject to Confidentiality Restrictions"

ESM Detail

Existing System

>Bristol City Hall

The building is heated by (2) Columbia MPH-60 cast iron, oil-fired boilers that produce low pressure steam. Steam is fed to three (3) heat exchangers that produce hot water, and nine (9) steam coils serving five (5) AHUs. A temporary electric storage heater located in the maintenance room provides domestic hot water to the building.

>Police Court Building

The Police Court building is served by two (2) HB Smith 350 Mills sectional, cast iron, oil-fired boilers producing low pressure steam. Steam is passed through (2) heat exchangers to create heating hot water distributed throughout the building by zone pumps for terminal units and reheats. The remaining steam produced is distributed to four (4) steam coils serving four (4) AHUs located in the 2nd floor mechanical rooms. Additional hot water used for supplemental heating of the cell area and summer reheat is produced by a Weil-McLain 478, oil-fired boiler located in the boiler room. Domestic Hot Water is supplied to the building from a 116 gallon Rheem Ruud ES120-18-G electric storage heater located in the mechanical room next to the boiler room.

Proposed System

>Bristol City Hall

Ameresco proposes to convert the two (2) existing oil-fired Columbia MPH-60 steam boilers at City Hall to gas-fired hot water boilers. The steam heating coils serving the existing air handling units will be replaced with hot water coils, sized to provide the same heating capacity.

The scope of work for this ESM includes all demolition, mechanical, and electrical work required to convert the existing oil-fired Columbia steam boilers to gas-fired hot water, removing the steam infrastructure and installing a new hot water infrastructure including new hot water coils to serve the AHU's. A new gas-fired storage heater is also included to provide domestic hot water to the building. Natural gas service will be brought to the building by Eversource and piped to the new boiler. The existing oil system will be removed including the underground oil tank and fuel oil pumps and piping. The scope of work details are:

Demolition

- Disable, drain two (2) existing Columbia MPH-60 oil-fired steam boilers and remove breeching in boiler room.
- Demolish and remove all steam and condensate piping in boiler room, all steam and condensate runouts and risers, and all steam piping in the penthouse mechanical room.
- Disable and remove existing indirect domestic hot water storage tank located next to the boilers.
- Drain, demo, and remove the existing 8,000 gallon oil storage tank
    - Remove all associated piping

- Insulate and seal all exterior penetrations left by removal of piping
- Tank located next to 8,000 gallon oil storage tank serving the Police Court building.

Abatement

- Abatement of asbestos containing material that Ameresco has been made aware of in the boiler room and penthouse mechanical room includes piping elbows of existing steam piping. Any additional material proven to contain asbestos will require revised numbers.
- Based on the information provided a containment using Plastic sheeting, duct tape or similar to secure the sheeting, and all work will be performed under negative air pressure.
- When the work is completed there will be a final visual inspection and a PCM re-occupancy air test administered by a third party licensed asbestos Project Monitor.
- All asbestos containing material will be disposed of following state and federal guidelines for disposal of asbestos containing material.

Mechanical – Boiler Room

- Convert the two (2) existing Columbia MPH-60 steam boilers to hot water including for each boiler:
  - Existing Danfoss pressure controls to be replaced with aquastat controls
  - Remove steam water columns on boilers
  - Remove pump controls
  - Re-use secondary low water cut-off (install float control)
  - Convert L91B modulating burner control to T91 modulating burner control
  - Replace existing Safety valve with relief valve
  - Same supply outlet exists for steam as new hot water supply outlet in boiler
  - Provide and install all isolation valves, check valves, pressure and temperature gauges, temperature probes, etc. to complete the boiler piping as shown in the manufacturer's installation layout.
  - Provide and install boiler room piping, fittings, flanges, unions, and valves as needed to connect to the existing supply and return pipe stubs in the main boiler room. New piping shall be welded Schedule 40 steel pipe, ASTM B36.10.
  - Provide and install two (2) Taco or equal primary circulators inline with existing boilers, 150 gpm, 25' hd.
  - Existing building loop pumps shall remain and be reused.
  - Provide and install Owens Corning Fiberglass pipe insulation or equal per Connecticut energy code for all new heating water supply, and heating water return piping, elbows, valves, fittings (except unions), and piping connections. Seal exposed fiberglass ends with white mastic waterproofing paint.
  - Fill new piping, provide test and balance services within the boiler plant, and coordinate start-up with boiler manufacturer's representative.
  - Label all new piping.

"Page content is subject to Confidentiality Restrictions"

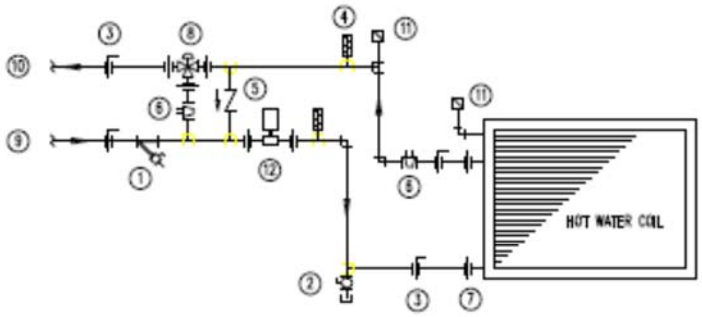
Mechanical-Piping

Install Hydronic Piping and Coils

The scope of work includes all mechanical work required to install new hot water supply and return piping and hot water coils in place of the existing steam coils.

- Provide and install hot water supply and return distribution piping, fittings, flanges, unions, and valves.
  - Penthouse Risers are located above the condensate tank in the boiler room
    - Approx. 60 feet 2" risers from boiler room to penthouse
  - Runout in penthouse to be approx. 65 ft of 2" to 1 ½" pipe.
  - New supply and return runouts and risers to existing mechanical rooms will reuse existing floor and wall penetrations from removed steam and condensate piping.
  - Install all new valves, strainers, temperature and pressure gauges, etc
  - Provide and install two (2) hot water (1.5 HP) Pumps serving new hot water coil loop providing 50 GPM @ 50 Ft head.
  - Provide and install wells for a new differential pressure sensor. Sensor and control wiring shall be provided by others (controls contractor).
  - Provide and install Owens Corning Fiberglass pipe insulation or equal per Connecticut energy code for all new heating water supply, and heating water return piping, elbows, valves, fittings (except unions), and piping connections. Seal exposed fiberglass ends with white mastic waterproofing paint.
  - Label all new piping.
- Install seven (7) hot water heating coils in place of removed steam heating coils
  - Coils to be installed in place of removed steam heating coils
  - Provide and install a freeze protection pump system with each new pre-heat coil, typical to schematic below.
  - Install control valves

"Page content is subject to Confidentiality Restrictions"



HOT WATER COIL PIPING DETAIL
NO SCALE

KEYED NOTES:

1. STRAINER WITH BLOW DOWN VALVE, (TYPICAL).
2. BALL VALVE. PROVIDE THREADED HOSE CONNECTION WHEN USED AS A DRAIN VALVE, (TYPICAL).
3. BALL VALVE 2" AND SMALLER OR BUTTERFLY VALVE 2-1/2" AND LARGER, (TYPICAL).
4. STEM THERMOMETER 9" SCALE, 30-240 DEG. F., (TYPICAL).
5. SPRING LOADED CHECK VALVE, (TYPICAL).
6. FLOW METER WITH BALANCING COCK, CIRCUIT SETTER, (TYPICAL).
7. UNION OR FLANGE, (TYPICAL).
8. THREE WAY ATC CONTROL VALVE SUPPLIED BY CONTROL CONTRACTOR, INSTALLED BY MECHANICAL CONTRACTOR, (TYPICAL).
9. HOT WATER SUPPLY PIPING, (TYPICAL).
10. HOT WATER RETURN PIPING, (TYPICAL).
11. MANUAL AIR VENT (TYPICAL). INSTALL AT ALL RISES AND DROPS AND HIGH POINTS OF SYSTEM
12. PIPE MOUNTED CIRCULATING PUMP WITH PRESSURE GAUGE, VALVES, AND PIPING COMPLETE.

Desig.	Location	Service	Existing Coil	Type of New Coil	Dimensions	Supply CFM
AHU-1	Penthouse	Pre-heat Interior Zones	LPS	HW	54"x124"x7.75"	17,810
AHU-1	Penthouse	Pre-heat Interior Zones	LPS	HW	54"x124"x7.75"	17,810
AHU-2	Penthouse	Pre-heat Induction Units	LPS	HW	33"H x 36"L x 6D"	9,000
AHU-2	Penthouse	Pre-heat Induction Units	LPS	HW	33"H x 36"L x 6D"	9,000
AHU-2	Penthouse	Pre-heat East Zone	LPS	HW	28" x 102" x 6.5"	4,500
AHU-2	Penthouse	Pre-heat West Zone	LPS	HW	28" x 102" x 6.5"	4,500
AHU-3	Penthouse	Office Area	LPS	HW	29"x60"x6.5"	5,000
AHU-4	Penthouse	Council Chambers	LPS	HW	34"x60"x6.5"	5,000
AHU-5	Boiler Room	Public Works Area	LPS	HW		6,000

"Page content is subject to Confidentiality Restrictions"

Plumbing – Domestic Hot Water

The scope of work includes all mechanical, plumbing, electrical, required to replace the existing DHW heater with one (1) new gas-fired high efficiency storage heater as described as follows:

- Disconnect and remove the existing 30-gallon temporary electric storage heater located in the maintenance room.
- Disconnect from existing cold water and hot water supply piping
- Disconnect from existing hot water recirculation piping
- Install one (1) new A.O. Smith Cyclone BTX-80 (50 gallon, 76,000 BTU/Hr input) or similar.
- Place new unit on new prefab concrete blocks in the open space left by the removed old indirect hot water tank.
- Install all new piping required to reconnect existing cold water and hot water piping to the new system as per manufactures' specifications
- Reconnect existing DHW recirculation piping and install new recirc pump to be controlled based on occupancy.
- Furnish and install new natural gas piping from the existing meter location to the new equipment
- Provide new CPVC sealed exhaust and combustion air through the sidewall of the boiler room.
- Insulate all new hot water and cold water piping
- Include all required electrical work
- Provide start-up and tuning

Plumbing-Gas

- To serve the conversion, Eversource will extend their intermediate pressure gas main approximately 1,680' on Laurel & North Main Streets to serve the City Hall, Police Court, and Fire HQ buildings.
- The two (2) boilers at the City Hall are Columbia MPH-60's (each with 2,520 MBH input) with Webster Cyclonetic Gas-Oil fired burners (MN: JB2C-10-RM7800L-M15-MP-UL-FM) that are currently only set up to burn oil.
    - Connect to existing gas meter outside boiler room
        - Provide and install new 4" gas piping approximately 115' from new gas meter in back of Maintenance office to burners.
        - Penetrate through boiler room sidewall and seal all penetrations
        - Connect new gas piping to existing burners per manufacturer's instructions
        - Provide and install all isolation valves
    - Provide all testing and balancing for burners and burner accessories
    - Provide startup and commissioning for burners and accessories
    - Provide all required wiring
    - Label all gas piping.

Electrical and Controls

- Install power conduit and conductors to new boiler,
- New Controls: Provide additional controls to the boiler plant.

"Page content is subject to Confidentiality Restrictions"

Hot Water Boiler Conversion – Mechanical Room

Point Name	Point	Count	Notes
Hot Water Supply Temperature Setpoint	AO	1	Adjustable per sequence
Main HW Supply Temp	AI	1	Install Well Sensor
Main HW Return Temp	AI	1	Install Well Sensor
Boiler Start/Stop	DO	-	Existing
Boiler Status	DI	-	Existing
Boiler Alarm	DI	-	Existing
Hot Water Pump Status	DI	2	Current Transducer
Hot Water Pump start/stop	DO	2	
Domestic Hot Water Pump Status	DI	1	Current Transducer
Domestic Hot Water Pump start/stop	DO	1	
Domestic Hot Water Storage Temp	AI	1	Install Well Sensor
Sub-Total Points		**10**	
Control Sequences: Hot Water Reset with DHW Priority; Pump Run Time Equalization; Boiler Start/Stop with pump control; Pump Run Time			

>Police Court Building

The scope of work for this ESM includes all demolition, mechanical, and electrical work required to replace the existing HB Smith oil-fired steam boilers and domestic hot water storage heater with two (2) new gas-fired boilers and indirect storage tank. The existing Weil McLain boiler will also be equipped with a new gas-fired burner. The scope of work details are:

Demolition

- Disable, drain, and legally dispose the two (2) existing HB Smith 350 Mills oil-fired steam boilers fuel oil piping, and burner control panels.
- Remove existing oil-fired burner serving Weil McLain 78 Series Boiler.
- Remove and legally dispose of the existing electric 120 gallon hot water heater located in the adjacent room.
- Cut and cap the boiler flue at the masonry chimney.
- Remove and legally dispose of the existing condensate receiver, pumps, housekeeping pad, and related appurtenances.
- Demolish and remove all steam and condensate piping in boiler room.
- Demolish and remove steam and condensate runouts and risers leading to penthouse mechanical room.
- Remove and legally dispose of the existing Zone 1 and Zone 2 steam to hot water heat exchangers (HX-1 and HX-2) and associated steam piping.

Abatement

- Abatement of asbestos containing material that Ameresco has been made aware of in the boiler room and penthouse mechanical room includes piping elbows of existing steam piping. Any additional material proven to contain asbestos will require revised numbers.
- Based on the information provided a containment using Plastic sheeting, duct tape or similar to secure the sheeting, and all work will be performed under negative air pressure.

"Page content is subject to Confidentiality Restrictions"

- When the work is completed there will be a final visual inspection and a PCM re-occupancy air test administered by a third party licensed asbestos Project Monitor.
- All asbestos containing material will be disposed of following state and federal guidelines for disposal of asbestos containing material.

Mechanical – Boiler Room

- Provide and install two (2) Lochinvar Crest FBN2500 boilers on one of the existing 4" (5'x11') concrete housekeeping pad.
- Provide Boiler 1st year service and maintenance per manufacturer's recommendations.
- Provide and install one new 500 MBH Input gas-fired burner for existing Weil McLain 78 Series Hot Water Boiler
- Provide and install all isolation valves, check valves, pressure and temperature gauges, temperature probes, etc. to complete the near boiler piping as shown in the manufacturer's installation layout.
- Provide and install boiler room piping, fittings, flanges, unions, and valves as needed to connect to the existing supply and return headers. New piping shall be welded Schedule 40 steel pipe, ASTM B36.10. Potable water piping shall be hard-drawn Type L copper tube, ASTM B88. Gasketed, crimp-type fittings such as ProPress are acceptable for use with copper tubing.
- Provide and install condensate neutralizers and pipe boiler condensate to nearest floor drain.
- Provide and install 8" PVC combustion air ducts approx. 25'. Supply air ducts shall terminate through the sidewall with screen cap.
- Provide and install 9" Saf-T Vent exhaust duct from each boiler. Exhaust flues shall terminate through side wall (25') through Generator room and up 15'. Refer to manufacturer's recommended breeching layout.
- Reusing existing zone pumps.
- Provide and install two (2) new ½ HP pumps to serve new AHU hot water coils (providing 35 GMP @ 30 Ft Head).
- Provide and install new Superstore Ultra indirect DHW tank, Model SSU-80C on existing housekeeping pad. Provide new B&G inline circulator sized for 24 gpm and 20' of head (P-4). Connect new DHW tank to boiler supply and return and to existing DHWS and CW/DHWR lines.
- Provide and install new Spirotherm air-dirt separator VDT250 in new boiler supply header. Provide and install new pad-mounted expansion tank(s).
- Provide and install Owens Corning Fiberglass pipe insulation or equal per Connecticut energy code for all new cold water, DHW, heating water supply, and heating water return piping, elbows, valves, fittings (except unions), and piping connections. Seal exposed fiberglass ends with white mastic waterproofing paint.
- Fill new piping, provide test and balance services within the boiler plant, and coordinate start-up with boiler manufacturer's representative.
- Label all new piping.

"Page content is subject to Confidentiality Restrictions"

Install Hydronic Piping and Coils

The scope of work includes all mechanical work required to install new hot water supply and return piping and hot water coils in place of the existing steam coils.

- Provide and install hot water supply and return distribution piping, fittings, flanges, unions, and valves.
  - Ground floor runouts to be approx. 190 ft of 2" pipe.
  - Approx. 40 feet 2" risers from boiler room to penthouse Mechanical Room
  - 2nd Floor Mechanical runouts to be 50 ft. of 1" pipe to HVAC-1 Mech room, and approx.. 40 ft. of 1½" pipe runout to HVAC-2 thru HVAC-4.
  - New supply and return runouts and risers to existing mechanical rooms will reuse existing floor and wall penetrations from removed steam and condensate piping.
  - Install all new valves, strainers, temperature and pressure gauges, etc
  - Provide and install two (2) hot water (½ HP) Pumps serving new hot water coil 25 GPM @ 30 Ft. Head.
  - Provide and install wells for a new differential pressure sensor. Sensor and control wiring shall be provided by others (controls contractor).
  - Provide and install Owens Corning Fiberglass pipe insulation or equal per Connecticut energy code for all new heating water supply, and heating water return piping, elbows, valves, fittings (except unions), and piping connections. Seal exposed fiberglass ends with white mastic waterproofing paint.
  - Label all new piping.
- Provide and install four (4) hot water coils in place of removed steam coils
  - Install four (4) new hot water control valves
  - Provide and install control valves and actuators
- Install all new valves, strainers, temperature and pressure gauges, etc

Desig.	Location	Service	New Type of Coil	Existing MBH	Existing Dimensions	Supply CFM
HVAC-1	PENTHOUSE 1	1st floor top section, 1st floor lobby	Hot Water Coil	306.2	60"x120"	20,965
HVAC-2	PENTHOUSE 2	1st floor below section	Hot Water Coil	61.6	60"x120"	21,745
HVAC-3	PENTHOUSE 3	2nd Fl Interview, Narcotics	Hot Water Coil	334.6	89"x114"	30,390
HVAC-4	MECH RM B	Court #1,2, Jury Assembly Rm	Hot Water Coil	223.2	33"x104"	10,085

Plumbing-Gas

- Provide and install new Schedule 40 metallic gas line to new boilers. Provide isolation valves at each boiler (40 LF of 4" pipe).
- Provide new gas train to each boiler per manufacturer's piping diagram.
- Label all gas piping.

"Page content is subject to Confidentiality Restrictions"

Electrical and Controls

- Provide and install new electric panel.
- Install power conduit and conductors to new boilers, circulators, and accessories.
- Provide and install in the boiler room a Carbon Monoxide detector on the same circuit as the boilers, with a relay that disables the boilers in the event Carbon Monoxide is detected.
- New Controls: Provide controls to the new boiler plant:

Hot Water Boilers – Mechanical Room

Point Name	Point	Count	Notes
Hot Water Supply Temperature Setpoint	AO	1	Adjustable per sequence
Main HW Supply Temp	AI	1	Install Well Sensor
Main HW Return Temp	AI	1	Install Well Sensor
Boiler Start/Stop	DO	2	
Boiler Status	DI	2	Status from panel
Boiler Alarm	DI	2	Alarm relay from boiler control panel
Hot Water Pump Status	DI	2	Current Transducer
Hot Water Pump start/stop	DO	2	
Domestic Hot Water Pump Status	DI	1	Current Transducer
Domestic Hot Water Pump start/stop	DO	1	
Domestic Hot Water Storage Temp	AI	1	Install Well Sensor
Sub-Total Points		**16**	
Control Sequences: Hot Water Reset with DHW Priority; Pump Run Time Equalization; Boiler Start/Stop with pump control; Pump Run Time			

LON Card included from the boiler manufacturer

Demo & Remove Fuel Oil Storage Tank

- Drain, demo, and remove the existing 8,000 gallon oil storage tank
  - Remove all associated piping
  - Insulate and seal all exterior penetrations left by removal of piping
  - Tank located next to 8,000 gallon oil storage tank serving the City Hall.

Exclusions

The measure assumes the following:

- Existing boilers are assumed to be in working order.
- Existing isolation valves in gas, steam, and water piping are assumed to be in working order.
- Repair of existing valves and piping that shall be tied into as part of this scope of work is excluded.
- The existing building hot water distribution pumps shall remain and their replacement or repair is excluded.
- Work shall occur during normal business hours.
- Provision of temporary heat or other utilities is excluded.
- Additions or modifications to fire protection systems are excluded.

"Page content is subject to Confidentiality Restrictions"

- Any abatement or remediation of asbestos or other hazardous materials beyond that specifically called out to be included in the scope of work above is excluded from the scope and cost of the proposed work.
- Removal of any remaining oil left in the existing oil tanks is excluded. It is assumed that the City may transfer this oil to other facilities as needed and at their convenience.
- If oil leakage is discovered during removal of the oil tank Ameresco will stop all work and report back to the City. Remediation of any existing oil leaks is not included in the project.

>Equipment, Design and Construction Documentation

Equipment will be identified in submittals provided for approval prior to procurement. Documents will be submitted to the facilities department for their review and comment. Upon approval, these will constitute the construction documents. Upon completion of the construction phase, the documents will be revised as needed to reflect "As-Built" conditions and submitted in multiple for record.

>Impact on Facility Operations and Performance

Energy savings will be realized by the improved efficiency of the boiler and the reduced cost of natural gas in comparison to oil and electricity.

"Page content is subject to Confidentiality Restrictions"

This page is intentionally left blank.

Appendix for ESM 23:
Steam to Hot Water Conversion

I. Energy Savings Calculations

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

City of Bristol, CT				
Energy and Demand Savings Summary				
Measure ID:	**23**			
Measure Name:	**Steam to Hot Water Conversion**			
Measure Location:				
Engineers:				

Site Name:		**City_Hall**	**Police**	**Summary**
Item	Units	Savings	Savings	
Electricity				
Energy On-Peak	kWh			0
Energy Off-Peak	kWh			0
Energy Total	kWh	0	0	0
Demand On-Peak, Monthly	kW			0.0
Demand On-Peak, Annual	kW			0.0
Demand Off-Peak, Monthly	kW			0.0
Demand Off-Peak, Annual	kW			0.0
Fossil Fuel				0
Natural Gas (NG)	CCF	-22,647	-36,873	-52,318
Liquid Propane Gas (LPG)	Gallons			0
Steam	Mlbs			0
Fuel Oil, #2	Gallons	18,023	31,092	49,115
Fuel Oil, #4	Gallons			0
Fuel Oil, #6	Gallons			0
Max Daily Demand (Natural Gas)	CCF (Demand)	-225	-343	-486
Water				0
Water Savings	CF			0
Sewer				0
Sewer Savings	CF			0

City of Bristol, CT
City Hall & Annex
Steam to Hot Water Conversion

TMY-3 Weather Data for Hartford, CT								Existing Occupancy Schedule				Proposed EMS Operating Hours								Proposed		Savings
Amb. Temp Bin deg. F	Ave Temp deg. F	M.C.W.B deg. F	M.C. Enthalpy Btu/lbma	01-08 Hours	09-16 Hours	17-24 Hours	Total Bin Hours	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Interacted Occ. Heat Load (MBH)	Interacted UnOcc. Heat Load (MBH)	Occ. Heat Usage (MMBTU)	UnOcc. Heat Usage (MMBTU)	Occ Cooling/Heating Energy Consump. (MMBTU)	UnOcc Cooling/Heating Energy Consump. (MMBTU)	Heating Energy Savings (MMBTU)
A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**Q**	**R**	**S**	**T**	**U**	**V**	**W**
Cooling																						
105 to 110	107.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0							
100 to 105	102.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0							
95 to 100	97.5	75.8	39.4	0	4	0	4	1	0	0	3	1	0	1	2							
90 to 95	92.5	74.9	38.7	0	34	9	43	6	4	4	28	11	0	8	24							
85 to 90	87.5	72.8	36.9	0	105	22	127	19	11	13	84	31	0	24	72							
80 to 85	82.5	69.0	33.5	4	247	105	356	53	32	37	234	88	0	66	202							
75 to 80	77.5	66.7	31.7	55	243	158	456	68	41	48	300	112	0	85	258							
70 to 75	72.5	64.6	30.0	137	208	183	528	79	47	55	347	130	0	98	299							
65 to 70	67.5	61.1	27.5	199	231	248	678	101	61	71	446	167	0	126	384							
60 to 65	62.5	56.0	24.0	306	300	310	916	136	82	95	602	226	0	171	519							
Heating																						
55 to 60	57.5	51.2	21.1	270	226	289	785	117	70	82	516	194	0	146	445	(377)	(33)	0	58	0	54	4
50 to 55	52.5	46.7	18.6	291	186	261	738	110	66	77	485	182	0	138	418	(463)	(99)	17	91	16	84	8
45 to 50	47.5	41.8	16.1	210	129	187	526	78	47	55	346	130	0	98	298	(567)	(168)	30	103	28	96	10
40 to 45	42.5	38.1	14.4	282	188	155	625	93	56	65	411	154	0	117	354	(681)	(236)	59	170	54	158	16
35 to 40	37.5	33.1	12.2	288	296	306	890	132	80	93	585	220	0	166	504	(796)	(305)	116	311	108	288	30
30 to 35	32.5	28.5	10.3	252	222	251	725	108	65	76	477	179	0	135	411	(910)	(373)	122	308	113	286	31
25 to 30	27.5	24.1	8.6	182	160	177	519	77	46	54	341	128	0	97	294	(1,024)	(442)	106	260	99	242	26
20 to 25	22.5	20.3	7.2	231	89	177	497	74	44	52	327	123	0	93	282	(1,138)	(511)	120	287	112	267	29
15 to 20	17.5	15.5	5.6	135	42	57	234	35	21	24	154	58	0	44	133	(1,253)	(579)	65	153	61	142	16
10 to 15	12.5	10.9	4.1	44	7	24	75	11	7	8	49	18	0	14	43	(1,367)	(648)	24	55	22	51	6
5 to 10	7.5	6.4	2.7	23	3	1	27	4	2	3	18	7	0	5	15	(1,481)	(716)	10	22	9	20	2
0 to 5	2.5	2.4	1.5	11	0	0	11	2	1	1	7	3	0	2	6	(1,596)	(785)	4	10	4	9	1
-5 to 0	(2.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	(1,706)	(875)	0	0	0	0	0
-10 to -5	(7.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	(1,817)	(945)	0	0	0	0	0
-15 to -10	(12.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	(1,928)	(1,015)	0	0	0	0	0
-20 to -15	(17.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	(2,039)	(1,085)	0	0	0	0	0
-25 to -20	(22.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	(2,149)	(1,155)	0	0	0	0	0
				2,920	2,920	2,920	8,760	1,304	783	913	5,761	2,161	0	1,634	4,965			672	1,828	624	1,697	179
								841	505	589	3,717											

Cell Ref.	Comment
A-H	TMY-3 Weather Data for Hartford, CT
I - L	Occupied hours as per the RFP data
M - P	Equipment operating hours after EMS is installed
Q	Interacted Occupied Heating loads (MBH)
R	Interacted Unoccupied Heating loads (MBH)
S	Heating = -(MIN([col I] + [col K],[col M] + [col O]) x MIN([col Q] + internal gains,0) + IF([col I] + [col K] > [col M] + [col O],(([col I] + [col K]) - ([col M] + [col O])) x MIN([col R] + internal gains,0),0)) ÷ 1,000 ÷ R43
T	Heating = -(([col N] + [col P]) x MIN([col R] + internal gains,0) + IF([col I] + [col K] < [col M] + [col O],(([col M] + [col O]) - ([col I] + [col K])) x MIN([col Q] + internal gains,0),0)) ÷ 1,000 ÷ R43
U	Heating = -(MIN([col I] + [col K],[col M] + [col O]) x MIN([col Q] + internal gains,0) + IF([col I] + [col K] > [col M] + [col O],(([col I] + [col K]) - ([col M] + [col O])) x MIN([col R] + internal gains,0),0)) ÷ 1,000 ÷ R44
V	Heating = -(([col N] + [col P]) x MIN([col R] + internal gains,0) + IF([col I] + [col K] < [col M] + [col O],(([col M] + [col O]) - ([col I] + [col K])) x MIN([col Q] + internal gains,0),0)) ÷ 1,000 ÷ R44
W	= [col S] + [col T] - [col U] - [col V]

Assumptions:	Value	Unit	CELL REF	Description
Existing Heating Plant Efficiency	78.0%		R43	Baseline Boiler Efficiency
Proposed Heating Plant Efficiency	84.0%		R44	Proposed Boiler Efficiency
Design Steam Loss Rate	16	MBTU/hr	R45	

Page content is subject to Confidentiality Restrictions

City of Bristol, CT
Police Court & Parking Garage
Steam to Hot Water Conversion

TMY-3 Weather Data for Hartford, CT								Existing Occupancy Schedule				Proposed EMS Operating Hours								Proposed		Savings
Amb. Temp Bin deg. F	Ave Temp deg. F	M.C.W.B deg. F	M.C. Enthalpy Btu/lbma	01-08 Hours	09-16 Hours	17-24 Hours	Total Bin Hours	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Interacted Occ. Heat Load (MBH)	Interacted UnOcc. Heat Load (MBH)	Occ. Heat Usage (MMBTU)	UnOcc. Heat Usage (MMBTU)	Occ Cooling/Heating Energy Consump. (MMBTU)	UnOcc Cooling/Heating Energy Consump. (MMBTU)	Heating Energy Savings (MMBTU)
A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**Q**	**R**	**S**	**T**	**U**	**V**	**W**
Cooling																						
105 to 110	107.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0							
100 to 105	102.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0							
95 to 100	97.5	75.8	39.4	0	4	0	4	1	0	3	0	1	0	2	1							
90 to 95	92.5	74.9	38.7	0	34	9	43	10	0	33	0	13	0	22	8							
85 to 90	87.5	72.8	36.9	0	105	22	127	30	0	97	0	39	0	64	24							
80 to 85	82.5	69.0	33.5	4	247	105	356	85	0	271	0	109	0	181	66							
75 to 80	77.5	66.7	31.7	55	243	158	456	108	0	348	0	140	0	231	84							
70 to 75	72.5	64.6	30.0	137	208	183	528	125	0	403	0	162	0	268	98							
65 to 70	67.5	61.1	27.5	199	231	248	678	161	0	517	0	208	0	344	126							
60 to 65	62.5	56.0	24.0	306	300	310	916	217	0	699	0	282	0	465	170							
Heating																						
55 to 60	57.5	51.2	21.1	270	226	289	785	186	0	599	0	241	0	398	145	(384)	(48)	159	0	139	0	20
50 to 55	52.5	46.7	18.6	291	186	261	738	175	0	563	0	227	0	374	137	(520)	(135)	255	0	223	0	31
45 to 50	47.5	41.8	16.1	210	129	187	526	125	0	401	0	162	0	267	97	(656)	(222)	260	0	228	0	32
40 to 45	42.5	38.1	14.4	282	188	155	625	148	0	477	0	192	0	317	116	(792)	(309)	411	0	360	0	51
35 to 40	37.5	33.1	12.2	288	296	306	890	211	0	679	0	274	0	452	165	(928)	(396)	731	0	640	0	90
30 to 35	32.5	28.5	10.3	252	222	251	725	172	0	553	0	223	0	368	134	(1,065)	(484)	713	0	625	0	88
25 to 30	27.5	24.1	8.6	182	160	177	519	123	0	396	0	160	0	263	96	(1,201)	(571)	595	0	522	0	74
20 to 25	22.5	20.3	7.2	231	89	177	497	118	0	379	0	153	0	252	92	(1,337)	(658)	651	0	570	0	80
15 to 20	17.5	15.5	5.6	135	42	57	234	56	0	178	0	72	0	119	43	(1,473)	(745)	345	0	302	0	43
10 to 15	12.5	10.9	4.1	44	7	24	75	18	0	57	0	23	0	38	14	(1,609)	(832)	123	0	108	0	15
5 to 10	7.5	6.4	2.7	23	3	1	27	6	0	21	0	8	0	14	5	(1,745)	(920)	49	0	43	0	6
0 to 5	2.5	2.4	1.5	11	0	0	11	3	0	8	0	3	0	6	2	(1,882)	(1,007)	22	0	19	0	3
-5 to 0	(2.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	(2,052)	(1,094)	0	0	0	0	0
-10 to -5	(7.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	(2,191)	(1,181)	0	0	0	0	0
-15 to -10	(12.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	(2,330)	(1,269)	0	0	0	0	0
-20 to -15	(17.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	(2,468)	(1,356)	0	0	0	0	0
-25 to -20	(22.5)	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	(2,607)	(1,443)	0	0	0	0	0
				2,920	2,920	2,920	8,760	2,080	0	6,680	0	2,694	0	4,445	1,622			4,312	0	3,779	0	533
								1,342	-	4,310	-											

Cell Ref.	Comment
A-H	TMY-3 Weather Data for Hartford, CT
I - L	Occupied hours as per the RFP data
M - P	Equipment operating hours after EMS is installed
Q	Interacted Occupied Heating loads (MBH)
R	Interacted Unoccupied Heating loads (MBH)
S	Heating = -(MIN([col I] + [col K],[col M] + [col O]) x MIN([col Q] + internal gains,0) + IF([col I] + [col K] > [col M] + [col O],(([col I] + [col K]) - ([col M] + [col O])) x MIN([col R] + internal gains,0),0)) ÷ 1,000 ÷ R43
T	Heating = -(([col N] + [col P]) x MIN([col R] + internal gains,0) + IF([col I] + [col K] < [col M] + [col O],(([col M] + [col O]) - ([col I] + [col K])) x MIN([col Q] + internal gains,0),0)) ÷ 1,000 ÷ R43
U	Heating = -(MIN([col I] + [col K],[col M] + [col O]) x MIN([col Q] + internal gains,0) + IF([col I] + [col K] > [col M] + [col O],(([col I] + [col K]) - ([col M] + [col O])) x MIN([col R] + internal gains,0),0)) ÷ 1,000 ÷ R44
V	Heating = -(([col N] + [col P]) x MIN([col R] + internal gains,0) + IF([col I] + [col K] < [col M] + [col O],(([col M] + [col O]) - ([col I] + [col K])) x MIN([col Q] + internal gains,0),0)) ÷ 1,000 ÷ R44
W	= [col S] + [col T] - [col U] - [col V]

Assumptions:	Value	Unit	CELL REF	Description
Existing Heating Plant Efficiency	78.0%		R43	Baseline Boiler Efficiency
Proposed Heating Plant Efficiency	89.0%		R44	Proposed Boiler Efficiency
Design Steam Loss Rate	14	MBTU/hr	R45	

Page content is subject to Confidentiality Restrictions

City of Bristol, CT	
Energy and Demand Savings Summary	
Measure ID:	**23**
Measure Name:	**Steam to Hot Water Conversion**
Measure Location:	
Engineers:	

Site Name:		**City_Hall**	**Police**	**Summary**
Item	Units	Savings	Savings	
Electricity				
Energy On-Peak	kWh	4,434	3,709	8,143
Energy Off-Peak	kWh			0
Energy Total	kWh			0
Demand On-Peak, Monthly	kW			0.0
Demand On-Peak, Annual	kW			0.0
Demand Off-Peak, Monthly	kW			0.0
Demand Off-Peak, Annual	kW			0.0
Fossil Fuel				0
Natural Gas (NG)	CCF	-164	-134	-299
Liquid Propane Gas (LPG)	Gallons			0
Steam	Mlbs			0
Fuel Oil, #2	Gallons			0
Fuel Oil, #4	Gallons			0
Fuel Oil, #6	Gallons			0
Max Daily Demand (Natural Gas)	CCF (Demand)			0
Water				0
Water Savings	CF			0
Sewer				0
Sewer Savings	CF			0

City of Bristol, CT
Steam to Hot Water Conversion

Cafeteria Domestic Hot Water Consumption								Proposed		Savings
Location	Meals/Day	Consumption Rate Gal/meal	Average Daily Load Gal/ Day	Average Daily Load Gal/Hr	Occupant Days	Efficiency	Total Consumption (MBTU)	Efficiency	Total Consumption (MBTU)	Total Consumption (MBTU)
[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]
City Hall & Annex	0	0.00	0	0	260	100%	0	90%	0	0
Police Court & Parking Garage	0	0.00	0	0	365	98%	0	90%	0	0
										0

Lavatory Domestic Hot Water Consumption (Includes Cafeteria and Showers for K - 12 Schools)								Assumptions		Savings
Location	Occupants	Consumption Rate Gal/Day/Occupant	Consumption Rate Gal/Day/Occupant	Average Daily Load Gal/Hr	Occupant Days	Efficiency	Total Consumption (MBTU)	Efficiency	Total Consumption (MBTU)	Total Consumption (MBTU)
City Hall & Annex	137	0.60	82	10	260	100%	15,132	90%	16,814	-1,681
Police Court & Parking Garage	80	0.60	48	6	365	98%	12,658	90%	13,783	-1,125
										24,975

Cell Ref.	Comment
A	Location
B	Meals served per day as per interviews with the food service supervisors at each school or number of occupants
C	Estimated consumption rates as per ASHRAE Systems, Chaper 54, Table 1.
D	= [col B] x [col C]
E	= [col D] / hours of operation
F	Number of days the DHW system is active
G	Estimated existing efficiency includes cycling losses during low load periods
H	= [col E] x 0.1337 x 64 x 1 x ([col O] - [col N]) ÷ 1,000 x [col M] x [col F] ÷ [col G])
I	Estimated proposed efficiency includes cycling losses during low load periods
J	= [col H] x [col G] ÷ [col I]
K	= [col H] - [col J]

Page content is subject to Confidentiality Restrictions

Appendix for ESM 23:
Steam to Hot Water Conversion

II. Manufacturer Specification Sheets

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

HIGH EFFICIENCY COMMERCIAL BOILERS

CREST®

CONDENSING BOILER

SMART TOUCH™

WITH MODBUS PROTOCOL,
CASCADING SEQUENCER AND
FRONT-END LOADING CAPABILITY

- 5 INPUTS FROM 2.5 TO 5.0 MILLION BTU/HR
- FIRING RATE MODULATION UP TO 20:1
- DIRECT-VENT FLEXIBILITY TO 100 FEET
- FLEXIBLE FLOW RATES UP TO 350 GPM



UP TO 99%
THERMAL EFFICIENCY

LOW NOx Certified
PROTECTING OUR ENVIRONMENT

Lochinvar
HIGH EFFICIENCY BOILERS & WATER HEATERS

CREST®
CONDENSING BOILER

Fire Tube Innovation up to 5.0 Million BTU

Lochinvar® has taken the fire-tube concept in an innovative new direction with the CREST® modulating-condensing boiler. With sizes that range from 2.5 to 5.0 million Btu/hr, you have the opportunity to utilize Lochinvar leading-edge technology in your largest applications. With thermal efficiencies up to 99% in low water temperature applications, CREST is positioned to provide exceptional energy-saving performance.

The advanced CREST introduces a combustion system with a unique burner design with up to 20:1 turndown. The burner fires into an array of 316L stainless steel fire-tubes that transfer the heat to the surrounding water with exceptionally high efficiency.

CREST communicates seamlessly and in real time with building management systems by utilizing an on-board MODBUS protocol. The SMART TOUCH™ control has a built-in cascading component that communicates with up to eight units, providing total command without an external control or complex and expensive control logic programming by the BMS integrator.

Yes, innovative fire-tube boiler technology integrated with our SMART TOUCH™ operating control makes the CREST a genuine game-changer among commercial boilers.



Advanced Negative Regulation Technology

CREST safely and reliably operates with supply gas pressure as low as 4 inches water column. Because Negative Regulation (Neg/Reg) technology draws fuel gas into a pre-mix combustion system instead of relying on utility pressure through the gas valve, operation is steady in low gas pressure systems or when peak demands occur on supply lines. Plus, Neg/Reg automatic fan speed control fine-tunes the correct fuel/air ratio entering the burner, providing even, consistent combustion for a cleaner burning flame achieving high combustion efficiency.

Fully Modulating up to 20:1 Turndown

20:1 turndown means the burner can fire at a rate as low as 5% of its maximum input. For example, a 2.5 million Btu/hr CREST unit can modulate from 125,000 up to 2,500,000 Btu/hr depending on demand. High turndown greatly reduces “short cycling” when demand is low. All boiler systems are designed to provide enough heat to maintain a facility’s heat loss on the coldest days. When the system is zoned, the CREST’s high turndown works to match the actual system demand and, in return, reduces the customer’s fuel bill and provides better comfort by load matching the heat loss of the system. Greater seasonal efficiencies will be realized due to the extremely large turndown offered by CREST.

As Low As 25 GPM* to Full 350 GPM Flow Rates

CREST allows system designers tremendous flexibility to vary the flow rate through the boiler. It can service systems that operate with widely fluctuating flow rates depending on demand. CREST can be installed with primary/secondary piping or in a full-flow arrangement. Typical design techniques include full-flow systems or variable flow systems using variable frequency drives on the heating water pumps. In either case, CREST excels in these applications and allows the flow through the boiler to vary based on system demand.

** 25 GPM min. flow on FB2500-3000 models, 45 GPM on FB3500-4000 models and 50 GPM on FB5000.*

LOW NOx Certified
PROTECTING OUR ENVIRONMENT



The CREST Combustion System

CREST's top-mounted, single micro metal fiber burner is actually "two combustion systems in one," each with its own blower/gas valve assembly to power the combustion process from air/gas intake to driving heat energy down and through the fire-tubes to exhaust venting through the bottom of the unit.

In a 2 Million BTU/Hr CREST Boiler

The upper portion of the burner fires first and, with 5:1 turndown, modulates from 125,000 to 625,000 Btu/hr.

When demand exceeds 625,000 Btu/hr., the lower portion of the burner fires and modulates from 470,000 to 1,875,000 Btu/hr.

With the entire burner firing at capacity, the total input is 625,000 + 1,875,000 = 2,500,000 Btu/hr.

The CREST's patent-pending dual-system design is truly an industry first!

The CREST Heat Exchanger

Heat energy and combustion products flow downward into fire-tubes from the burner.

Energy from inside fire-tubes heats water flowing through the heating vessel.

As water is heated, it flows up through the heating vessel and out into the system.

Cold water returning from the system enters the heating vessel to maximize efficiency.

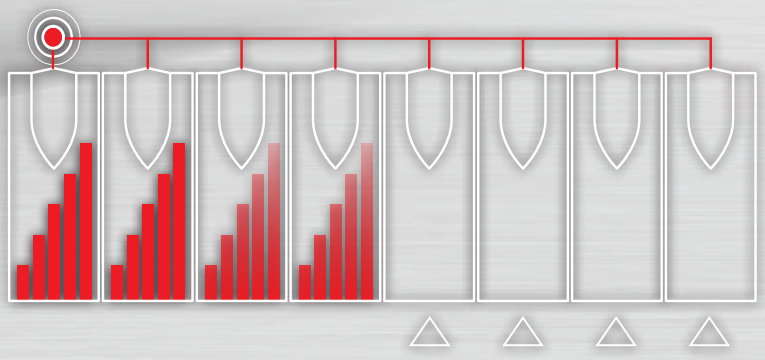
Condensate is drained into a stainless steel collector, to be piped to a suitable floor drain.

The flue outlet is located at the bottom of the unit.

Built-in Cascading Sequencer

Sequences up to an 8-boiler system using simple 2-wire daisy-chain connection, eliminating cost and uncertainty of separate "third party" sequencer. On demand, one boiler functions as the leader and modulates to capacity. Increasing load then "cascades" to additional "lag" boilers in sequence as needed. Lead-lag rotation shifts "first on" boiler role every 24 hours, distributing equal lead-lag runtimes to each unit.

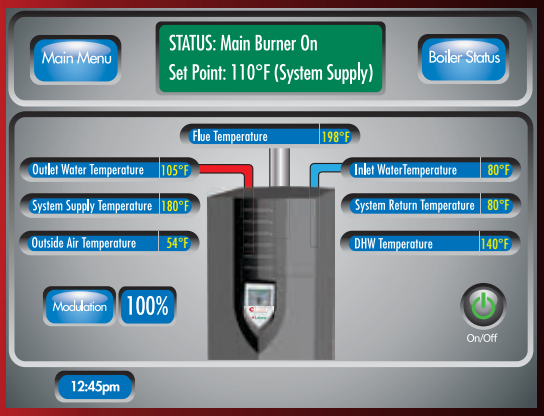
CREST's ability to sequence up to eight units that each have as much as 20:1 turndown means that the combined system has the potential of operating with modulation of up to 160:1 turndown. A bank of eight 2.5M Btu CRESTs would be able to provide as little as 125,000 Btu/hr and as much as 20,000,000 Btu/hr of heating output. In addition, the CREST Cascade can be set for "Efficiency Optimization" with each boiler firing at the same low BTU/hr input rates to receive the benefits of the highest thermal efficiency.



Unequaled Control and Monitoring Functions That Are Easy to Use

The CREST features Lochinvar's popular, all-in-one SMART TOUCH™ operating control. Amplified with an 8-inch touchscreen, the multi-color interface offers the best info-graphics and visual control content in the boiler industry today. It is smartly dressed with distinctive features and control parameters. It provides the operator with outstanding functionality, ease of operation and customized data retrieval. The CREST's SMART TOUCH control can be integrated directly into a Building Automation System via ModBus protocol and other communication protocols via a gateway device.

SMART TOUCH™

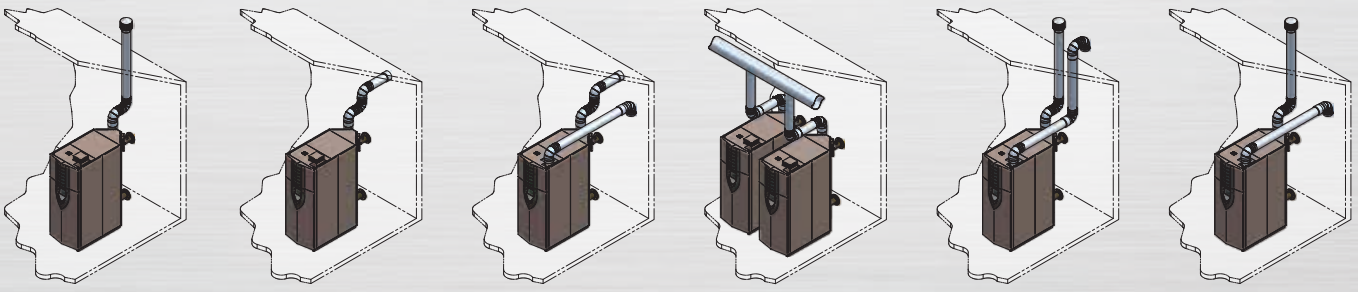


- MODBUS COMMUNICATION
- BUILDING MANAGEMENT SYSTEM CONTROL
- PC CONNECTION
- OUTDOOR RESET
- NIGHT TEMPERATURE SETBACK
- HOT WATER GENERATOR COMPATIBILITY
- SYSTEM AND BOILER PUMP CONTROLS
- FREEZE PROTECTION
- PRODUCT SERVICE DUE INDICATOR
- PASSWORD SECURITY



Direct-Venting up to 100 Feet

CREST offers 6 venting options and tremendous flexibility for placement of units within the building, because it permits direct-vent air intake and exhaust runs up to 100 equivalent feet using AL29-4C stainless steel (Category IV) vent pipe. Intake and exhaust runs can terminate horizontally through a sidewall or vertically through the roof. Additionally, CREST boilers installed in multiples of 2 or more can be common-vented, eliminating much of the time and material cost of venting multiple boilers individually.

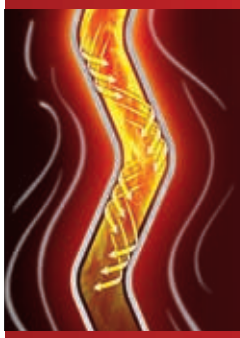


Room Air Vertical | **Room Air Sidewall** | **Direct-Vent Sidewall** | **Common-Vent*** | **Direct-Vent Vertical** | **Vertical w/Sidewall Air**

**Contact Lochinvar for information on common venting of CREST boilers.*

The Industry's First Wave™ Fire-Tube Boiler Is Also the Industry's Best

Through an extensive research and design program, Lochinvar has taken fire-tube boiler technology to a new level. The CREST® boiler features the Wave™ 316L stainless steel fire-tube. Each CREST Fire Tube has a larger input capacity than other industry fire-tubes, which means fewer tubes and welds. This exclusive, new design provides superior heat transfer in every fire-tube.



The Wave™ fire-tube employs a unique wave pattern that creates turbulence as the flue gas products flow down the tube, scrubbing the energy from the flue products. The Wave™ design also enhances the life of the heat exchanger by allowing the fire-tubes to flex, operating stress-free with none of the adverse effects suffered by traditional fire-tube boilers.

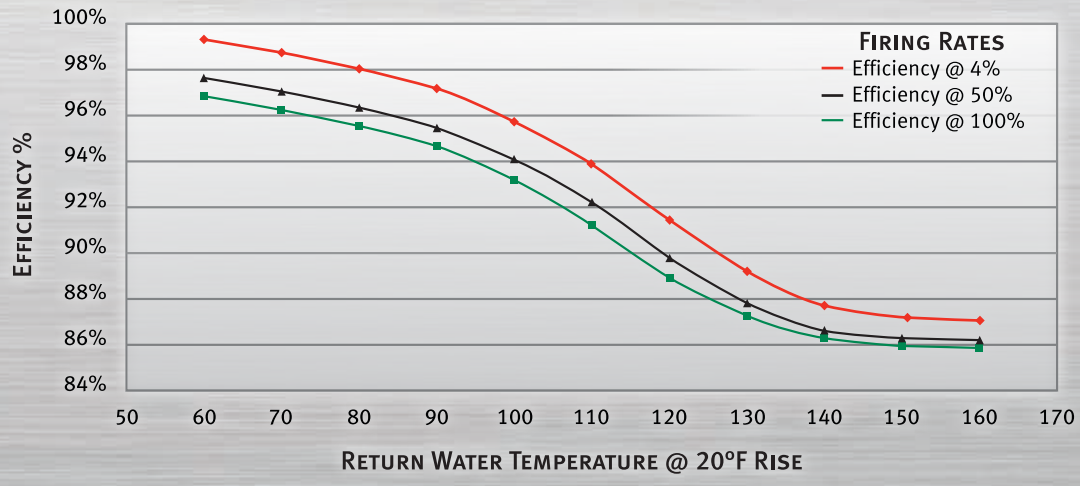
Each fire-tube is welded into the heat exchanger vessel and surrounded by water. The heat transfer process is enhanced by the water's counterflow. As the water flows up inside the vessel, the super-heated flue products flow down the fire-tube. With one pass, the heat is effectively captured from the flue products reaching condensing temperatures. At the top of the vessel, the combustion chamber is also water-backed for additional heat transfer.

Finally, the CREST heat exchanger can operate with flow rates from as low as 25 GPM* to 350 GPM, comfortably suited to a wide variety of boiler system designs.

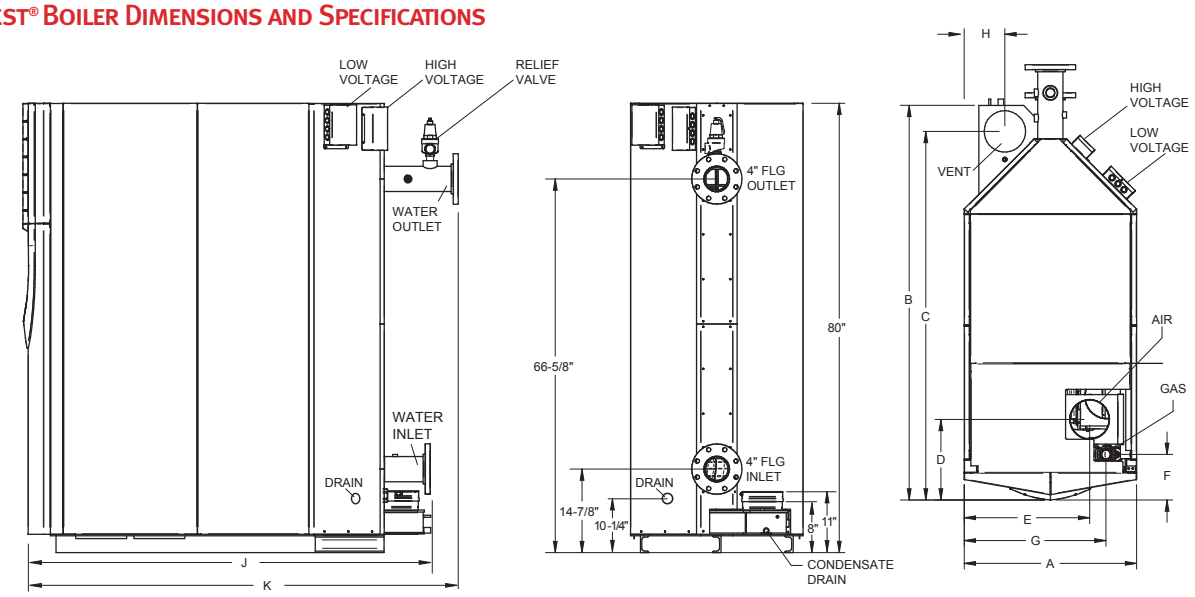
** 25 GPM min. flow on FB2500-3000 models, 45 GPM on FB3500-4000 models and 50 GPM on FB5000.*



CREST Boiler Efficiency



Crest® Boiler Dimensions and Specifications



Crest Heating Boiler — Dimensions and Specifications

Model Number	Input MBH Min.	Input MBH Max.	AHRI Thermal %	Output MBH	NET AHRI Rating MBH	Turndown	A	B	C	D	E	F	G	H	J	K	Gas Conn.	Air Inlet	Vent Size	Operating Wt. (lbs.)	Shipping Wt. (lbs.)
FBN2500	125	2,500	92.0%	2,300	2,000	20:1	34-1/4"	76-3/8"	70-1/4"	17-3/4"	26-1/8"	9-3/4"	27-3/8"	6-1/4"	78"	83"	2"	8"	9"	3,652	2,560
FBN3000	150	3,000	92.0%	2,760	2,400	20:1	40-1/2"	83-5/8"	76-3/8"	17-3/8"	31-3/8"	9-7/8"	34-3/4"	8-1/2"	82-1/8"	87-1/8"	2"	10"	10"	4,126	2,920
FBN3500	200	3,500	92.0%	3,220	2,800	18:1*	40-1/2"	83-1/4"	75-5/8"	17-1/4"	31-3/8"	9-7/8"	34-3/4"	7-1/4"	81-1/8"	86-1/8"	2"	10"	10"	4,744	3,225
FBN4000	335	4,000	93.0%	3,720	3,235	12:1	53-1/2"	109"	100-3/4"	31-1/4"	40-3/4"	14-1/2"	45-3/4"	12-1/2"	109-1/4"	108-1/4"	2-1/2"	12"	12"	6,900	4,750
FBN5000	500	5,000	93.0%	4,650	4,043	10:1	53-1/2"	109"	100-3/4"	28"	40-3/4"	11"	45-1/2"	9"	109-1/4"	108-1/4"	2-1/2"	14"	14"	8,000	5,550

Notes: *Indoor installation only. All information subject to change. Change "N" to "L" for LP gas models and to "D" for dual fuel models. For Low NOx on FB2500 - FB5000 models, consult factory. *Turndown rate reduced on LP gas models.*

Smart Touch™ Features

- **SMART TOUCH™ Touchscreen Operating Control**
- **Full-Color 8" Touchscreen LCD Display**
- **Built-in Cascading Sequencer for up to 8 Boilers**
  - Cascade Multiple Sized Boilers
  - Lead/Lag Cascade
  - Efficiency Optimized Cascade
- **Front-End Loading Capability with CopperFin II and Powerfin Boilers**
- **Building Management System Integration with 0-10 VDC Input**
- **Modbus Communications**
- **Outdoor Reset Control with Outdoor Air Sensor**
- **Password Security**
- **Domestic Hot Water Prioritization**
  - DHW tank piped with priority in the boiler loop
  - DHW tank piped as a zone in the system with the pumps controlled by the Smart System
  - DHW Modulation Limiting
  - Separately Adjustable SH/DHW Switching Times
- Low Water Flow Safety Control & Indication
- Inlet & Outlet Temperature Readout
- Freeze Protection
- Service Reminder
- Time Clock
- **Data Logging**
  - Hours Running, Space Heating
  - Hours Running, Domestic Hot Water
  - Hours Running, Modulation Rate
  - Ignition Attempts
  - Last 10 Lockouts
- **Programmable System Efficiency Optimizers**
  - Night Setback
  - Anti-Cycling
  - Outdoor Air Reset Curve
  - Ramp Delay
  - Boost Temperature & Time
- **Three Pump Control**
  - System Pump
  - Boiler Pump
  - Domestic Hot Water Pump
- **High-Voltage Terminal Strip**
  - 120 VAC / 60 Hertz / 1 Phase Power Supply (FB2500-3500)
  - 208 VAC / 60 Hertz / 3 Phase Power Supply (FB4000-5000)
  - System Pump, Boiler Pump and DHW Pump Power
- **Low-Voltage Terminal Strip**
  - 24 VAC Auxiliary Device Relay
  - Auxiliary Proving Switch Contacts
  - Alarm on Any Failure Contacts
  - Runtime Contacts
  - DHW Thermostat Contacts
  - Unit Enable/Disable Contacts
  - System Sensor Contacts
  - DHW Tank Sensor Contacts
  - Outdoor Air Sensor Contacts
  - Cascade Contacts
  - 0-10 VDC BMS External Control Contact

Optional Equipment

- Alarm Bell
- BMS Gateway - BACnet or LonWorks
- Condensate Neutralization Kit
- SMART TOUCH PC Software
- Common Vent Kits
- Dual Fuel Gas Train
- Electrical Options (Shipped Loose):
  - 208V/3Ø/60Hz (Models FB2500-3500 only)
  - 480V/3Ø/60Hz
  - 600V/3Ø/60Hz
- Motorized Isolation Valve
- Variable Speed Boiler Pump

Codes & Registrations

- ANSI Z21.13/CSA Certified
- ASME certified, "H" Stamp / National Board
- California Code Compliant
- CSD1 / Factory Mutual / GE Gap Compliant
- South Coast Air Quality Management District Qualified
- Canadian Registration Number (CRN)
- AHRI Certified

Standard Features

- Up to 93% Thermal Efficiency (AHRI)
- Up to 99% Thermal Efficiency in Low Temperature Applications
- Modulating Burner with up to 20:1 Turndown
- Direct-Spark Ignition
- Low-NOx Operation
- Sealed Combustion
- Low Gas Pressure Operation
- Vertical or Horizontal Venting
- Category IV Venting up to 100 Feet
- ASME "H" Stamped Heat Exchanger
- 316L Stainless Steel Fire Tubes
- 160 psi Working Pressure
- On/Off Switch
- Adjustable High Limit with Manual Reset
- Low Water Cutoff with Manual Reset & Test
- High & Low Gas Pressure Switches w/Manual Reset
- Low Air Pressure Switches
- Condensate Trap w/ Blocked Drain Switch
- Drain Valve
- System Sensor
- Outdoor Air Sensor
- Inlet & Outlet Temperature Sensors
- High Voltage Terminal Strip
- Low Voltage Terminal Strip
- Downstream Gas Test Cocks
- 50 psi ASME Relief Valve
- Temperature & Pressure Gauge
- Zero Clearances to Combustible Materials
- 10-Year Limited Warranty (See Warranty for Details)
- 1-Year Warranty on Parts (See Warranty for Details)

Registered Under U.S. Patent #8286594

Lochinvar®
HIGH EFFICIENCY BOILERS & WATER HEATERS

Lochinvar, LLC
300 Maddox Simpson Parkway
Lebanon, Tennessee 37090
P: 615.889.8900 / F: 615.547.1000
Lochinvar.com

PDP 5M © Lochinvar, LLC - 3/15 - Printed in U.S.A.

HTP

SUPERstor ULTRA Stainless Steel

Advanced Heating
& Hot Water Systems

Stainless Steel Indirect & Storage Tanks



WWW.HTPRODUCTS.COM

The SuperStor Ultra has been Recognized as the Market Leader for Over 25 Years

SUPERSTOR BUFFER TANK SSU-20B

The Buffer Tank

adds water volume to the heating system, smoothing out disturbances like short cycling, this will protect your heating system and make it more efficient



DOUBLE WALL

Provides additional protection against cross contamination



DOUBLE WALL

MODEL	180 DEG F BOILER WATER FIRST HOUR RATING		CIRCULATOR GPM	PRESSURE DROP (FEET)
	140 DEG F	115 DEG F		
SSU-45DW	70 GPH	108 GPH	6	8.2
SSU-60DW	90 GPH	144 GPH	7	12.8
SSU-80DW	138 GPH	215 GPH	10	13.6
SSU-119DW	210 GPH	326 GPH	12	15.9



Residential Indirect Double & Single Wall

7 Sizes Available (Single Wall)

4 Sizes Available (Double Wall)

High Output Heat Exchanger

May Be Eligible for Utility Rebates

Lightweight

Industry Best: Limited Lifetime Warranty on SSU Indirect Tanks

Industry Best Warranty

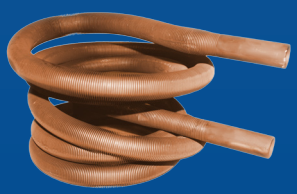
4 Versions Available:

Residential
Residential Double Wall
Commercial
Storage Tanks

4 Designs to Choose From:

Single Coil Indirect
Dual Coil for Solar Backup
Solar w/ Electric Backup
Storage Tank w/o Coil

HTP's Specially Designed Finned Cupronickel Heat Exchanger



SINGLE WALL

This heat exchanger provides a higher BTU output per foot than any other heat exchanger in the market.

SINGLE WALL

MODEL	180 DEG F BOILER WATER FIRST HOUR RATING		CIRCULATOR GPM	PRESSURE DROP (FEET)
	140 DEG F	115 DEG F		
SSU-20	121 GPH	168 GPH	8	6.0
SSU-30	154 GPH	212 GPH	8	6.0
SSU-30LB	169 GPH	234 GPH	8	6.0
SSU-45	212 GPH	292 GPH	10	7.9
SSU-60	266 GPH	370 GPH	10	7.9
SSU-80	330 GPH	440 GPH	12	9.1
SSU-119	423 GPH	564 GPH	14	11.3



MODEL	Dimensions		Floor to Drain	Floor to Inlet	Floor to Outlet	Weight (LBS)	Water Connection Sizes
	Height	Diameter					
SSU-30CB	39.5”	19.25”	4.5”	4.5”	33.75”	40	.75” NPT
SSU-45CB	52.5”	19.25”	4.5”	4.5”	45.75”	64	.75” NPT
SSU-60CB	52.5”	23.25”	4.5”	4.5”	45.75”	90	1” NPT
SSU-80CB	72”	23.25”	6”	16”	64.75”	129	1.5” NPT
SSU-119CB	73.5”	27”	7.25”	17.25”	66”	178	1.5” NPT

Storage Tanks

Low standby heat loss
316L stainless steel tank resists corrosion and eliminates the need for anode rods
Limited 10 Year Warranty on SSU Storage Tanks

SSU-119C



Commercial Indirects

4 Sizes Available
Ultra High Output Heat Exchanger
Lightweight
7 Year Limited Warranty on SSU Commercial Indirect Water Heaters

The Commercial SuperStor Ultra Consists of Two Heat Exchangers to Accommodate High Volume Needs



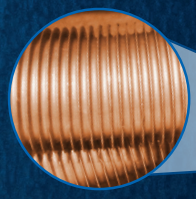
No Anode Rods Needed!
All HTP Stainless Steel Tanks are Laser Welded for a more Precise Welding

MODEL	180 DEG F BOILER WATER FIRST HOUR RATING		CIRCULATOR GPM	PRESSURE DROP (FEET)
	140 DEG F	115 DEG F		
SSU-45C	314 GPH	414 GPH	20	6.8
SSU-60C	354 GPH	467 GPH	22	9.2
SSU-80C	490 GPH	647 GPH	24	10.0
SSU-119C	637 GPH	841 GPH	28	12.7

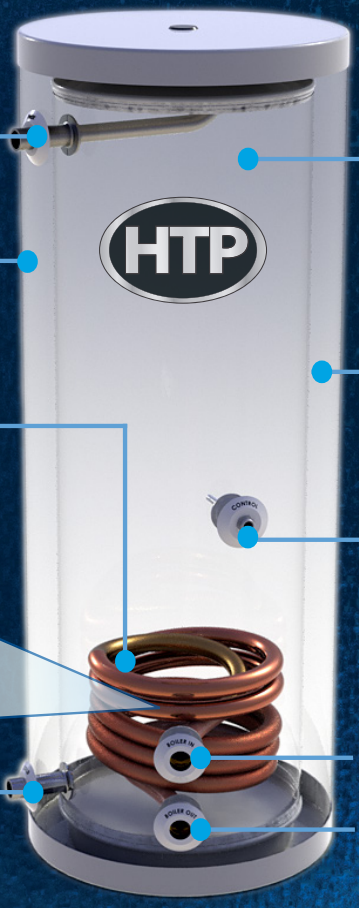
Stainless Steel Internal Bent Hot Water Outlet Tube – Extracts 5 – 7% more hot water off the top of the tank dome

Attractive silver finish cover that resists dents and corrosion

High Output Finned Cupronickel Heat Exchanger Provides Maximum Efficiency 11 Fins per inch



Stainless Steel Cold Water Inlet



316L Stainless Steel Tank for High Temperatures & Corrosion Resistance

Environmentally Safe, CFC Free Water Blown, 2" Thick Foam Insulation allows less than 1/2 Degree F heat loss per hour

Immersion Type Stainless Steel Control Well

1" Boiler Supply Connection

1" Boiler Return Connection

HTP Made in America

NSF

LEAD FREE
Safe Drinking Water Act
SDWA • Section 1417

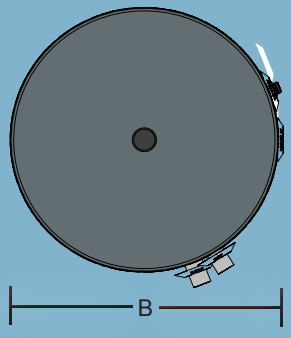
OPTIONAL EQUIPMENT

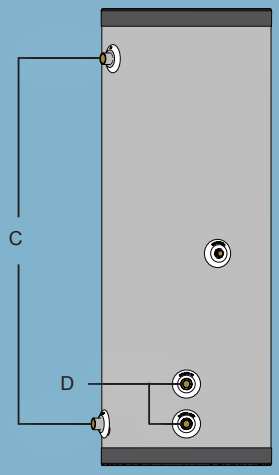
- Aquastat Control
- Thermostatic Mixing Valve
- Bronze Pump

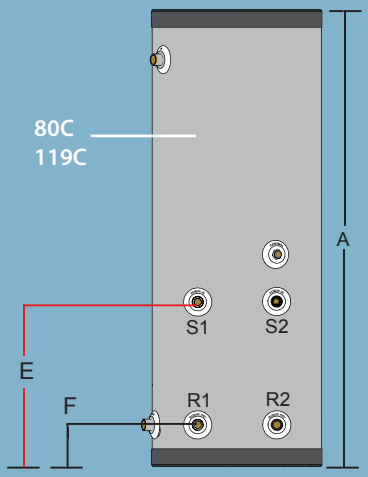
STANDARD FEATURES

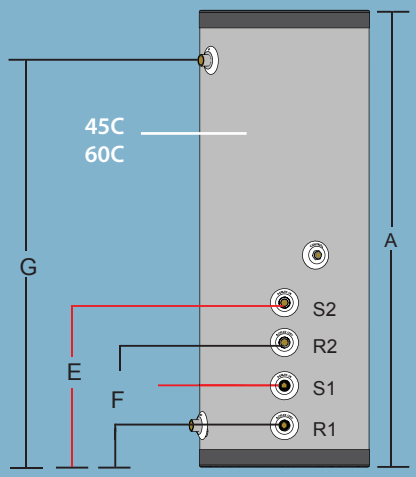
- 316L Stainless Steel
- Finned 90/10 Cupronickel Heat Exchanger
- Stainless Steel Aquastat Well

Dimensions & Specifications









Model	A Dimensions Ht	B Diameter	C Domestic Connections	D Boiler Connections	E Floor to Boiler Supply		F Floor to Boiler Return		G Floor to Domestic Out	Capacity	Heat Exchanger Surface	Shipping Weight
SSU-20	27"	19 1/4"	3/4"	1" NPT	S1- 9 3/4"		R1- 5 1/4"		22"	20	15 SQ FT	51 LBS
SSU-30	39 1/2"	19 1/4"	3/4"	1" NPT	S1- 9 3/4"		R1- 5 1/4"		34"	30	15 SQ FT	62 LBS
SSU-30LB	28 1/2"	23 1/4"	3/4"	1" NPT	S1- 9 3/4"		R1- 5 1/4"		22"	30	15 SQ FT	71 LBS
SSU-45	52 1/2"	19 1/4"	3/4"	1" NPT	S1- 9 3/4"		R1- 5 1/4"		46"	45	20 SQ FT	72 LBS
SSU-60	52 1/2"	23 1/4"	1"	1" NPT	S1- 9 3/4"		R1- 5 1/4"		46"	60	20 SQ FT	109 LBS
SSU-80	72"	23 1/4"	1 1/2"	1" NPT	S1- 29"		R1- 6"		64 3/4"	80	34 SQ FT	143 LBS
SSU-119	74"	27"	1 1/2"	1" NPT	S1- 30 1/4"		R1- 7 1/4"		66"	119	34 SQ FT	212 LBS
SSU-45C	42	23 1/4"	3/4"	1" NPT	S1- 9 3/4"	S2- 18 3/4"	R1- 5 1/4"	R2-14"	35"	45	40 SQ FT	106 LBS
SSU-60C	52 1/2"	23 1/4"	1"	1" NPT	S1- 9 3/4"	S2- 18 3/4"	R1- 5 1/4"	R2-14"	46"	60	40 SQ FT	126 LBS
SSU-80C	72"	23 1/4"	1 1/2"	1" NPT	S1- 29"	S2- 29"	R1- 6"	R2- 6"	64 3/4"	80	68 SQ FT	175 LBS
SSU-119C	74"	27"	1 1/2"	1" NPT	S1- 30 1/4"	S2- 30 1/4"	R1- 7 1/4"	R2- 7 1/4"	66"	119	68 SQ FT	242 LBS

© HTP • LP-81 • 08/2014

AEROFIN

Quality HVAC and Custom Engineered Heat Transfer Equipment for over 75 years

general products catalog

ARI Certified Ratings

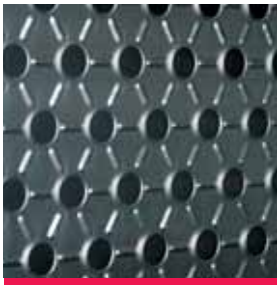


table of contents

Quality HVAC and Custom Engineered Heat Transfer Equipment for over 75 years

Visit our website today, www.aerofin.com

About Aerofin ..... **i**
Quality Statement, ARI Ratings and Selection Method 1
Plate Fin Energy Flow® Coils **2-5**
Construction Features 2-3
Standard Fin Designs 2
Tubes, Tube Joints, Headers 2
Casings, Circuits, Testing 3
Ordering Instructions 3
Water Coils- Cooling 4
Water Coils- Heating 5
Steam Coils- Heating 5
Spiral Fin Aerofin® Coils **6-11**
Construction Features 6-7
Standard Fin Designs 6
Tubes, Tube Joints, Headers 6
Casings, Circuits, Testing 7
Ordering Instructions 7
Water Coils- Cooling 8-9
Water Coils- Heating 10-11
Steam Coils- Heating 10-11
Specialty Coils **12-13**
Other Coils, **Aeromix®** Integral Face & Bypass Heating Coils, Universal Heating and Cooling Coils 14
Coil Type Cross Reference 15
Aerofin Contact Information **16-17**

About Aerofin

Founded in 1923, Aerofin Corporation is a leading manufacturer of finned tube heat exchanger coils and related heat transfer equipment and accessories:

- Process gas coolers and heaters
- Transformer oil coolers
- Fan/coil units
- Integral face and bypass coils
- Frames for coil removal
- Airside transitions and drain pans
- Moisture Eliminators

We also specialize in engineered applications and arrangements:

- Transferring heat from special gas streams and fluids
- Problem solving for corrosion and contamination
- Handling extremes in pressures and temperatures
- Designing for seismic conditions

Aerofin products serve a variety of industries:

- HVAC
- Fossil fuel power generation
- Nuclear power generation
- Industrial processes
- Pulp and paper
- Automotive
- Petrochemical



Aerofin Main Office and Manufacturing Facility—Lynchburg, Virginia
Regional Aerofin Offices throughout the United States and Canada

Call 1-800-AEROFIN (237-6346) for the Aerofin office nearest you.

Quality Statement

Aerofin is ISO 9001 certified.

Our Mission—To provide our customers with quality solutions to their heat transfer equipment needs. Our goal is to be recognized as the leading and most responsive manufacturer in the industry.

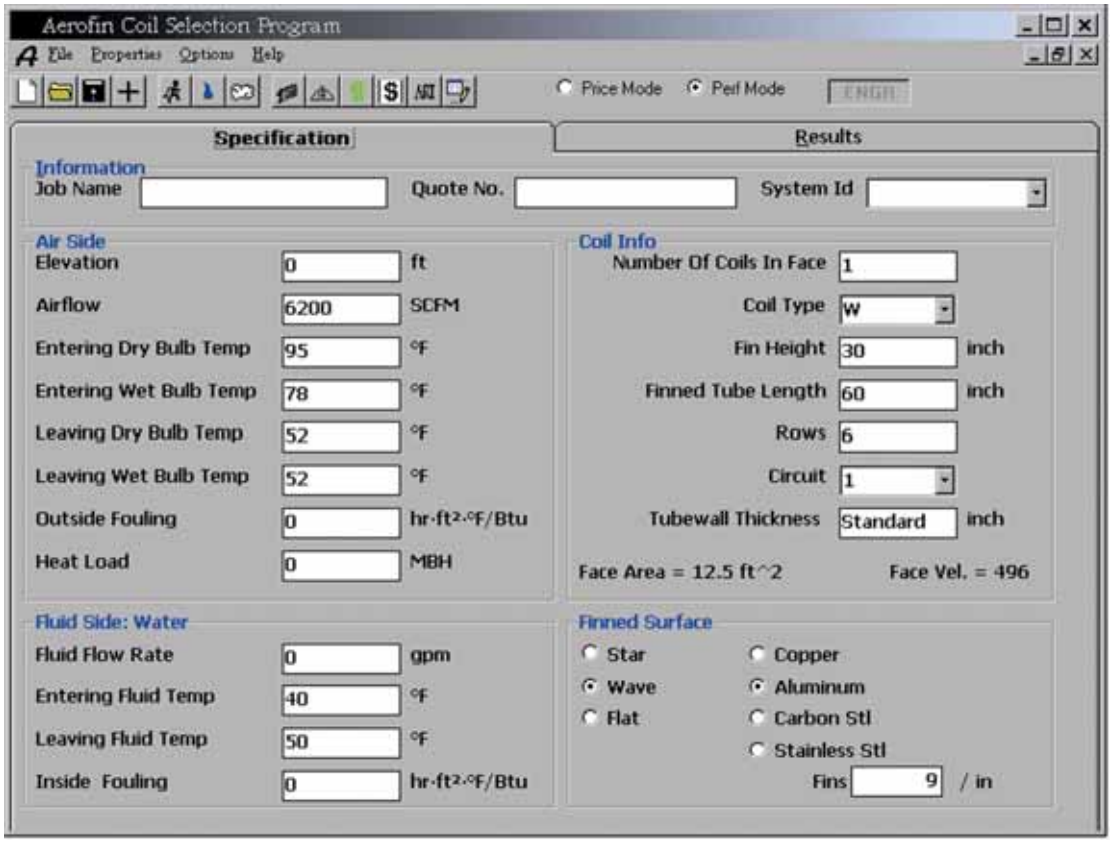
Our Commitment—Design and manufacture of heat exchangers that meet the highest standards of technical performance and conform to the quality expectations of our customers.

ARI Ratings

Our coil ratings have been established in accordance with the standards of the Air Conditioning and Refrigeration Institute (ARI). Aerofin's in-house test lab is ARI certified, and test data collected is evaluated in accordance with ARI Standard 410. To monitor coil performance, sample coils are provided to ARI annually for testing and evaluation.

Selection Method

Coil selections are made using one of the most advanced Windows-based computer programs in the industry. The program's speed, flexibility and extensive help screens make selecting both new and replacement coils simple and straightforward. The program is available upon request from the home office in Lynchburg, Virginia or from any regional Aerofin sales office.



© 2003 BY AEROFIN CORPORATION LYNCHBURG, VA. ALL RIGHTS RESERVED. PRINTED USA

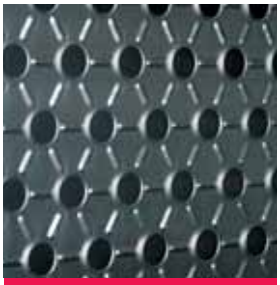


plate fin coils

Quality HVAC and Custom Engineered Heat Transfer Equipment for over 75 years

Visit our website today, www.aerofin.com

Energy Flow® Coils

Energy Flow® Plate Fin water coils are used for heating, cooling and dehumidifying. In addition to water, a variety of other heating and cooling media can be used such as glycol and brine solutions and thermal oils. Standard heating and cooling coils using steam, water or glycol are designed for applications up to 400 degrees F and 250 psig, except Type WR and WRC coils which are for use at 100 psig and 160 degrees F or less. Custom engineered solutions are available to meet your unique application requirements.

Construction Features

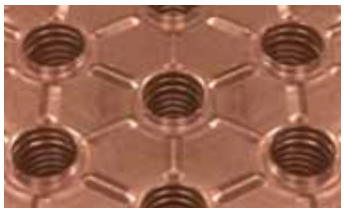
Standard Fin Designs

All Energy Flow® coils feature flat or patterned plate fins of aluminum, copper, stainless steel or carbon steel. The fins are permanently attached to the tubes by expansion of each tube. Full fin collars allow for both precise fin spacing and maximum fin-to-tube contact. Three standard plate fin patterns are available:



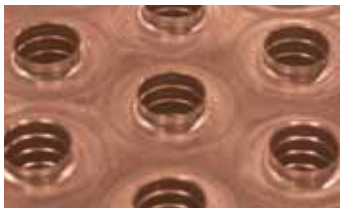
WAVE FIN

The wave fin corrugation across the fin provides the maximum heat transfer rate for a given surface area, and is the standard fin configuration used.



STAR FIN

The star fin pattern corrugation around the tubes provides lower air friction. This pattern is used when lower air friction is desired without a large decrease in heat transfer capacity.



FLAT FIN

The flat fin has no corrugation, which results in the lowest possible air friction drop and lowest fan horsepower demands.

Tubes

All standard Energy Flow® coils feature 5/8" OD or 1" OD seamless copper tubes conforming to ASTM specifications. Standard 5/8" OD tube wall thickness is 0.020 inches, except Type WR and WRC coils, which use 0.025 inch wall. Standard 1" OD tube wall thickness is 0.035 inches. Heavier wall tubing is available. Copper-nickel, aluminum, stainless steel and carbon steel are available material options.

Tube Joints

With the exception of type WR and WRC coils which feature roller-expanded tube joints, all joints for Energy Flow® heating and cooling water coils are brazed. All joints for steam heating coils are silver brazed. Aerofin brazers and welders are ASME qualified. Optional tube materials may require welded joints; call Aerofin for help in choosing the right materials for your needs.

Headers

With the exception of type WR and WRC coils, standard Energy Flow® coils feature carbon steel or non-ferrous headers with threaded pipe connections (other materials are available). Water coils are supplied with vents and drains. Type WR and WRC cooling coils use carbon steel tube sheets and removable carbon steel headers with threaded connections.



Aerofin Main Office and Manufacturing Facility—Lynchburg, Virginia
Regional Aerofin Offices throughout the United States and Canada

Call 1-800-AEROFIN (237-6346) for the Aerofin office nearest you.

Casings

Energy Flow® coil casings are heavy gauge galvanized steel designed for high strength, durability and are double flanged for coil stacking. Coil casings are furnished without mounting holes unless required. Stainless steel, aluminum and other casing materials are available material options. Special configurations are available such as welded casings for airtight applications.

Circuits

With a wide selection of standard circuits, Aerofin can optimize fluid velocity, maximize heat transfer, and minimize fluid pressure loss. Special circuits can also be engineered to meet special performance requirements.

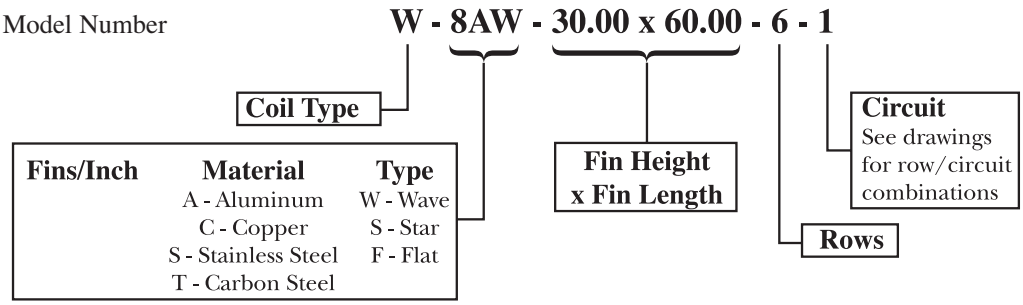
Testing

Aerofin's standard coil test is performed with 300 psig air under water. Type WR and WRC coils are tested hydrostatically to 150 psig. Higher design and test pressures are available for special applications.

Ordering Instructions

To place an order for an Aerofin Energy Flow® coil, specify the following:

1. Model Number



2. Header material

3. Tube material and tube wall thickness

4. Casing material (specify if mounting holes are required)

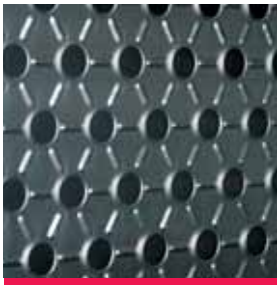
5. Connection type (NPT-M, Victaulic, Butt Weld, or Flanged), specify if top or bottom supply

6. Horizontal or vertical airflow

7. Left-hand or right-hand arrangement (water coils only) Note: standard construction is for horizontal airflow, right hand bottom supply unless specified otherwise

EXAMPLE

Model number W - 8AW - 30.00 x 60.00 - 6 - 1, carbon steel headers, copper tubes with .020 wall, galvanized steel casing, NPT-M connections, right-hand bottom supply for horizontal airflow.

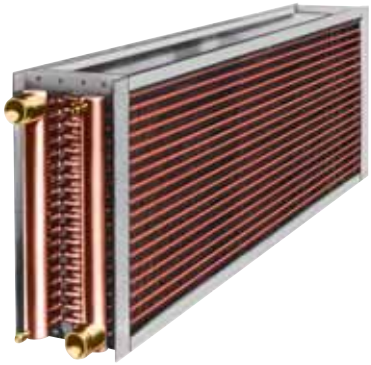


cooling plate fin coils

AEROFIN

Quality HVAC and Custom Engineered Heat Transfer Equipment for over 75 years

Visit our website today, www.aerofin.com



Energy Flow® Type W

Standard 5/8" OD tube coil for heating and cooling

Type W coils are the standard plate fin water coils, used for both heating and cooling applications. A typical latent and sensible cooling load requires from 4 to 12 rows of aluminum or copper plate fin surface. Standard construction includes threaded connections on carbon steel or non-ferrous supply and return headers. This coil type falls within the scope of ARI Standard 410 Certified Ratings.



Energy Flow® Type WD

Standard 5/8" OD tube coil with intermediate drain headers for heating and cooling

Similar to type W coils, type WD coils feature intermediate drain headers located on the rows between the supply and return headers. The intermediate drain headers enhance drainability and help coils drain more quickly and thoroughly. Coils should be installed pitched towards the piping connection end. This coil type falls within the scope of ARI Standard 410 Certified Ratings.



Energy Flow® Type WR

Cleanable 5/8" OD tube coil with dual removable headers for heating and cooling

Type WR coils differ from type W coils in that removable headers are supplied instead of pipe manifolds. This design allows access to the internal tubes for inspection and cleaning from either end of the coil. The headers are baffled to direct the fluid flow for numerous circuiting options, with vents and drains provided in the individual compartments. This coil type falls within the scope of ARI Standard 410 Certified Ratings.



Energy Flow® Type WRC

Cleanable 5/8" OD tube coil with a single removable header for heating and cooling

Similar to type WR coils, type WRC coils have a removable header on the piping connection end only. The opposite end has return bends, making the type WRC coil very useful in applications where access to the opposite end is limited. This coil type falls within the scope of ARI Standard 410 Certified Ratings.

Download dimensional drawings at www.aerofin.com

Aerofin Main Office and Manufacturing Facility—Lynchburg, Virginia
Regional Aerofin Offices throughout the United States and Canada

Call 1-800-AEROFIN (237-6346) for the Aerofin office nearest you.

Energy Flow® Type HW

Standard 5/8" OD tube coil for heating and cooling

Type HW coils are used with hot water, glycols, or steam and are available in 1 or 2 row configurations. Standard construction includes threaded connections on carbon steel or non-ferrous supply and return headers. This coil type falls within the scope of ARI Standard 410 Certified Ratings.



Energy Flow® Type HWP

5/8" OD tube duct booster coil for heating

Type HWP duct booster coils are used with hot water or steam, available in 1 or 2 row configurations. Threaded female connections are provided at the inlet and outlet tube locations in lieu of manifold headers. This coil type falls within the scope of ARI Standard 410 Certified Ratings.



Energy Flow® Type HD

5/8" OD tube non-freeze steam coil for heating

Type HD steam coils are designed for freezing air, heating applications. The non-freeze design is accomplished with inner-distributing tubes (tube within a tube construction). Outer finned tubes are 5/8" OD. Tubes are pitched for horizontal air flow. For vertical air flow, coil must be installed pitched towards the header end for positive condensate drainage. Type HD coils are available with 1 or 2 rows and are typically used for applications with low to moderate steam condensate loads. This coil type falls within the scope of ARI Standard 410 Certified Ratings.



Energy Flow® Type HM

1" OD tube non-freeze steam coil for heating

Similar to HD coils, type HM steam coils use 1" OD finned outer tubes. These coils feature tube within a tube construction, and tubes are pitched for horizontal airflow. For vertical airflow, this coil type must be installed pitched toward the header end for positive condensate drainage. Type HM coils are only available with 1 row and are used for applications with high steam condensate loads. This coil type falls within the scope of ARI Standard 410 Certified Ratings.



Download dimensional drawings at www.aerofin.com



spiral fin coils

Quality HVAC and Custom Engineered Heat Transfer Equipment for over 75 years

Visit our website today, www.aerofin.com

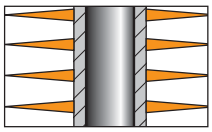
Aerofin® Coils

Aerofin® Spiral Fin water coils are used for heating, cooling and dehumidifying. In addition to water, a variety of other heating and cooling media can be used such as glycol and brine solutions and thermal oils. Standard heating and cooling coils using steam, water or glycol are designed for applications up to 400 degrees F and 250 psig, except Type R and RC coils which are for use at 100 psig and 160 degrees F or less. Custom engineered solutions are available to meet your unique application requirements.

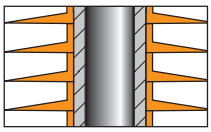
Construction Features

Standard Fin Designs

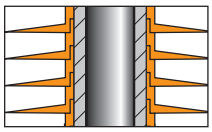
Aerofin® Spiral Fin coils feature fins of aluminum, copper, stainless steel or carbon steel. The fins are tension wound onto individual tubes to minimize thermal contact resistance and air friction. Tapered fin design provides maximum fin-to-tube contact for optimum heat transfer. Individually finned tubes allow unrestricted movement of the tubes, eliminating stress on the tube joints and fin to tube bond caused by thermal cycling.



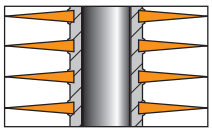
EDGEWOUND FINS
- Aluminum
- Tin-coated copper
- Tin-coated steel
- Tin-coated stainless steel



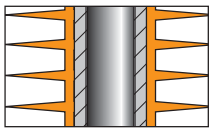
FOOTED "L" FINS
- Aluminum
- Copper
- Steel



OVERLAPPED "L" FINS
- Aluminum
- Copper



EMBEDDED FINS ***(for high temperature or extremely corrosive applications)***
- Aluminum
- Copper
- Steel
- Stainless steel
- 1" OD tubes only



EXTRUDED FINS
- Aluminum
- Copper

Tubes

All standard Aerofin® coils feature 5/8" OD or 1" OD seamless copper tubes conforming to ASTM specifications. Standard 5/8" OD tube wall thickness is 0.020 inches, except Type R and RC coils, which use 0.025 inch wall. Standard 1" OD tube wall thickness is 0.035 inches. Heavier wall tubing is available. Copper-nickel, aluminum, stainless steel and carbon steel are available material options.

Tube Joints

With the exception of type R and RC coils which feature roller-expanded tube joints, all joints for Aerofin® heating and cooling coils are brazed. All joints for steam heating coils are silver brazed. Aerofin brazers and welders are ASME qualified. Optional tube materials may require welded joints; call Aerofin for help in choosing the right materials for your needs.

Headers

With the exception of type R and RC coils, standard Aerofin® coils feature carbon steel or non-ferrous headers with threaded pipe connections (other materials are available). Water coils are supplied with vents and drains. Type R and RC cooling coils use carbon steel tube sheets and removable carbon steel headers with threaded connections.



Aerofin Main Office and Manufacturing Facility—Lynchburg, Virginia
Regional Aerofin Offices throughout the United States and Canada

Call 1-800-AEROFIN (237-6346) for the Aerofin office nearest you.

Casings

Aerofin® coil casings are heavy gauge galvanized steel designed for high strength, durability and are double flanged for coil stacking. Tube supports are provided on various centers to support the tubes and to provide extra support during handling and coil stacking. Coil casings are furnished without mounting holes unless required. Stainless steel, aluminum and other casing materials are available material options. Special configurations are available such as welding casings for airtight applications.

Circuits

With a wide selection of standard circuits, Aerofin can optimize fluid velocity, maximize heat transfer, and minimize fluid pressure loss. Special circuits can also be engineered to meet special performance requirements.

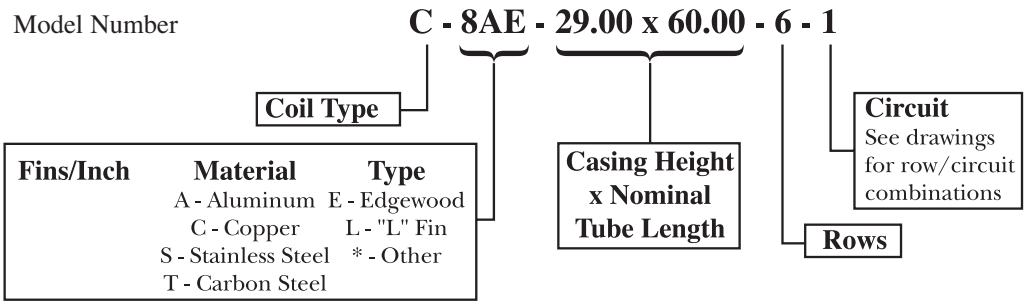
Testing

Aerofin's standard coil test is performed with 300 psig air under water. Type R and RC coils are tested hydrostatically to 150 psig. Higher design and test pressures are available for special applications.

Ordering Instructions

To place an order for an Aerofin® Spiral Fin coil, specify the following:

1. Model Number



2. Header material

3. Tube material and tube wall thickness

4. Casing material (specify if mounting holes are required)

5. Connection type (NPT-M, Victaulic, Butt Weld, or Flanged), specify if top or bottom supply

6. Horizontal or vertical airflow

7. Left-hand or right-hand arrangement (water coils only) Note: standard construction is for horizontal airflow, right hand bottom supply unless specified otherwise

EXAMPLE

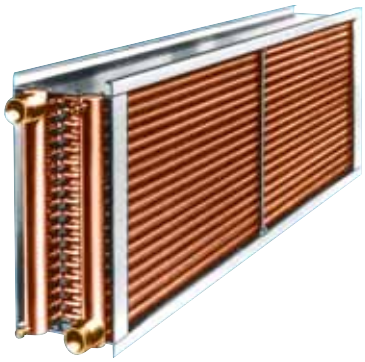
Model number C - 8AE - 29.00 x 60.00 - 6 - 1, carbon steel headers, copper tubes with .020 wall, galvanized steel casing, NPT-M connections, right-hand bottom supply for horizontal airflow.



cooling spiral fin coils

Quality HVAC and Custom Engineered Heat Transfer Equipment for over 75 years

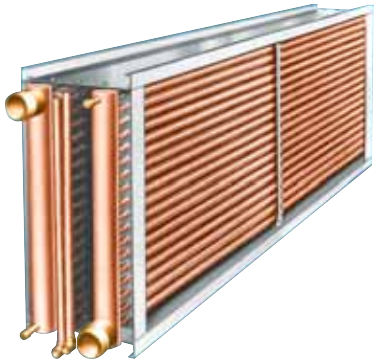
Visit our website today, www.aerofin.com



Aerofin® Type C

Standard 5/8" OD tube coil for heating and cooling

Type C coils are the standard spiral fin water coils, used for both heating and cooling applications. A typical latent and sensible cooling load requires from 4 to 12 rows of aluminum or copper fin surface. Standard construction includes threaded connections on carbon steel or non-ferrous supply and return headers. This coil type falls within the scope of ARI Standard 410 Certified Ratings.



Aerofin® Type CD

Standard 5/8" OD tube coil with intermediate drain headers for heating and cooling

Similar to type C coils, type CD coils feature intermediate drain headers located on the rows between the supply and return headers. The intermediate drain headers enhance drainability and help coils drain more quickly and thoroughly. Coils should be installed pitched towards the piping connection end. This coil type falls within the scope of ARI Standard 410 Certified Ratings.



Aerofin® Type R

Cleanable 5/8" OD tube coil with dual removable headers for heating and cooling

Type R coils differ from type C coils in that removable headers are supplied instead of pipe manifolds. This design allows access to the internal tubes for inspection and cleaning from either end of the coil. The headers are internally baffled to direct the fluid flow for numerous circuiting options, with vents and drains provided in the individual compartments. This coil type falls within the scope of ARI Standard 410 Certified Ratings.



Aerofin® Type RC

Cleanable 5/8" OD tube coil with a single removable header for heating and cooling

Similar to type R coils, type RC coils have a removable header on the piping connection end only. The opposite end has return bends, making the type RC coil very useful in applications where access to the opposite end is limited. This coil type falls within the scope of ARI Standard 410 Certified Ratings.

Download dimensional drawings at www.aerofin.com



Aerofin Main Office and Manufacturing Facility—Lynchburg, Virginia
Regional Aerofin Offices throughout the United States and Canada

Call 1-800-AEROFIN (237-6346) for the Aerofin office nearest you.

Aerofin® Type CP (P-Fin)

Standard 5/8" OD tube coil for heating and cooling

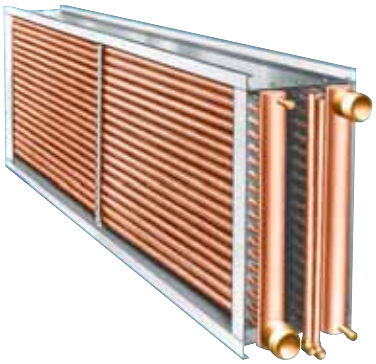
Similar to type C coils, type CP coils feature 1/2" high fins which deliver enhanced heat transfer in a given face area with extremely low air friction. This fin height also minimizes moisture carryover. Standard construction includes threaded connections on carbon steel or non-ferrous supply and return headers. This coil type falls within the scope of ARI Standard 410 Certified Ratings.



Aerofin® Type CDP (P-Fin)

Standard 5/8" OD tube coil with intermediate drain headers for heating and cooling

Similar to type CP coils, type CDP coils feature intermediate drain headers located on the rows between the supply and return headers. The intermediate drain headers enhance drainability and help coils drain more quickly and thoroughly. Coils should be installed pitched towards the piping connection end. This coil type falls within the scope of ARI Standard 410 Certified Ratings.



Aerofin® Type RP (P-Fin)

Cleanable 5/8" OD tube coil with dual removable headers for heating and cooling

Similar to type R coils, type RP coils feature 1/2" high fins which deliver enhanced heat transfer in a given face area with extremely low air friction. This fin height also minimizes moisture carryover. Removable headers allow access to the internal tubes for inspection and cleaning from either end of the coil. The headers are internally baffled to direct the fluid flow for numerous circuiting options, with vents and drains provided in the individual compartments. This coil type falls within the scope of ARI Standard 410 Certified Ratings.



Aerofin® Type RCP (P-Fin)

Cleanable 5/8" OD tube coil with a single removable header for heating and cooling

Similar to type RP coils, type RCP coils have a removable header only on the piping connection end. The opposite end has return bends, making the type RCP coil very useful in applications where access to the opposite end is limited. This coil type falls within the scope of ARI Standard 410 Certified Ratings.

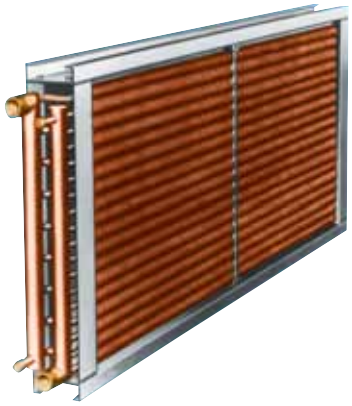


Download dimensional drawings at www.aerofin.com



Quality HVAC and Custom Engineered Heat Transfer Equipment for over 75 years

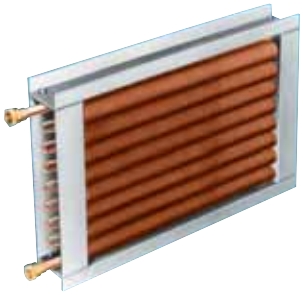
Visit our website today, www.aerofin.com



Aerofin® Type CH

Standard 5/8" OD tube coil for heating and cooling

Type CH coils are used with hot water, glycols, or steam and are available in 1 or 2 row configurations. Standard construction is carbon steel supply and return headers and threaded connections.This coil type falls within the scope of ARI Standard 410 Certified Ratings.



Aerofin® Type MP

5/8" OD tube duct booster coil for heating

Type MP duct booster coils are used with hot water or steam, available in 1 or 2 row configurations. Threaded female connections are provided at the inlet and outlet tube locations in lieu of manifold headers.This coil type falls within the scope of ARI Standard 410 Certified Ratings.



Aerofin® Type FNF

5/8" OD tube non-freeze steam coil for heating

Type FNF steam coils are designed for freezing air, heating applications. The non-freeze design is accomplished with inner-distributing tubes (tube within a tube construction). Outer finned tubes are 5/8" OD. Tubes are pitched in two directions within the casing for positive condensate drainage in either horizontal airflow or vertical airflow mounting positions. Type FNF coils are available with 1 or 2 rows and are typically used for applications with low to moderate steam condensate loads. This coil type falls within the scope of ARI Standard 410 Certified Ratings.



Aerofin® Type ANF

1" OD tube non-freeze steam coil for heating

Similar to FNF coils, type ANF steam coils use 1" OD finned outer tubes. This coil type features tube within a tube construction, and tubes pitched in two directions for horizontal or vertical airflow. Type ANF coils are available with 1 or 2 rows and are used for applications with high steam condensate loads. This coil type falls within the scope of ARI Standard 410 Certified Ratings.

Download dimensional drawings at www.aerofin.com

Aerofin Main Office and Manufacturing Facility—Lynchburg, Virginia
Regional Aerofin Offices throughout the United States and Canada

Call 1-800-AEROFIN (237-6346) for the Aerofin office nearest you.

Aerofin® Type CHP (P-Fin)

5/8" OD tube hot water coil with 1/2" high fins for heating



Type CHP coils are used with hot water, glycols, or steam and are available in 1 or 2 row configurations. Standard construction is carbon steel supply and return headers and threaded connections. 1/2" high fins deliver enhanced heat transfer in a given face area with extremely low air friction. This coil type falls within the scope of ARI Standard 410 Certified Ratings.

Aerofin® Type CHS

5/8" OD tube steam coil for heating



Type CHS heating coils are specially designed steam coils used with entering air temperatures above freezing, and are available in a 2 row configuration. Standard construction is carbon steel supply and return headers, return bends and threaded connections. Center supply connection ensures even steam distribution. This coil type falls within the scope of ARI Standard 410 Certified Ratings.

Aerofin® Type FLEX

5/8" OD tube steam coil for heating with flexible tubes for thermal expansion and contraction



Type FLEX coils are for demanding applications where frequent cycling occurs due to intermittent operation. The “S” shaped tubes absorb thermal expansion and contraction without causing undue joint stress. Standard construction is carbon steel supply and return headers (opposite end) and threaded connections. Type FLEX coils are available in 1 or 2 rows. They are typically used for applications with low to moderate steam condensate loads. This coil type falls within the scope of ARI Standard 410 Certified Ratings.

Aerofin® Type AFLEX

1" OD tube steam coil for heating with flexible tubes for thermal expansion and contraction

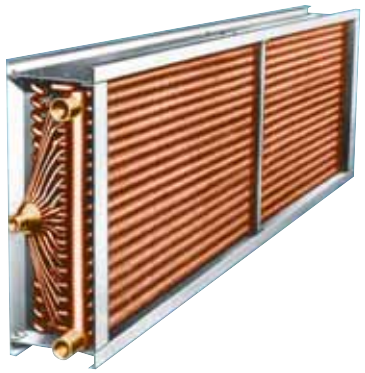


Similar to Type FLEX coils, Type AFLEX coils use 1" OD finned tubes. The “S” shaped tubes absorb thermal expansion and contraction without causing undue joint stress. Standard construction is carbon steel supply and return headers (opposite end) and threaded connections. Type AFLEX coils are available in 1 or 2 rows and are typically used for applications with high steam condensate loads.



Quality HVAC and Custom Engineered Heat Transfer Equipment for over 75 years

Visit our website today, www.aerofin.com



Aerofin® Type DP

5/8" OD tube coil for cooling with refrigerant.

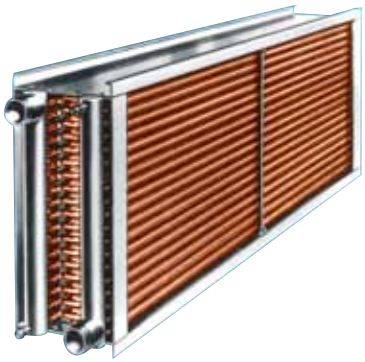
Type DP coils are direct expansion type (using refrigerant) which employ distributors that disperse refrigerant equally to all multiple circuits. Parallel/reverse flow ensures superheat. Standard construction is non-ferrous suction header(s), return bends and sweat connections. Equivalent plate fin coil is denoted as Type E.



Aerofin® Type ASH

1" OD outer tubes and 5/8" OD inner distributing tubes for boiler air preheating, removable core, same end connections.

Type ASH coils are used for heating with steam and feature a “removable core” design. This enables the coil to become an easily replaceable unit contained in a permanently mounted frame. Standard construction is carbon steel or stainless steel header, carbon steel or stainless steel tubes, embedded fins, welded joints, plugged tube ends and same end connections.



Aerofin® Type LRB

1" OD tube coil for heating and cooling with large volumes of heating or cooling medium.

Similar to Type C coils, Type LRB coils feature 1" OD tubes. Type LRB coils are for heating and cooling using water, steam or other heat transfer liquid. Although generally used for boiler air preheating, this coil readily handles large quantities of heating or cooling fluid. High temperature and pressure designs are available with special sizes and configurations and materials to meet specific requirements.



Aerofin® Type PDRC and PDRP

1" OD tube coil for heating and cooling with large volumes of liquid or steam, cleanable tubes.

Type PDRC and PDRP coils feature 1" OD tubes and removable cover plate (PDRC) or plugs (PDRP). This design allows access to the inside of the tubes for inspection and cleaning. Compatible with hot water, glycols, oils, gas, and steam, this coil is available in special high pressure/temperature designs (up to 1500 psig).

Download dimensional drawings at www.aerofin.com

Aerofin Main Office and Manufacturing Facility—Lynchburg, Virginia
Regional Aerofin Offices throughout the United States and Canada

Call 1-800-AEROFIN (237-6346) for the Aerofin office nearest you.

Aerofin® Process Gas Coolers/Heaters

Transition unit for cooling or heating process gas.

These units are specifically designed for the temperatures, pressures and environments to which they will be exposed. The gastight removable core allows heat exchange elements to be readily cleaned, inspected or replaced without the need to replace the entire unit. Process Gas Coolers/Heaters are provided with transitions on both ends to mate to process piping. Aerofin designs each transition to properly distribute the air across the finned tube bundle and minimize pressure drop.



Aerofin® Transformer Oil Coolers

Fan/coil unit specifically designed to cool transformer oil.

Transformer Oil Coolers are specifically designed for the transformer make and model, and the operating conditions. Each cooler unit consists of a coil and cabinet containing one or more direct drive propeller type fans. Standard construction is copper tubes, aluminum or copper fins, roller expanded tube joints, welded carbon steel box headers and threaded connections. Turbulators are used inside the tubes to enhance heat transfer when required.



Aerofin® Fan/Coil Units

Fan and Coil units for cooling liquid with ambient air.

Fan/Coil Units consist of one or more heavy-duty coils fitted with cabinet housing fans for cooling water, glycols, oils, and other fluids. Typical applications are dry cooling tower cooling, engine jacket water cooling and process water cooling. Fans, motors and coils are selected specifically for the environment in which they are to operate.



Aerofin® Nuclear, Safety Related Coils

Nuclear, Safety Related and Non-Safety Related coils available with various ASME Stamps.

Aerofin maintains essential quality assurance controls for all Safety Related (and Non-Safety Related) equipment requirements including 10CFR50-Appendix B, ASME Section III (Class 2 or 3), and ASME Section VIII, Division 1. Aerofin holds the ASME "N" and "NPT" certificates for ASME Section III, Class 2 and Class 3 pressure vessels, as well as a Certificate of Authorization to U-stamp ASME Section VIII, Division 1 pressure vessels. Coils are available in virtually any commercial alloy with heavy duty seismic construction and total access to internals for maintenance and inspection.



Quality HVAC and Custom Engineered Heat Transfer Equipment for over 75 years

Visit our website today, www.aerofin.com

Other Coils

Aerofin Corporation, a market leader in the heat transfer coil industry, offers a wide variety of standard and special coils. Over the years, Aerofin has responded to industry needs with new products that suit specific applications, providing benefits unsurpassed in other configurations.

Examples of specially designed coil types are briefly described below. Aerofin's highly trained engineers can help you select the most efficient and cost effective coil type for your application.

Aeromix® Integral Face & Bypass Heating Coils

Aerofin's Aeromix® coils feature Integral Face and Bypass design. Because the leaving air temperature from the Aeromix® is controlled by directing the airflow across or around the finned tubes, modulation of the steam or fluid is not necessary. This feature maintains adequate steam pressure or fluid velocity for prevention of freeze-up. The Aeromix® provides even air temperature and constant air volume with minimal temperature override.

Typical applications include HVAC air preheat, institutional air make-up and roof-mounted penthouse make-up air. This coil type falls within the scope of ARI Standard 410 Certified Ratings.



Vertical tube model



Horizontal tube model

There are two distinct Aeromix® coil types available, most easily differentiated by the tube orientation. The vertical tube Aeromix® coil is a copper spiral fin design used in larger face area applications, up to 88 square feet. The smaller horizontal tube coil is an aluminum plate fin design used in applications up to 24 square feet in face area.

Contact Aerofin for a complete Aeromix® catalog.

Aerofin® Universal Casing Heating and Cooling Coils

Universal casing coils provide maximum fin surface area in a given space. Our special casing profile shape accommodates more tubes and more fins, yielding more heat transfer capacity.

Aerofin welcomes new and different coil design challenges. Many long-term relationships have resulted from Aerofin's desire to support customers with almost any type of heat transfer coil for most any application. Aerofin is willing and equipped to help you. Call today for your heat exchanger needs.



Aerofin Main Office and Manufacturing Facility—Lynchburg, Virginia
Regional Aerofin Offices throughout the United States and Canada

Call 1-800-AEROFIN (237-6346) for the Aerofin office nearest you.

Cross Reference Table for Coil Type

Water Coils—Cooling

5/8" OD tubes, "P" type designation indicates 1/2" high fins

Spiral Fin Coil Types	Features	Plate Fin Coil Types
C & CP	Chilled water coils	W
R & RP	Chilled water coils, removable headers both ends	WR
CD & CDP	Chilled water coils, intermediate drain headers	WD
RC & RCP	Chilled water coils, removable header connection end only	WRC

Water Coils—Heating

5/8" OD tubes

Spiral Fin Coil Types	Features	Plate Fin Coil Types
CH & CHP	Hot water coils, orificed tubes	HW
MP	Serpentine water coils	HWP
AMIX	Aeromix® integral face & bypass water coils, vertical tubes	VMW
N/A	Aeromix® integral face & bypass water coils, horizontal tubes	HMW

Steam Coils—Heating

5/8" or 1" OD tubes

Spiral Fin Coil Types	Features	Plate Fin Coil Types
CHS	Steam coils, orificed tubes	HHS
MPS	Serpentine steam coils	HSP
NW	Narrow width steam coil, opposite end connections	HB
FLEX	5/8" Flexi-tube steam coil, opposite end connections	N/A
AFLEX	1" Flexi-tube steam coil, opposite end connections	N/A

Steam Coils—Heating

5/8" OD outer tubes, 3/8" OD inner tubes

Spiral Fin Coil Types	Features	Plate Fin Coil Types
FNF	Steam coils, inner distributing tubes	HD
FIDT	Steam coils, inner distributing tubes, opposite end connections	HSP
AMIX	Aeromix® integral face & bypass steam coils, inner distributing tubes, vertical tubes	VMX
N/A	Aeromix® integral face & bypass steam coils, return bends (no inner tubes), horizontal tubes	HMX

Steam Coils—Heating

1" OD outer tubes, 5/8" OD inner tubes

Spiral Fin Coil Types	Features	Plate Fin Coil Types
ANF	Steam coils, inner distributing tubes	HM
AIDT	Steam coils, inner distributing tubes, opposite end connections	HMDT

AEROFIN

Quality HVAC and Custom Engineered Heat Transfer Equipment for over 75 years

Visit our website today, www.aerofin.com



Aerofin Online

Aerofin Corporation maintains a comprehensive website that provides history about our company, drawing downloads, coil selection program updates, employment information, and other general information.

Most of the information contained in this catalog can also be accessed through the website. We are continually adding updates and maintaining the site to have the most useful information available to anyone at any time.

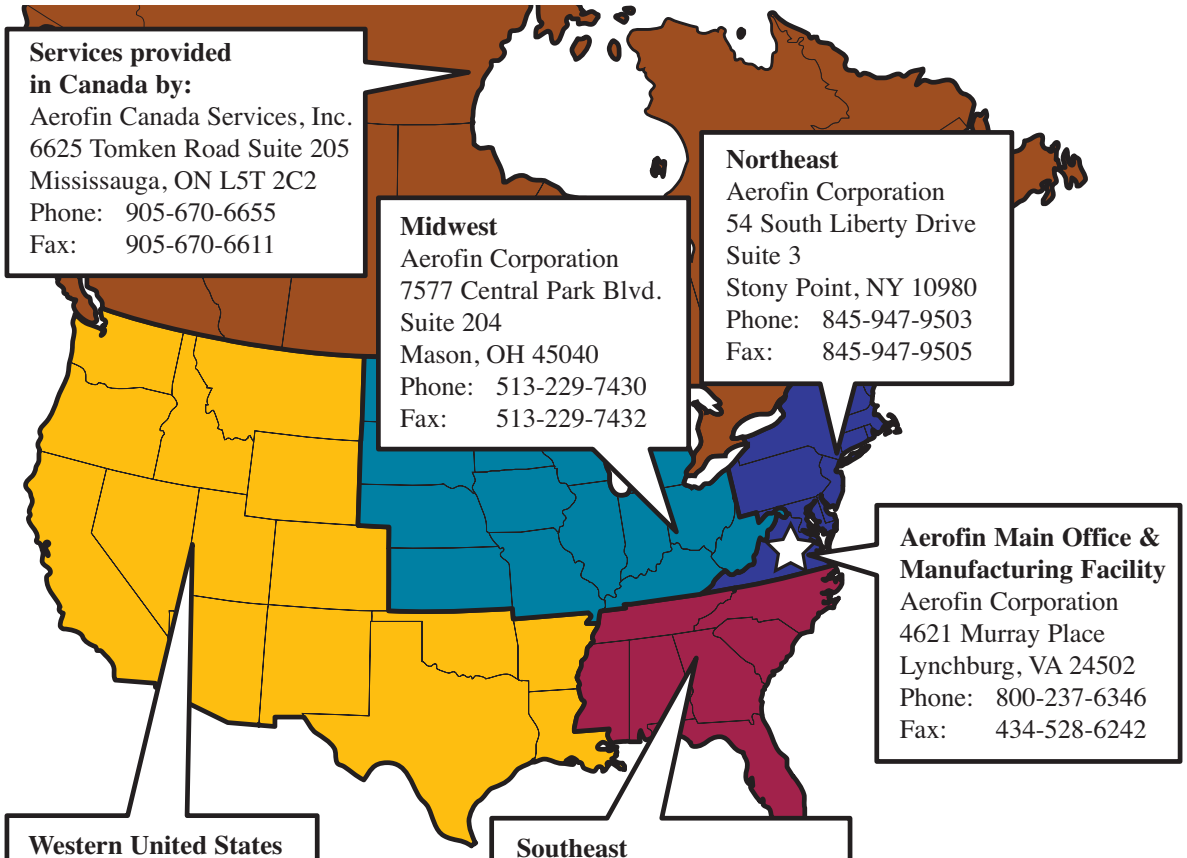
Comments about www.aerofin.com can be sent to the webmaster from the site. Sales inquiries are also promptly answered via sales@aerofin.com.

www.aerofin.com

Aerofin Main Office and Manufacturing Facility—Lynchburg, Virginia
Regional Aerofin Offices throughout the United States and Canada

Call 1-800-AEROFIN (237-6346) for the Aerofin office nearest you.

Working closely with our main office and a network of trained independent sales representatives, personnel in our Regional Sales Offices provide custom engineered solutions to unique requirements. Call 1-800-AEROFIN (237-6346) for the Aerofin Regional Office nearest you.



Services provided in Canada by:
Aerofin Canada Services, Inc.
6625 Tomken Road Suite 205
Mississauga, ON L5T 2C2
Phone: 905-670-6655
Fax: 905-670-6611

Midwest
Aerofin Corporation
7577 Central Park Blvd.
Suite 204
Mason, OH 45040
Phone: 513-229-7430
Fax: 513-229-7432

Northeast
Aerofin Corporation
54 South Liberty Drive
Suite 3
Stony Point, NY 10980
Phone: 845-947-9503
Fax: 845-947-9505

Aerofin Main Office & Manufacturing Facility
Aerofin Corporation
4621 Murray Place
Lynchburg, VA 24502
Phone: 800-237-6346
Fax: 434-528-6242

Western United States
Contact Aerofin
Main Office
Phone: 800-237-6346
Fax: 434-528-6242

Southeast
Aerofin Corporation
5041 Dallas Highway
#700
Powder Springs, GA 30127
Phone: 678-355-1520
Fax: 678-355-1590

or send email inquiries to sales@aerofin.com



Main Office and Plant

Aerofin Corporation
4621 Murray Place
Lynchburg, Virginia 24502
P.O. Box 10819
Lynchburg, Virginia 24506
Phone: 434-845-7081
Fax: 434-528-6242

www.aerofin.com

Phone Toll Free: 1-800-AEROFIN (237-6346)

FM Approvals
Quality System Registration

In addition to ASME and NBBI accreditations, Aerofin also holds nationwide Canadian registrations such as CSA B-51 Class H fittings on all standard projects.

ISO 9001 Registered Company
sira Certification Service
UKAS QUALITY MANAGEMENT

© 2003 BY AEROFIN CORPORATION LYNCHBURG, VA. PRINTED USA

CATALOG NO GPROD03

SPIROVENT® DIRT





AIR ELIMINATORS
DIRT SEPARATORS
STANDARD VELOCITY

SPIROTHERM

THE ULTIMATE IN DISTRIBUTION EFFICIENCY

AIR- AND DIRT-FREE SYSTEM WATER THROUGH A SINGLE UNIT

The life and efficiency of a heating or cooling system are greatly dependent on the quality of the system water. Air and dirt problems cause frequent breakdowns and increased customer complaints. Corrosion, cavitation, and component wear are consequences of air-saturated, dirty water.

Recurring problems and increased maintenance results in unnecessary costs and dissatisfied owners.

There is a solution!

A system without air and dirt is possible! There is a unique dual-purpose device that will remove air and dirt down to the smallest particle, keeping the system free from air and dirt, permanently. It requires little maintenance, and works without strainers or filters. Less maintenance, fewer costs, satisfied owners!

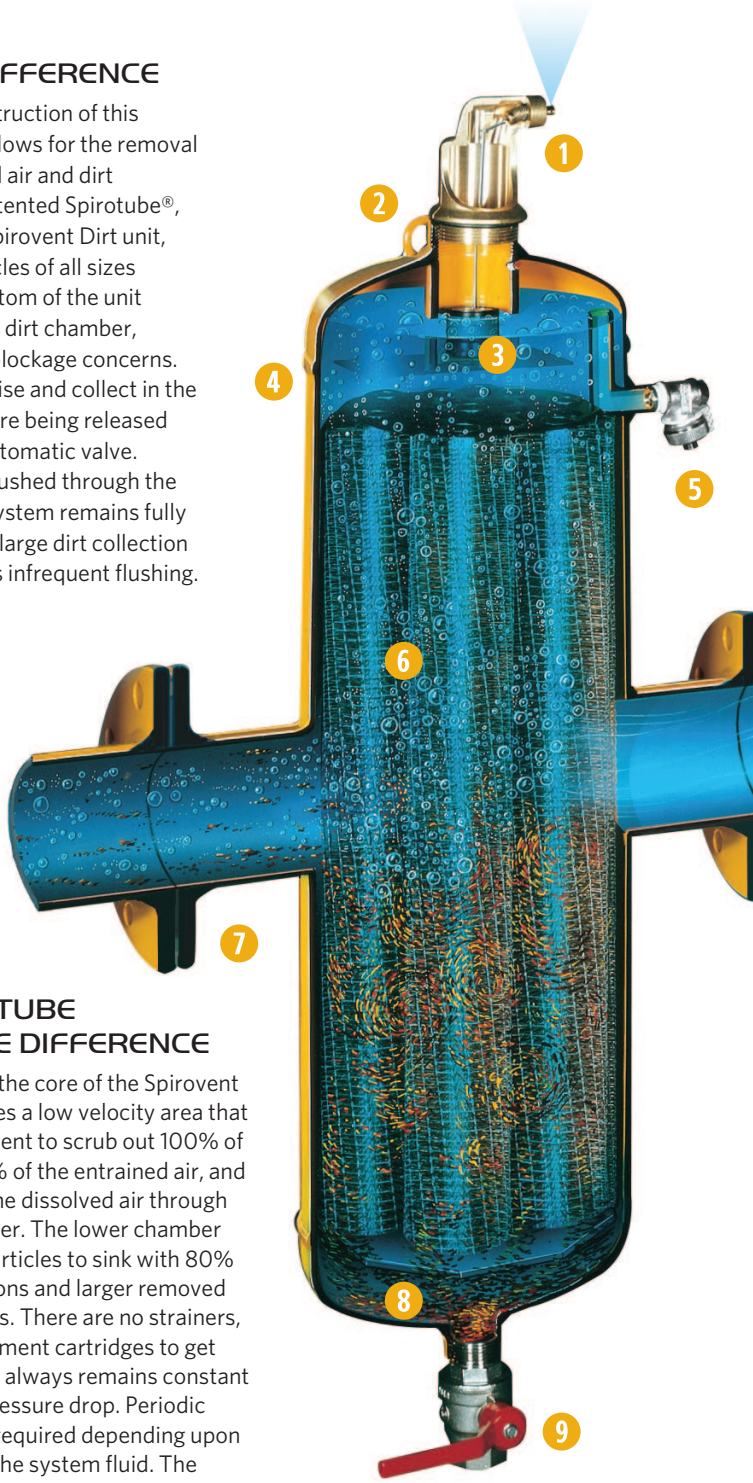
The name:

SPIROVENT DIRT



THE KEY DIFFERENCE

The unique construction of this combined unit allows for the removal of both entrained air and dirt particles. The patented Spirotube®, the core of the Spirovent Dirt unit, causes dirt particles of all sizes to sink to the bottom of the unit and collect in the dirt chamber, eliminating any blockage concerns. The air bubbles rise and collect in the air chamber before being released via an integral automatic valve. The dirt can be flushed through the drain while the system remains fully operational. The large dirt collection chamber ensures infrequent flushing.



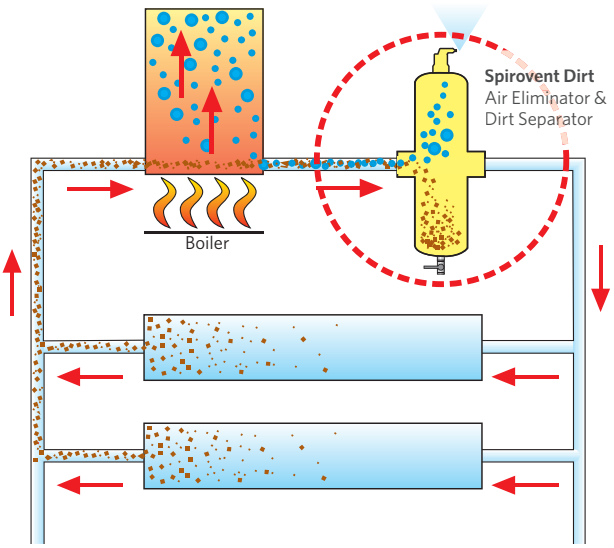
THE SPIROTUBE MAKES THE DIFFERENCE

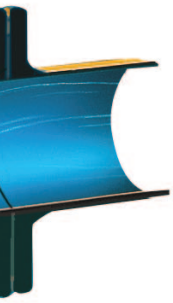
The Spirotube is the core of the Spirovent Dirt unit. It creates a low velocity area that allows the Spirovent to scrub out 100% of the free air, 100% of the entrained air, and up to 99.6% of the dissolved air through the upper chamber. The lower chamber allows the dirt particles to sink with 80% of those 30 microns and larger removed within 100 passes. There are no strainers, filters, or replacement cartridges to get clogged and flow always remains constant without a high pressure drop. Periodic blow downs are required depending upon the condition of the system fluid. The result: increased component life and heat transfer efficiency; decreased oxygen-based corrosion and pump cavitation; the elimination of air related noises such as gurgling and cascading; and the need for continual "routine" maintenance to vent, bleed, and purge.

THE ULTIMATE IN DISTRIBUTION EFFICIENCY

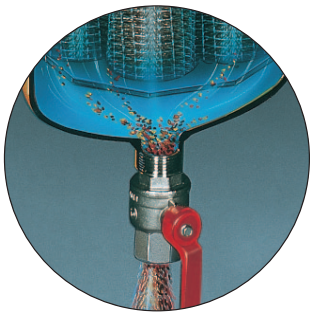
ADVANTAGES TO THE SPECIFIER, INSTALLER AND OWNER

- No bypass, isolating valves or replacement filters to clog and reduce flow
- Dirt can be flushed while the system is in full operation.
- Quiet operation
- Minimum pressure drop; always constant
- Increased component life
- Reduced oxygen-based corrosion and pump cavitation
- Provides optimum heat transfer
- Optional removable head for bundle inspection





1. The automatic air vent is guaranteed not to leak and can only be closed by the installer for a pressure test.
2. Lifting eyes make installation easy.
3. The air chamber has been designed so that dirt cannot reach the valve.
4. Welded steel construction guarantees long life.
5. Valve for releasing large amounts of air during filling and for skimming off floating dirt.
6. The unique Spirotube is the core of the Spirovent. Designed to trap the smallest microbubble and microscopic dirt particle, yet it offers little resistance to flow.
7. Threaded or flanged connections available.Threaded 2"- 4" (not available on units with removable head) ; Flanged 2"and up.
8. Large capacity collection chamber reduces the need for frequent draining.
9. Drain valve for flushing out the dirt.



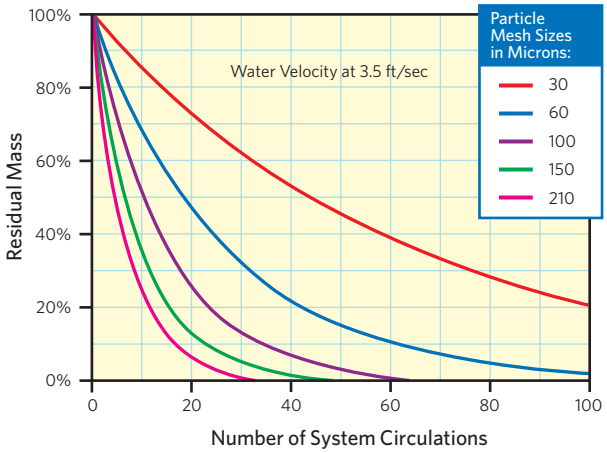
When the drain valve is opened the system pressure flushes out the collected dirt. This only takes a few seconds.

INSTALL THE SPIROVENT DIRT FOR OPTIMUM PERFORMANCE

Ideal placement of a Spirovent unit is based on microbubble separation and Henry's Law. Simply put, Henry's Law states that air is released from water as the temperature increases or the pressure decreases*. For this reason, the Spirovent is typically installed in the hottest point in the system. For a heating installation, this is in the supply from the boiler. In a chilled water circuit, the warmest point is in the return to the chiller.

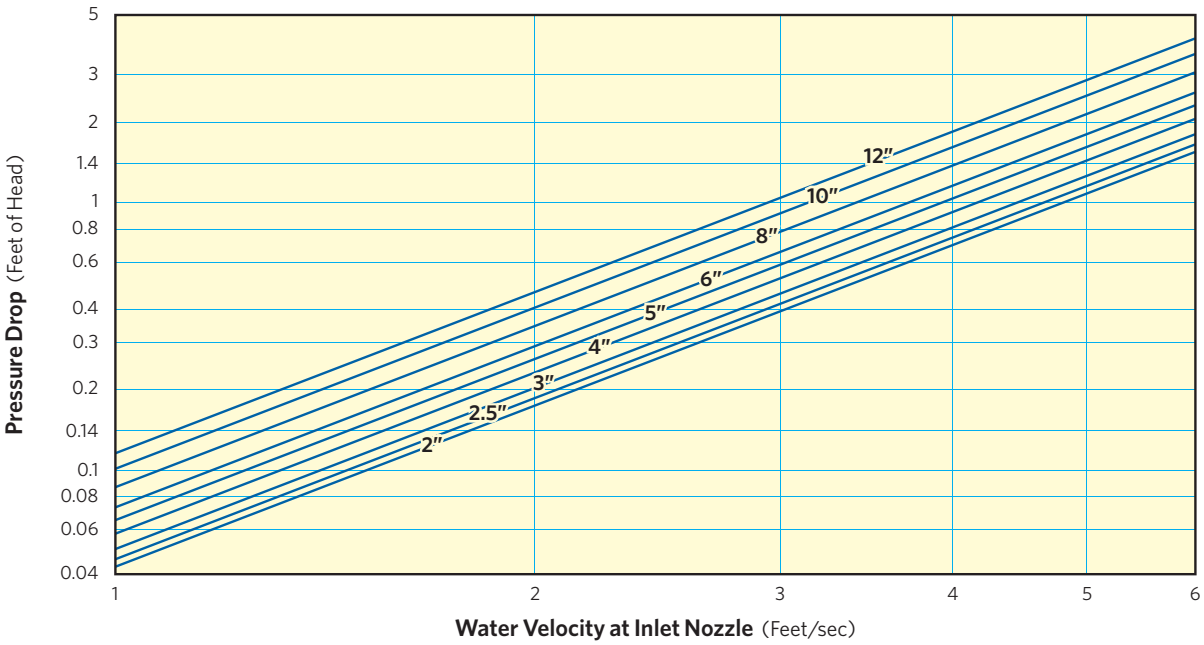
*For more detailed technical information, ask about our Spirotism booklet .

DIRT SEPARATION EFFICIENCY



SPIROVENT® DIRT

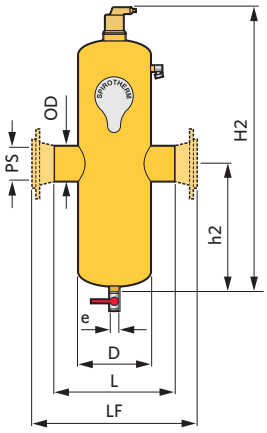
PRESSURE DROP

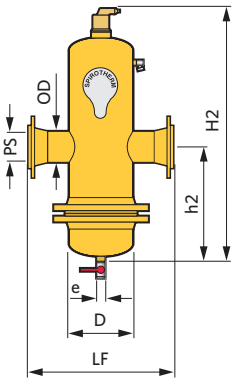


TECHNICAL SPECIFICATIONS

SPIROVENT SENIOR

DIRT Part Number DRAIN Part Number		VDT200 VDN200	VDT250 VDN250	VDT300 VDN300	VDT400 VDN400	VDT500 VDN500	VDT600 VDN600	VDT800 VDN800	VDT1000 VDN1000	VDT1200 VDN1200
Pipe Size	Inch	2	2.5	3	4	5	6	8	10	12
O.D.	Inch	2.375	3	3.5	4.5	5.5	6.625	8.625	10.75	12.75
Thread	NPT	2	2.5	3	4	—	—	—	—	—
D	Inch	6.3	6.3	8.6	8.6	12.8	12.8	16.0	20.0	24.0
H2	Inch	25.3	25.3	31.4	31.4	41.7	41.7	51.8	67.5	79.7
h2	Inch	10.4	10.4	13.6	13.6	18.9	18.9	24.2	32.1	38.2
L (Threaded)	Inch	10.2	10.2	14.6	14.6	—	—	—	—	—
LF (Flanged)	Inch	15.2	15.7	20.2	20.6	27.7	27.7	33.6	37.5	42.5
e	Inch	1	1	1	1	1	1	1	1	1
Volume	Gal.	1.8	1.8	6.6	6.6	19.8	19.8	39.6	79.3	132.1
Weight: Dirt										
Threaded	Lbs.	55	56	105	120	—	—	—	—	—
Flanged	Lbs.	66	75	139	149	238	260	436	718	1250
Weight: Drain**										
Flanged	Lbs.	107	150	202	233	325	355	686	990	1483
Recom. Flow*	GPM	60	90	140	240	370	540	940	1470	2090





*Approximately 6 ft. per second inlet velocity.

**Spirovent Drain models are available with flanged connections only and feature a removable lower head to facilitate cleaning.

All Spirovents fabricated and stamped in accordance with ASME Section VIII, Division 1 for unfired pressure vessels.
Standard rating is 150 psi at 270°F. Consult local sales office for special requirements.
Custom dimensions available for space limitations.
Refer to High Velocity models for higher flows and web site Submittal Data for models up to 36″.

SPIROTHERM
A SPIRO ENTERPRISES COMPANY

Spirotherm, Inc.
25 N. Brandon Drive
Glendale Heights, IL 60139

Tel.: 630-307-2662
Fax: 630-307-3773
www.spirotherm.com
E-mail: info@spirotherm.com

©2014 Spirotherm, Inc.

ESM 26:
Condensing Unit Replacement

ESM Overview

Ameresco proposes to replace the existing outdoor condensing unit serving the Manross Library with a new condensing unit. The unit is nearing the end of its useful life, and numerous service and repairs have been made to maintain the unit. The new unit will help improve reliability and alleviate expensive repairs as well as improving efficiency.



Figure 26.1: Ameresco proposes to replace the condensing unit serving the Manross Library with a new equivalent high efficiency unit.

ESM Detail

Existing System

The Manross Library has a 20-ton condensing unit (Trane MN: RAUA-2006-MB) located outside which provides cooling to two Trane AHUs. Personnel report that the unit has received numerous repairs, leaks coolant, and is near the end of its useful life.

Proposed System

Ameresco proposes to install a new Trane RAUJC20EB (or approved equivalent) condensing unit on the existing outdoor location, sized for the appropriate load. New refrigerant and piping will be used to supply the new AHU's proposed in ESM 27.

The scope of work includes all mechanical, electrical and demolition work required to install a new air-cooled condensing unit located outside the Manross Library.

Demolition:

- Remove existing Trane condensing unit (CU) located outside behind the Manross Library.
- Disconnect electric power at the unit circuit breaker; verify power is off at the CU's disconnect;
- Remove existing disconnect, leaving the electric feeders in place; remove nameplate from the disconnect and set aside for reinstallation on new disconnect
- Remove and reclaim refrigerant as per EPA guideline
- Disconnect and remove all existing refrigerant lines, including underground lines.

New Work:

- Provide and install one (1) new 20 ton air-cooled condensing unit (Trane RAUJC20EB) or equal.

"Page content is subject to Confidentiality Restrictions"

- CUs' refrigerant shall be an HFC, R410A, or equal
- Furnish and install new suction and liquid lines
- Furnish and install 1 inch thickness new closed cell, elastomeric insulation on the suction line, Armaflex Armacell, or equal. Expose insulation shall be covered with 2 coats of paint manufactured specifically for covering elastomeric insulation, WB Armaflex or equal
- Furnish and install new electric disconnect for CU. Disconnect shall be approved for outdoor use
- Wire CU utilizing flexible waterproof outdoor conduit
- Furnish and install new copper suction and liquid lines, sized equal to existing
- Furnish and install new sight glass and filter drier charge CU and verify proper operation

Exclusions:

The measure assumes the following:

- Work shall occur during normal business hours.
- Any abatement or remediation of asbestos or other hazardous materials beyond that specifically called out to be included in the scope of work above is excluded from the scope and cost of the proposed work.

>Equipment, Design and Construction Documentation

Equipment will be identified in submittals provided for approval prior to procurement. Documents will be submitted to the facilities department for their review and comment. Upon approval, these will constitute the construction documents. Upon completion of the construction phase, the documents will be revised as needed to reflect "As-Built" conditions and submitted in multiple for record.

>Impact on Facility Operations and Performance

Energy savings will be realized by the improved efficiency of the new condensing unit and reduced maintenance cost requirements.

"Page content is subject to Confidentiality Restrictions"

Appendix for ESM 26: Condensing Unit Replacement

I. Energy Savings Calculations

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

City of Bristol, CT	
Energy and Demand Savings Summary	
Measure ID:	**26**
Measure Name:	**Condensing Unit Replacement**
Measure Location:	
Engineers:	

Site Name:		**Manross_Library**	**Summary**
Item	Units	Savings	
Electricity			
Energy On-Peak	kWh	1,914	1,914
Energy Off-Peak	kWh	4,895	4,895
Energy Total	kWh	6,809	6,809
Demand On-Peak, Monthly	kW	1.8	1.8
Demand On-Peak, Annual	kW	7.4	7.4
Demand Off-Peak, Monthly	kW		0.0
Demand Off-Peak, Annual	kW		0.0
Fossil Fuel			0
Natural Gas (NG)	CCF		0
Liquid Propane Gas (LPG)	Gallons		0
Steam	Mlbs		0
Fuel Oil, #2	Gallons		0
Fuel Oil, #4	Gallons		0
Fuel Oil, #6	Gallons		0
Max Daily Demand (Natural Gas)	CCF (Demand)		0
Water			0
Water Savings	CF		0
Sewer			0
Sewer Savings	CF		0

City of Bristol, CT
Manross Library
Condensing Unit Replacement

TMY-3 Weather Data for Hartford, CT								Existing										Proposed				Savings		
Amb. Temp Bin deg. F	Ave Temp deg. F	M.C.W.B deg. F	M.C. Enthalpy Btu/lbma	01-08 Hours	09-16 Hours	17-24 Hours	Total Bin Hours	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ. Cooling Load (MBH)	UnOcc. Cooling Load (MBH)	Existing Efficiency (EER)	On-Peak Electric Cooling Demand (kW)	Peak Electric Cooling Consump. (kWh)	Off-Peak Electric Cooling Consump. (kWh)	Proposed Efficiency (EER)	On-Peak Electric Cooling Demand (kW)	Peak Electric Cooling Consump. (kWh)	Off-Peak Electric Cooling Consump. (kWh)	Peak Electric Cooling Savings (kWh)	Off-Peak Electric Cooling Savings (kWh)	Average On-Peak Cooling/Heating Demand Savings (kW)
A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**		**O**	**P**	**Q**		**R**	**S**	**T**	**U**	**V**	**AA**
Cooling																								
105 to 110	107.5	0.0	0.0	0	0	0	0	0	0	0	0	212	104	7.5	28	0	0	11.8	18	0	0	0	0	0.0
100 to 105	102.5	0.0	0.0	0	0	0	0	0	0	0	0	190	93	7.5	25	0	0	11.8	16	0	0	0	0	0.0
95 to 100	97.5	75.8	39.4	0	4	0	4	1	0	1	2	169	83	7.5	23	22	45	11.8	14	14	21	8	23	4.1
90 to 95	92.5	74.9	38.7	0	34	9	43	10	0	10	23	148	73	7.5	20	202	420	11.8	13	129	193	73	227	3.6
85 to 90	87.5	72.8	36.9	0	105	22	127	30	0	30	67	127	62	7.9	16	488	1,014	12.9	10	298	468	190	546	3.1
80 to 85	82.5	69.0	33.5	4	247	105	356	85	0	85	186	106	52	8.4	13	1,072	2,226	14.1	7	635	1,047	437	1,179	2.6
75 to 80	77.5	66.7	31.7	55	243	158	456	109	0	108	239	85	41	9.0	9	1,021	2,119	15.5	5	594	1,027	426	1,092	2.0
70 to 75	72.5	64.6	30.0	137	208	183	528	126	0	126	277	63	31	9.8	6	816	1,694	16.9	4	471	854	345	840	1.4
65 to 70	67.5	61.1	27.5	199	231	248	678	162	0	161	355	42	21	10.7	4	639	1,327	18.5	2	369	701	270	626	0.8
60 to 65	62.5	56.0	24.0	306	300	310	916	218	0	218	480	21	10	11.7	2	393	816	20.2	1	228	454	165	362	0.4
				2,920	2,920	2,920	8,760	2,087	0	2,084	4,589					4,653	9,661			2,738	4,766	1,914	4,895	1.848
																							Annual kW	**7.391**

Cell Ref.	Comment
A-H	TMY-3 Weather Data for Hartford, CT
I - L	Occupied hours as per the RFP data
M	Occupied Cooling loads (MBH)
N	Unoccupied Cooling loads (MBH)
O	= [col M] x 1,000 ÷ 3413 ÷ (Base EER ÷ 3.413)
P	= ([col M] x [col I] + [col N] x [col J]) x 1,000 ÷ 3,413 ÷ (Base EER ÷ 3.413)
Q	= ([col M] x [col K] + [col N] x [col L]) x 1,000 ÷ 3,413 ÷ (Base EER ÷ 3.413)
R	= [col M] x 1,000 ÷ 3413 ÷ (New EER ÷ 3.413)
S	= ([col M] x [col I] + [col N] x [col J]) x 1,000 ÷ 3,413 ÷ (New EER ÷ 3.413)
T	= ([col M] x [col K] + [col N] x [col L]) x 1,000 ÷ 3,413 ÷ (New EER ÷ 3.413)
U	= [col P] - [col S]
V	= [col Q] - [col T]

Assumptions:	Value	Unit	CELL REF	CELL REF	Description
Occupied Area	23,518	SF	P43	Q43	
Percent Cooling Load	90%		P44		Percent of load served by condensers being replaced
Months in Cooling	4.0	Months	Q46		

Page content is subject to Confidentiality Restrictions

Appendix for ESM 26: Condensing Unit Replacement

II. Manufacturer Specification Sheets

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

TRANE



Air-cooled condensing units

20 to 120 ton models ideal for conventional, split system applications

Ingersoll Rand

Outstanding design for conventional facilities: schools, multi-story office buildings, hotels, municipal and industrial facilities





and the not so conventional

Sportsdome

The Wyoming Valley Sportsdome located in Wilkes Barre, Pennsylvania is just one example of the Trane Split System flexibility. This unique design is kept comfortable with a 100 ton Trane Split System Condensing Unit coupled with a Trane DX coil module and retrofitted into one of two existing gas fired heating units.

The Sportsdome hosts:

- Indoor soccer
- Indoor golf driving range
- Extreme games: BMX bikes and skateboards
- Indoor field hockey
- Indoor football
- Indoor baseball

What makes Trane a leader in the 20 to 120 ton condensing unit market?

A natural leader

The impeccable reputation of Trane in the Air Conditioning Marketplace makes them a natural leader in the split system sector. This advanced design is engineered to be the most efficient, reliable and flexible in the industry today. When paired with air-handling units or remote chillers, these units are remarkably efficient systems.

Superior features

Trane uses 14 gauge galvanized steel to build a unit frame that will endure years of weathering. Louvered panels provide excellent coil protection while enhancing the appearance of the unit and increasing its strength. The unit is phosphatized and finished with Trane Slate Gray air-dry paint.

With more than 12 years of development and over 25 patents, the Trane 3-D® Scroll compressors have 70% fewer parts than an equal capacity reciprocating compressor.

The single orbiting scroll eliminates the need for pistons, connecting rods, wrist pins and valves; fewer parts result in a longer, more reliable operating life. Less rotating mass further reduces friction for far greater efficiency. (For additional details on the 3-D Scroll compressors, please see Trane Sales Brochure COM-S-9.)

Great options

A wide range of options are available to meet a variety of 20 to 120 ton applications.

- Low ambient option
- Hot gas bypass
- Suction service valve
- Pressure gauges
- Copper finned condenser coil
- Isolators
- Flow switch
- UL/CSA approval
- Coil coating for corrosion resistance (available on 20 to 60 tons only)

Nom. tons	EER/IPLV	Net Cap. MBh @ ARI	Unloading Steps %	Dimensions (in.) H×W×L	Operating weights (lb.) copper/aluminum
20	10.9/15.5	239	100/50	69×60×88	1522/1720
25	11.1/15.2	314	100/40	69×60×88	1640/1842
30	11.3/16.2	376	100/50	74×60×88	1824/2115
40	11.5/16.4	507	100/75/50/25	79×88×88	2769/3102
50	11.0/15.7	626	100/80/60/30	79×88×88	3148/3540
60	11.2/16.2	748	100/75/50/25	79×88×114	3480/4050
80	10.9/16.1	1045	19/38/50/63/81/100	79×85×176	5500/6099
100	10.7/15.3	1300	20/40/55/70/85/100	79×85×227	6472/7272
120	10.9/16.2	1560	25/50/63/75/88/100	79×85×227	7000/8199

Notes: 20-ton condensing unit only is certified and tested in accordance with ARI Standard 365. All tonnages above 20-ton are tested in accordance with ARI Standard 365. Full load ratings are at 95°F entering air temperature, and refrigerant conditions entering the condensing unit of 45°F saturated and 60°F actual temperature. Part load ratings are at 80°F entering air temperature and refrigerant conditions entering the condensing unit of 50°F saturated suction and 65°F actual temperature.

System control options that give you control

Control options

Four system control options on 20 to 60 ton, and three system control options on the 80 to 120 ton models are available, offering solid-state electronics. Factory-installed controls help offset field installation costs.

No system control provides easy termination of locally provided and designed temperature controls. Compressor minimum on and off timers are provided with this option.



Supply air Variable Air Volume (VAV) control includes a multi-step, demand oriented, microprocessor based discharge air controller, designed for VAV systems. With this option, Trane includes Frostat™, the industry's most reliable method of coil frost protection. With Frostat, your system can provide energy efficient comfort at part load.

Remote Evaporative Liquid Chiller (EVP) control includes a unit mounted, multi-step, demand oriented, microprocessor-based leaving chilled water controller that allows chilled water to be generated remotely from the condensing section.

Constant volume control (20 to 60 ton) includes an electronic controller with two cool steps and four heat steps for 20-30 ton models, four cool steps and four heat steps on the 40-60 ton models.

TRANE

Trane optimizes the performance of homes and buildings around the world. A business of Ingersoll Rand, the leader in creating and sustaining safe, comfortable and energy efficient environments, Trane offers a broad portfolio of advanced controls and HVAC systems, comprehensive building services, and parts. For more information, visit www.Trane.com.

© 2009 Trane All rights reserved
SS-SLB003-EN October 23, 2009

Produced on 20% post-consumer recycled paper, using environmentally friendly print practices that reduce waste.

IR Ingersoll Rand

ESM 27:
AHU Replacement

ESM Overview



Ameresco proposes to replace the two (2) existing air handling units (AHU's) serving Manross Library. These upgrades will provide new reliable equipment that will save energy and lower operating and maintenance costs. The existing units will be removed and replaced with new units sized to match the existing. The new units will be tied into the new EMS, which will eliminate the existing pneumatic controls. The controls along with new dampers and valve controls will be able to more accurately control discharge temperatures, which will increase occupant comfort and provide energy savings.

ESM Detail

Existing System

The Manross Library is served by two (2) air handling units original to the building. AHU-1 is a Trane MN: BRCA-2006-0A and serves the main floor of the Library. The cooling coil for this unit was recently replaced. AHU-2 is a Trane MN: SAUA-1506A and serves the Basement level of the Library. The AHU's are old and nearing the end of their useful lives.

Proposed System

Ameresco proposes to replace the two (2) AHU's with new Trane (or approved equal) units. As part of the replacement of the units, Ameresco will install new DDC control valves and damper actuators on each unit and tie into the proposed energy management system.

The scope of work includes all mechanical, electrical and demolition work required to replace the two (2) existing air handling units serving the Manross Library with new similar sized units.

- Demo and remove the two (2) existing air handling units
  - Demo and remove existing circuit breakers
  - Disconnect existing conduits and reconfigure for new air handlers
  - Demo and remove hot water piping back to valves
  - Demo and remove two (2) existing hot water valves
  - Disconnect and cap existing DX cooling lines

"Page content is subject to Confidentiality Restrictions"

  - Demo and remove existing ductwork transitions between ductwork and removed units
- Provide and install two (2) new Trane Climate Changer air handling units or similar:
  - AHU-1 to be Trane MN: UCCAD12A0A0RVC5200000 or equal
    - 4 row DX coil
    - 1 row reheat hydronic coil
    - FC fan with VFD and SGR
    - 1st year labor warranty for whole unit
  - AHU-2 to be Trane SCIJ15032 or equal
    - Self-contained
    - Integral air-cooled condenser (15 tons)
    - Hot water heating coil
    - 2-speed motor kit
    - 1st year labor warranty for whole unit
  - Install new breaker sized for new units and reconnect existing conduit and wiring to new units
  - Disconnect existing pneumatic tubing for actuators and cap prior to removal of units
  - New units will replicate existing AHUs and require same control points
  - Provide and install new electronic damper actuators and control valves
    - AHU-1 –2" HW valve (2-way), four (4) Damper Actuators
    - AHU-2 – 2" HW valve (2-way), two (2) Damper Actuators
  - Pipe to new hot water coils in new units, per manufacturer's instructions
    - Install new isolation valves at connection points
    - Install all new valves, strainers, temperature and pressure gauges, etc
  - Provide new duct transitions to connect new units to existing ductwork
- Insulate with vapor barrier and label, where appropriate
- Insulate and label, where appropriate, all new hot water piping
- Provide startup of units with manufacturer's rep

Exclusions:

The measure assumes the following:

- Existing isolation valves in water piping are assumed to be in working order.
- Existing fire-suppression system in ductwork is up to code.
- Repair of existing valves and piping that shall be tied into as part of this scope of work is excluded.
- Repair, cleaning, or balancing of existing ductwork tied into as part of this scope of work is excluded.
- Work shall occur during normal business hours.
- Provision of temporary heat or other utilities is excluded.
- Any abatement or remediation of asbestos or other hazardous materials beyond that specifically called out to be included in the scope of work above is excluded from the scope and cost of the proposed work.

"Page content is subject to Confidentiality Restrictions"

>Equipment, Design and Construction Documentation

Equipment will be identified in submittals provided for approval prior to procurement. Documents will be submitted to the facilities department for their review and comment. Upon approval, these will constitute the construction documents. Upon completion of the construction phase, the documents will be revised as needed to reflect "As-Built" conditions and submitted in multiple for record.

>Impact on Facility Operations and Performance

Energy savings will be realized by the improved efficiency of the new units and reduced maintenance cost requirements.

"Page content is subject to Confidentiality Restrictions"

This page is intentionally left blank.

Appendix for ESM 27: AHU Replacement

I. Energy Savings Calculations

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

City of Bristol, CT	
Energy and Demand Savings Summary	
Measure ID:	**27**
Measure Name:	**AHU Replacement**
Measure Location:	
Engineers:	

Site Name:		**Manross_Library**	**Summary**
Item	Units	Savings	
Electricity			
Energy On-Peak	kWh	620	620
Energy Off-Peak	kWh		0
Energy Total	kWh	620	620
Demand On-Peak, Monthly	kW		0.0
Demand On-Peak, Annual	kW		0.0
Demand Off-Peak, Monthly	kW		0.0
Demand Off-Peak, Annual	kW		0.0
Fossil Fuel			0
Natural Gas (NG)	CCF	405	405
Liquid Propane Gas (LPG)	Gallons		0
Steam	Mlbs		0
Fuel Oil, #2	Gallons		0
Fuel Oil, #4	Gallons		0
Fuel Oil, #6	Gallons		0
Max Daily Demand (Natural Gas)	CCF (Demand)		0
Water			0
Water Savings	CF		0
Sewer			0
Sewer Savings	CF		0

City of Bristol, CT
Manross Library
AHU Replacement

TMY-3 Weather Data for Hartford, CT								Savings							
Amb. Temp Bin deg. F	Ave Temp deg. F	M.C.W.B deg. F	M.C. Enthalpy Btu/lbma	01-08 Hours	09-16 Hours	17-24 Hours	Total Bin Hours	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ. Heat Load (MBH)	UnOcc. Heat Load (MBH)	Occ. Cool/Heat Consump. (MMBTU)	UnOcc. Cool/Heat Consump. (MMBTU)
A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**
Cooling															
105 to 110	107.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
100 to 105	102.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
95 to 100	97.5	75.8	39.4	0	4	0	4	1	0	1	2	18	0	0	0
90 to 95	92.5	74.9	38.7	0	34	9	43	10	0	10	23	17	0	0	0
85 to 90	87.5	72.8	36.9	0	105	22	127	30	0	30	67	15	0	0	0
80 to 85	82.5	69.0	33.5	4	247	105	356	85	0	85	186	10	0	1	0
75 to 80	77.5	66.7	31.7	55	243	158	456	109	0	108	239	7	0	1	0
70 to 75	72.5	64.6	30.0	137	208	183	528	126	0	126	277	5	0	0	0
65 to 70	67.5	61.1	27.5	199	231	248	678	162	0	161	355	1	0	0	0
60 to 65	62.5	56.0	24.0	306	300	310	916	218	0	218	480	0	0	0	0
Heating															
55 to 60	57.5	51.2	21.1	270	226	289	785	187	0	187	411	(4)	(3)	2	0
50 to 55	52.5	46.7	18.6	291	186	261	738	176	0	176	387	(6)	(5)	3	0
45 to 50	47.5	41.8	16.1	210	129	187	526	125	0	125	276	(8)	(6)	3	0
40 to 45	42.5	38.1	14.4	282	188	155	625	149	0	149	327	(10)	(8)	4	0
35 to 40	37.5	33.1	12.2	288	296	306	890	212	0	212	466	(11)	(10)	6	1
30 to 35	32.5	28.5	10.3	252	222	251	725	173	0	173	380	(13)	(12)	6	1
25 to 30	27.5	24.1	8.6	182	160	177	519	124	0	123	272	(15)	(13)	5	1
20 to 25	22.5	20.3	7.2	231	89	177	497	118	0	118	260	(16)	(15)	5	1
15 to 20	17.5	15.5	5.6	135	42	57	234	56	0	56	123	(18)	(17)	3	0
10 to 15	12.5	10.9	4.1	44	7	24	75	18	0	18	39	(20)	(18)	1	0
5 to 10	7.5	6.4	2.7	23	3	1	27	6	0	6	14	(22)	(20)	0	0
0 to 5	2.5	2.4	1.5	11	0	0	11	3	0	3	6	(23)	(22)	0	0
-5 to 0	(2.5)	0.0	0.0	0	0	0	0	0	0	0	0	(25)	(24)	0	0
-10 to -5	(7.5)	0.0	0.0	0	0	0	0	0	0	0	0	(27)	(25)	0	0
-15 to -10	(12.5)	0.0	0.0	0	0	0	0	0	0	0	0	(29)	(27)	0	0
-20 to -15	(17.5)	0.0	0.0	0	0	0	0	0	0	0	0	(30)	(29)	0	0
-25 to -20	(22.5)	0.0	0.0	0	0	0	0	0	0	0	0	(32)	(31)	0	0
				2,920	2,920	2,920	8,760	2,087	0	2,084	4,589			39	4

Cell Ref.	Comment
A-H	TMY-3 Weather Data for Hartford, CT
I - L	Occupied hours - Interactive with EMS ECM
M	Cooling = 4.5 x K43 x K47 x ([col D] - K45) / 1000
	Heating = 1.08 x K43 x K47 x ([col B] - L53) / 1000
N	Heating = 1.08 x K43 x K47 x ([col B] - L54) / 1000
O	Cooling = ([col I] + [col K]) x [col M] / 1000 / K44
	Heating = ([col I] + [col K]) x [col M] / 1000 / K46
P	Heating = ([col J] + [col L]) x [col M] x K48 / 1000 / K46

Assumptions:	Value	Unit	CELL REF	Description
Total Supply CFM	16,000	CFM	**K43**	
Existing Cooling Efficiency	2.9	COP	**K44**	
Proposed Occ Cooling Enthaply Setpoi	26.6		**K45**	72° @ 50% RH
Existing Heating Efficiency	76%		**K46**	
Percent Supply Leakage	2%		**K47**	
UnOcc. Fan & Pump Cycling	10%		**K48**	% Operating Hours During UnOcc.

Average Proposed Space Temperatures					
	Cooling		Heating		Description
Occupied	72.0	**J53**	70.0	**L53**	
UnOccupied	85.0	**J54**	66.0	**L54**	

Appendix for ESM 27: AHU Replacement

II. Manufacturer Specification Sheets

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

TRANE



Performance Climate Changer™

Next generation air handler from Trane

Ingersoll Rand

Trane Performance Climate Changer™ Air Handler



Trane has a history of combining customer needs, engineering expertise, advanced technology and cutting-edge innovation to provide superior products that deliver exceptional performance. The next generation of Trane air handlers continues this tradition.

Superior performance

The Performance air handler has the tightest casing in the commercial ARI market, meeting an ASHRAE 111 Class 6 leakage level. This leakage rate is better than most custom designs. Superior performance features include:

- Low-leak casing design that achieves less than 1.0 percent leakage rate and can withstand +/- 8 inches w.g. static pressure, with no more than 0.0042 inch deflection.
- Two-inch, R-13 foam-injected panels with mid-span, internal thermal breaks and standard thermal break access doors. The no-through-metal design delivers thermal performance that helps ensure condensation will not form on the casing exterior, even with 55°F supply air temperature and unit external conditions of 81°F dry bulb and 73°F wet bulb.
- Filter technology that exceeds LEED requirements and reduces pressure drops up to 50 percent versus previous designs.

Energy efficient

Trane has designed even the most basic features to encourage energy conservation, allowing the system to surpass minimum ASHRAE Standard 90.1 requirements.

The Performance air handler delivers:

- Superior performance
- Industry-leading energy efficiency
- System optimization
- Highest quality
- Lowest installed cost

Energy efficient components include:

- Positional service lights with light emitting diode (LED) fixtures, which last up to ten times longer than fluorescent bulbs and one hundred times longer than incandescent bulbs, while using only 2–10 watts of electricity.
- Traq™ dampers, an AMCA 611-certified airflow monitoring solution with standard and low-flow options, which allow direct measurement and control of outdoor and return airflow. The low-flow Traq damper is a key part of a demand control ventilation strategy to help drive down energy costs.
- High-efficiency coil fins deliver superior heat-transfer efficiency while allowing face velocities in excess of 625 fpm without moisture carryover.
- Discharge plenums and plenum fan sections, which are available with variable size, type and location of openings, to reduce static pressure loss and lower energy consumption.

System optimization

The Trane EarthWise™ design philosophy incorporates high-efficiency air handlers and water chillers with low-flow rates and low temperatures on both the waterside and airside. Benefits include:

- Reduced emissions
- Lower first cost
- Lower operating cost
- Improved acoustical performance
- Smaller equipment and components
- Better comfort with lower space humidity

Low-temperature, low-flow systems can be challenging, but the Performance air handler is engineered to capitalize on the benefits of an EarthWise system:

- Low-leak casing design incorporates foam-injected and mid-span internal thermal break panels and standard thermal break access doors to minimize condensation from low-leaving air temperatures.

The Trane EarthWise™ design philosophy incorporates high efficiency air handlers and water chillers with low flow rates and low temperatures on both the waterside and airside.



System Optimization, continued

In addition to the obvious energy savings, moving less air reduces the size of air handlers and ductwork. This can result in a quieter unit and a smaller mechanical room, leaving more space for tenants. In addition, the colder air lowers building dew point, improving building humidity control and indoor air quality.

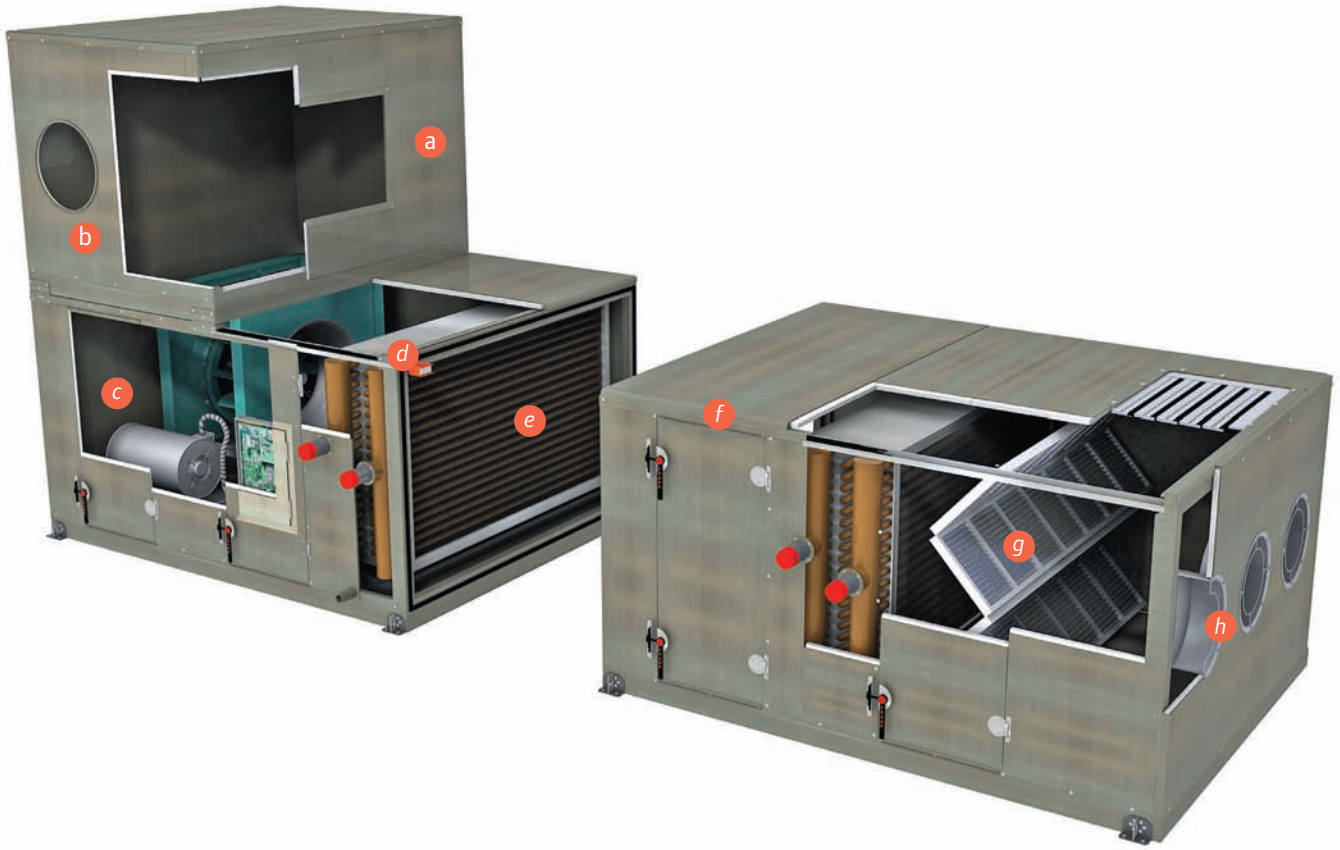
- Factory-engineered, -mounted, and -tested controls ensure that sensors and sequences deliver optimal operating efficiencies and that casing openings have been properly sealed.
- Numerous coil types and high-efficiency coil fin technology enables the latest in airside heat transfer, which improves overall system efficiency by lowering the coil approach temperature and reducing the chance of moisture carryover.
- The ability to choose the exact number of fins per foot of coil surface allows heat transfer and air pressure performance to be tuned to specific application requirements.
- A wide array of fan options provides optimal sound and efficiency choices for the application.
- The latest controls technology easily incorporates fan pressurization and/or demand control ventilation strategies to further enhance the system.

EarthWise design provides many benefits—both for the environment, and for business. Few building design and construction strategies can offer a solution as complete as the EarthWise system.

High quality

Trane has a long-term commitment to quality and manufacturing excellence ensuring our customers receive a reliable unit with proven and tested dependability. The innovative new Performance air handler—ARI Standard 430–certified—will provide optimal, energy-efficient comfort for decades to come.

Exceptional quality is built into every component of the new Performance air handler. Formulated panels and an integral base frame minimize the number of seams that could introduce air leak paths. All Trane coils are ARI Standard 410-certified and tested at one-and-a-half times the maximum operating pressure. In addition, all Trane fans are dynamically balanced in the horizontal and vertical planes. Fans with variable frequency drives also undergo inverter balancing at peak airflow and at all operating points on the system curve. Experienced technicians factory-mount and –wire controls using standard control point locations so that each unit is wired the same way, every time, making check out and servicing quicker and easier.



Performance Climate Changer features:

- *a* ***Low casing air leakage:*** ASHRAE Standard 111 Class 6 leakage level achieves less than one percent leakage rate
- *b* ***Discharge plenum sections:*** Minimize air pressure drop by transforming sections to the most efficient opening sizes, types and locations
- *c* ***Fan sections:*** Twice the fan flexibility and an average 3–5 percentage points more efficient than previous Climate Changer™ air handler designs
- *d* ***Single-point power and quick connect wiring:*** Factory wiring minimizes installation costs and provides wiring integrity between sections
- *e* ***Coil sections:*** More coil options with industry-leading low pressure drop fin designs and infinitely variable fin spacing to exactly match capacity requirements
- *f* ***Thermal-break casing panels and doors:*** Two-inch R-13 foam-injected casing panels and doors with thermal breaks minimize heat transfer and withstand +/– 8-inches w.g. pressure with no more than 0.0042 inches deflection
- *g* ***Filter sections:*** Filter technology that exceeds LEED requirements and reduces pressure drops up to 50 percent versus previous designs
- *h* ***Mixing sections:*** New AMCA 611-certified Traq technology capable of accurately measuring lower flow for demand control ventilation applications

Lowest installed cost

The Performance air handler includes many features designed to reduce installation time and cost:

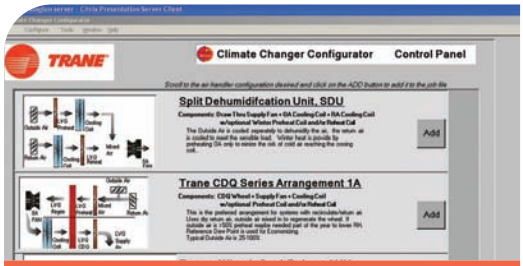
- Lifting lugs are included on the integral base frame; and all units ship with a skid designed for forklift transport.
- Discharge plenums are available with variable height, size, type and location of openings, which minimizes the need for duct transitions by the installing contractor.
- Factory-installed interoperable controls shorten construction cycles, simplify job site coordination, reduce installation time and expense, and provide single-source responsibility for warranty and service issues.
- Single-point power is available with a high-voltage distribution block and external main unit disconnect with lockout/tagout capabilities.
- LED service lights are factory wired to an external factory-provided Service Module, which includes a switch and GFCI receptacle.
- Quick-connect wiring minimizes installation costs and provides wiring integrity between sections without having to identify or check continuity.
- Factory-installed conduit connectors eliminate penetrations in the wrong location, and all electrical casing penetrations and coil connections are properly sealed at the factory.
- NEMA 4 external motor junction box and motor conduit is available. Motor leads are run through flexible metal conduit to the external junction box, and penetrations are properly sealed.



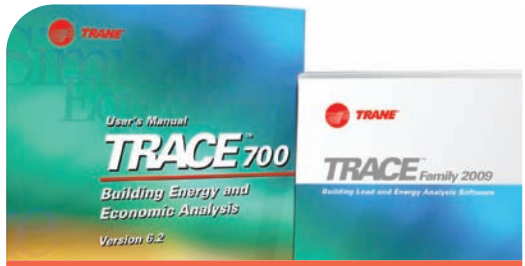
Trane consistently delivers the best HVAC solution for your buildings.

Trane analysis and design tools

Trane has comprehensive analysis and design software tools to provide whole building analysis, acoustical design guidance, equipment performance data, suggested control strategies, and more. Talk with your local Trane sales engineer to learn how these tools will help achieve an energy-efficient system design that provides optimal IAQ, and stays within the project budget.



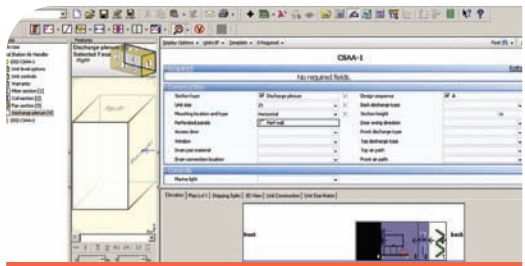
Trane Climate Changer Configurator (CCC) software evaluates air handler design alternatives such as split dehumidification units, energy wheels, and CDQ™ desiccant dehumidification systems for energy efficiency and humidity control



Trane Air Conditioning Economics (TRACE™) optimizes and compares the design of virtually any building's HVAC system based on energy utilization and lifecycle cost, factoring in construction, orientation and size.



Trane Controls Pre-Packaged Solutions (PPS) quickly lays out and optimizes control strategies for superior equipment and system performance.



Trane Official Product Selection System (TOPSS™) selects and calculates performance of Trane equipment.

Trane Acoustics Program (TAP™) accurately predicts and compares system sound levels.

Trane Expertise

The innovative Performance air handler was developed by the trusted leader in the industry: Trane. For superior performance, industry leading energy efficiency, system optimization, the highest quality and the lowest installed cost, the right choice is the Trane Performance Climate Changer air handler.

Trane is a pioneer in the HVAC industry and has consistently led the industry in providing solutions for its ever changing needs. With a portfolio of proven equipment and controls, systems-focused solutions, leading industry experts, and highly trained sales engineers, Trane has the experience and expertise to design, manufacture, install and service an HVAC system that will meet your environmental, business and building performance goals.

Ingersoll Rand

Ingersoll Rand (NYSE:IR) is a world leader in creating and sustaining safe, comfortable and efficient environments in commercial, residential and industrial markets. Our people and our family of brands—including Club Car®, Hussmann®, Ingersoll Rand®, Schlage®, Thermo King® and Trane®—work together to enhance the quality and comfort of air in homes and buildings, transport and protect food and perishables, secure homes and commercial properties, and increase industrial productivity and efficiency. We are a $13 billion global business committed to sustainable business practices within our company and for our customers.

© 2010 Trane All rights reserved
CLCH-SLB017-EN October 14, 2010

Produced on post-consumer recycled paper, using environmentally friendly print practices that reduce waste.

ESM 28A:
Induction Unit Refurbishment

ESM Overview

As an alternate to ESM 28, Ameresco proposes to refurbish the majority of existing perimeter induction air terminal units at City Hall and replace twenty (20) of the worst shape units with new units equivalent in size and style. As part of the Refurbishment, Ameresco will replace each enclosure with new enclosures and install new DDC dual temperature control valves on each unit that will be tied into the proposed energy management system.



Figure 28A.1: Ameresco proposes to refurbish the induction units found throughout the City Hall.

Refurbishing the existing induction units as opposed to replacing all of them will improve each unit's functionality while costing less than a full replacement of all 195 units.

ESM Detail

Existing System

City Hall is served by one-hundred and ninety-five (195) perimeter induction air-terminal units equipped with supply air continually fed from air handling unit #2. Each unit has a pneumatic dual temperature valve and dual temperature coil which can be used for heating (hot water) or cooling (chilled water), depending on the mode of operation of the central plant. The induction units are part of the original construction, which dates back to the early 1960's. Due to the age of these units, there are several performance and maintenance issues, which lead to increased maintenance requirements.

Proposed System

As an alternate to a full replacement (ESM 28), Ameresco proposes to refurbish one-hundred and seventy-five (175) existing induction units at City Hall while replacing the twenty (20) worst shape units with new units equivalent in size and style. As part of this refurbishment, all 195 units will receive new enclosures, and new DDC dual temperature control valves that will be tied into the proposed energy management system.

The scope of work includes all mechanical, electrical and demolition work required to refurbish one-hundred and seventy-five (175) induction units and install twenty (20) new induction units throughout City Hall. SOW includes:

- Refurbish one-hundred and seventy-five (175) induction units including:

"Page content is subject to Confidentiality Restrictions"

  - Cleaning dual temp coils
  - Cleaning nozzles
  - Repairing any induction unit duct connections in poor condition.
  - Removing existing enclosure and install new painted enclosure including removable vent parts.
- Demo and remove twenty (20) existing induction units;
  - Single heating/cooling water coil
  - Two Position 2-way dual temp control valve.
  - Isolation Valves
- New units to be Carrier Weathermaster® 36SV Induction units or similar. Sizes and capacities shall match existing units.
- Drainable galvanized steel condensate pan shall be provided with unit.
- Base unit assembly shall consist of an air inlet, air plenum, induction nozzles, water coil assembly, (lint screen or filter), air transition fitting, air plug and drainable condensate pan.
- Base unit enclosure and panel sections shall be constructed of not lighter than 18 gage, cold-rolled steel, bonderized, recoatable baked prime finish. Enclosure shall consist of removable front access panel with snap-in fasteners to permit easy removal for routine inspection and servicing of unit and controls, removable plastic discharge grille sections designed for 4-way adjustment of airflow, mounting brackets and suitable accessories for base unit assembly.
- Install new units according to manufacturer's specifications including:
  - Install wall mounting strip and hang base unit
  - Make all air connections
  - Connect dual temp water supply and return piping to coil
  - Install new steel condensate pans and connect to existing ¾" drain connection.
  - Install new Carrier enclosure
  - Balance system
- Provide and install ½" 2-Way Modulating Dual Temp Water Control valves for one hundred and ninety-five (195) induction units.
  - Replace existing pneumatic control devises with electronic
  - Wire new valve to existing transducer near adjacent wall.
  - Re-use existing wall sensor
- Provide programming of all points, graphics and control sequences for each piece of equipment controlled.

Exclusions:

The measure assumes the following:

- Existing isolation valves in water piping are assumed to be in working order.
- Repair of existing piping and ductwork that shall be tied into as part of this scope of work is excluded.
- Work shall occur during normal business hours.

- Work excludes any floor tile work, cutting, patching and painting
- Any abatement or remediation of asbestos or other hazardous materials beyond that specifically called out to be included in the scope of work above is excluded from the scope and cost of the proposed work.

>Equipment, Design and Construction Documentation

Equipment will be identified in submittals provided for approval prior to procurement. Documents will be submitted to the facilities department for their review and comment. Upon approval, these will constitute the construction documents. Upon completion of the construction phase, the documents will be revised as needed to reflect "As-Built" conditions and submitted in multiple for record.

>Impact on Facility Operations and Performance

Energy savings will be realized by the improved efficiency of the new and refurbished induction units and reduced maintenance cost requirements.

"Page content is subject to Confidentiality Restrictions"

This page is intentionally left blank.

Appendix for ESM 28A: Induction Unit Refurbishment

I. Energy Savings Calculations

Please See ESM 28 for Energy Saving Calculations

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

Appendix for ESM 28A: Induction Unit Refurbishment

II. Manufacturer Specification Sheets

Please See ESM 28 for Manufacturer Specification Sheets

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

ESM 33:
WPCP - Aeration Control Improvements

ESM Overview

Ameresco proposes to improve the existing aeration control system at the Water Pollution Control Park (WPCP) by updating the existing aeration control software and switching the system from manual control to automatic control. The new system will provide better control of the dissolved oxygen (DO) levels in the tanks, reducing the required motor amperage from the air blowers, saving energy.

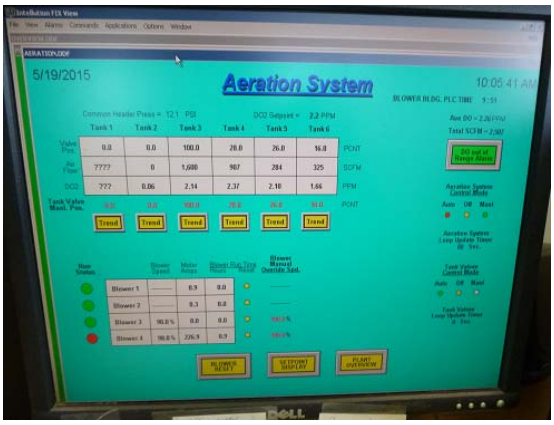


Figure 33.1: Ameresco proposes to upgrade the existing aeration controls and allow for automated DO control.

ESM Detail

Existing System

The existing aeration control system was installed in 2005 and utilizes Intellution Fix32 software. The system was originally set up with a sequence of operation for automated control of the DO system, however, it was reported that this automatic control has not been used. The system has primarily been in manual remote control mode. In this mode staff types in a percentage open for any of the valves in order to achieve desired DO levels in tanks 3 & 4. The system will drive the specific valve open or close to the designated position. This type of control requires constant monitoring by staff, and often allows DO levels to reach higher than required levels which translates into wasted energy.

The Existing system consists of:

- (6) Aeration tanks. Tanks 1 and 2 have a mixer, tanks 3-6 have air flow control via valve adjustment.
- (2) 250HP blowers with VFD's. VFD's have analog speed feedback outputs, run and fault contact outputs.
- (2) 350HP without VFDs
- (1) of the 350HP blower units is proposed to be replaced with a new 215 HP turbo blower (ESM 34)
- (2) Submersible Pumps with current sensing 4-20 mA analog outputs
- Submersible Wet Well Level Sensor – 4-20mA
- (6) DO sensors – 4-20mA
- (6) Air Flow Sensors – 4-20mA
- Common blower outlet header pressure sensor – 4-20mA
- (4) Air control valves (tanks 3 – 6 only, no air valves on tanks 1 or 2)

"Page content is subject to Confidentiality Restrictions"

Proposed System

Ameresco proposes to upgrade the Bristol WPCP aeration control system. The existing Automation Direct PLC, I/O modules and OPTO-22 I/O modules will be replaced with Allen-Bradley CompactLogix PLC or approved equal and I/O module hardware. The new PLC and I/O will be installed into the existing control panel. SCADA program modifications will be implemented (existing GE iFix). The new control system will be set for automatic DO control, adjusting each tanks valves based on DO levels of 2.2 ± 0.2ppm.

Hardware Scope

Ameresco will supply the following hardware for installation into the existing control panel

- (1) A-B CompactLogix PLC
- (1) PLC Power Supply
- (4) 8 channel Analog Input module
- (2) 8 channel Analog Output module
- (2) 16 point DC Digital Input module
- (1) 16 point Relay Output module
- (1) End cap terminator
- Misc. terminals, fuses, wire, connectors and mounting hardware required for retrofit installation

Installation Scope

- Removal of existing PLC and I/O
- Installation of new PLC and I/O
- Control Panel Wiring
- Termination of field device wiring
- PLC programming (currently based on original 2005 control strategy)
- SCADA modifications required to integrate the new PLC addresses

Exclusions:

The following are not included:

- VFD's, motors, instruments, repairs to existing instruments
- Field wiring modifications outside the main control panel
- PLC or SCADA programming/development software
- Spares
- Training

"Page content is subject to Confidentiality Restrictions"

>Equipment, Design and Construction Documentation

Equipment will be identified in submittals provided for approval prior to procurement. Documents will be submitted to the facilities department for their review and comment. Upon approval, these will constitute the construction documents. Upon completion of the construction phase, the documents will be revised as needed to reflect "As-Built" conditions and submitted in multiple for record.

>Impact on Facility Operations and Performance

Energy savings will be realized by the improved control of the DO levels in the tanks reducing excess air in turn saving on reduced motor amperage requirements.

"Page content is subject to Confidentiality Restrictions"

This page is intentionally left blank.

Appendix for ESM 33:
WPCP - Aeration Control Improvements

I. Energy Savings Calculations

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

City of Bristol, CT	
Energy and Demand Savings Summary	
Measure ID:	**33**
Measure Name:	**Aeration Control Improvement**
Measure Location:	
Engineers:	

Site Name:		**WPCP - Aeration Control Improvement**
Item	Units	Savings
Electricity		
Energy On-Peak	kWh	2,958
Energy Off-Peak	kWh	89,294
Energy Total	kWh	92,252
Demand On-Peak, Monthly	kW	
Demand On-Peak, Annual	kW	
Demand Off-Peak, Monthly	kW	
Demand Off-Peak, Annual	kW	
Fossil Fuel		
Natural Gas (NG)	CCF	
Liquid Propane Gas (LPG)	Gallons	
Steam	Mlbs	
Fuel Oil, #2	Gallons	
Fuel Oil, #4	Gallons	
Fuel Oil, #6	Gallons	
Max Daily Demand (Natural Gas)	CCF (Demand)	
Water		
Water Savings	CF	
Sewer		
Sewer Savings	CF	

timestamp	Hour	Tank 3 DO	Tank 4 DO	Tank 5 DO	Tank 6 DO	Tank 3 Flow (SCFM)	Tank 4 Flow (SCFM)	Tank 5 Flow (SCFM)	Tank 6 Flow (SCFM)	Total (SCFM)	*Total 3&4 SCFM	Tank 3 & 4 Average	Diff. From Setpoint (2.2)	Savings Peak (kWh)	Savings Off-Peak (kWh)	Estimated Blower 4 Amps (y = 0.0594x + 80.082)	Estimated kWh
3/10/2014 1:00	1	1.998	2.022	2.168	2.270	1,576	1,274	268	348	3,466	2,850	2.01	-0.19			249.40	271
3/10/2014 2:36	2	2.127	2.057	1.600	2.230	1,387	1,068	219	294	2,968	2,455	2.09	-0.11			225.90	246
3/10/2014 4:12	4	2.810	2.290	2.234	2.247	1,293	970	217	266	2,746	2,264	2.55	0.35			214.54	233
3/10/2014 5:48	5	2.781	2.272	2.265	2.506	1,094	855	211	275	2,434	1,948	2.53	0.33			195.81	213
3/10/2014 7:24	7	2.357	2.411	1.993	2.871	945	821	216	282	2,264	1,766	2.38	0.18			184.99	201
3/10/2014 9:00	9	2.250	2.253	2.831	2.849	1,058	819	298	265	2,439	1,877	2.25	0.05			191.56	208
3/10/2014 10:36	10	1.825	2.175	2.579	2.333	1,111	945	366	292	2,714	2,056	2.00	-0.20			202.20	220
3/10/2014 12:12	12	1.908	1.903	2.105	1.948	1,311	1,062	481	509	3,363	2,374	1.91	-0.29			221.07	240
3/10/2014 13:48	13	1.948	1.995	1.986	2.153	1,363	1,142	631	688	3,824	2,505	1.97	-0.23			228.87	249
3/10/2014 15:24	15	2.020	1.990	2.257	2.625	1,314	1,179	530	541	3,564	2,493	2.00	-0.20			228.14	248
3/10/2014 17:00	17	1.976	2.096	2.903	2.887	1,290	1,212	514	475	3,491	2,501	2.04	-0.16			228.66	249
3/10/2014 18:36	18	1.910	2.228	3.522	3.155	1,249	1,173	478	393	3,293	2,422	2.07	-0.13			223.93	244
3/10/2014 20:12	20	1.779	2.169	3.528	2.913	1,249	1,173	474	378	3,274	2,422	1.97	-0.23			223.94	244
3/10/2014 21:48	21	1.855	2.140	3.495	3.056	1,340	1,268	512	407	3,527	2,608	2.00	-0.20			234.98	256
3/10/2014 23:24	23	1.819	2.117	3.633	3.154	1,427	1,357	550	434	3,769	2,784	1.97	-0.23			245.47	267
3/11/2014 1:00	1	1.884	2.310	3.945	3.262	1,280	1,205	476	369	3,330	2,485	2.10	-0.10			227.71	248
3/11/2014 2:36	2	2.035	2.263	3.440	2.395	1,158	1,037	356	289	2,841	2,196	2.15	-0.05			210.50	229
3/11/2014 4:12	4	2.526	2.605	2.685	2.972	1,050	943	231	300	2,524	1,993	2.57	0.37			198.49	216
3/11/2014 5:48	5	2.254	2.479	2.846	3.447	900	812	321	319	2,353	1,712	2.37	0.17			181.79	198
3/11/2014 7:24	7	2.604	2.548	3.861	3.725	897	780	362	320	2,360	1,678	2.58	0.38			179.74	195
3/11/2014 9:00	9	2.282	2.398	3.633	3.589	958	793	269	305	2,325	1,751	2.34	0.14			184.09	200
3/11/2014 10:36	10	2.136	2.155	1.585	2.172	1,085	974	299	297	2,655	2,059	2.15	-0.05			202.36	220
3/11/2014 12:12	12	1.951	2.028	1.752	1.958	1,128	1,047	523	525	3,223	2,175	1.99	-0.21			209.29	228
3/11/2014 13:48	13	1.885	1.903	1.824	2.016	1,166	1,081	652	613	3,512	2,247	1.89	-0.31			213.58	232
3/11/2014 15:24	15	1.948	2.065	2.523	2.422	1,310	1,228	630	577	3,745	2,538	2.01	-0.19			230.84	251
3/11/2014 17:00	17	1.954	2.230	3.386	4.248	1,248	1,165	480	483	3,376	2,413	2.09	-0.11			223.42	243
3/11/2014 18:36	18	1.713	2.151	2.511	2.236	1,165	1,074	320	293	2,853	2,239	1.93	-0.27			213.08	232
3/11/2014 20:12	20	1.842	2.220	2.177	2.165	1,266	1,181	337	340	3,124	2,447	2.03	-0.17			225.42	245
3/11/2014 21:48	21	1.733	2.063	1.691	1.914	1,305	1,221	353	347	3,226	2,527	1.90	-0.30			230.16	250
3/11/2014 23:24	23	1.785	2.156	1.759	1.926	1,407	1,336	357	331	3,432	2,744	1.97	-0.23			243.05	264
3/12/2014 1:00	1	1.908	2.401	2.074	1.704	1,273	1,189	315	266	3,042	2,462	2.15	-0.05			226.32	246
3/12/2014 2:36	2	2.165	2.261	2.309	1.740	1,198	1,018	285	255	2,756	2,216	2.21	0.01			211.73	230
3/12/2014 4:12	4	2.101	2.337	2.963	2.942	936	848	319	312	2,415	1,784	2.22	0.02			186.05	202
3/12/2014 5:48	5	2.482	2.495	3.387	3.446	881	794	308	308	2,290	1,674	2.49	0.29			179.54	195
3/12/2014 7:24	7	2.684	3.259	3.748	3.951	828	788	286	279	2,181	1,616	2.97	0.77		15.43	176.10	192
3/12/2014 9:00	9	3.479	4.128	4.257	4.439	1,026	889	318	308	2,541	1,915	3.80	1.60		80.74	193.82	211
3/12/2014 10:36	10	2.803	3.378	3.488	4.151	1,016	846	283	294	2,438	1,862	3.09	0.89		25.71	190.70	207
3/12/2014 12:12	12	2.333	2.516	0.802	1.226	995	828	302	267	2,391	1,823	2.42	0.22			188.37	205
3/12/2014 13:48	13	1.927	1.935	1.910	1.703	996	844	519	491	2,851	1,840	1.93	-0.27			189.38	206
3/12/2014 15:24	15	1.974	2.019	2.115	2.121	1,024	879	396	383	2,683	1,903	2.00	-0.20			193.12	210
3/12/2014 17:00	17	2.064	2.187	2.350	1.938	1,034	897	322	268	2,521	1,931	2.13	-0.07			194.78	212
3/12/2014 18:36	18	2.139	2.221	2.155	2.181	1,064	895	258	285	2,503	1,959	2.18	-0.02			196.47	214
3/12/2014 20:12	20	1.934	1.881	1.646	1.775	1,306	1,108	347	351	3,113	2,414	1.91	-0.29			223.48	243
3/12/2014 21:48	21	1.828	1.802	1.337	1.075	1,394	1,179	483	412	3,468	2,573	1.81	-0.39			232.94	253
3/12/2014 23:24	23	1.829	1.872	2.078	2.126	1,349	1,149	445	496	3,439	2,498	1.85	-0.35			228.47	248
3/13/2014 1:00	1	1.995	2.220	1.969	2.159	1,239	1,071	345	366	3,020	2,309	2.11	-0.09			217.26	236
3/13/2014 2:36	2	2.041	2.314	1.917	1.952	1,136	962	298	312	2,708	2,098	2.18	-0.02			204.71	223
3/13/2014 4:12	4	2.907	3.021	3.534	3.215	1,110	816	311	331	2,569	1,927	2.96	0.76		16.46	194.52	212
3/13/2014 5:48	5	3.552	3.555	4.121	3.815	1,016	773	241	286	2,317	1,789	3.55	1.35		59.22	186.37	203
3/13/2014 7:24	7	3.735	4.366	4.351	4.458	922	787	248	295	2,251	1,708	4.05	1.85		93.37	181.56	197
3/13/2014 9:00	9	3.813	4.789	4.733	4.971	1,029	1,041	274	360	2,704	2,070	4.30	2.10		124.58	203.07	221
3/13/2014 10:36	10	2.790	3.840	2.640	4.173	1,032	951	312	338	2,633	1,983	3.32	1.12		44.25	197.89	215
3/13/2014 12:12	12	2.308	2.236	2.431	2.061	1,008	859	528	481	2,876	1,867	2.27	0.07			190.98	208
3/13/2014 13:48	13	2.259	2.214	2.173	2.011	1,042	919	566	548	3,075	1,961	2.24	0.04			196.59	214
3/13/2014 15:24	15	2.378	2.316	2.367	2.175	1,067	948	453	440	2,908	2,015	2.35	0.15			199.77	217
3/13/2014 17:00	17	1.934	2.119	2.064	2.338	983	918	337	355	2,594	1,901	2.03	-0.17			193.02	210
3/13/2014 18:36	18	2.572	2.414	2.542	2.228	1,071	947	281	267	2,566	2,018	2.49	0.29			199.95	217
3/13/2014 20:12	20	2.559	2.624	2.212	2.764	1,029	925	210	263	2,427	1,954	2.59	0.39			196.14	213
3/13/2014 21:48	21	2.099	1.886	2.064	1.898	1,102	890	349	281	2,621	1,992	1.99	-0.21			198.39	216
3/13/2014 23:24	23	2.025	1.887	2.303	1.921	1,180	1,110	423	391	3,104	2,290	1.96	-0.24			216.13	235
3/14/2014 1:00	1	2.218	2.073	3.811	2.330	1,211	1,092	446	349	3,098	2,303	2.15	-0.05			216.91	236
3/14/2014 2:36	2	2.794	2.762	3.884	3.040	1,198	1,080	347	316	2,940	2,277	2.78	0.58		2.36	215.36	234
3/14/2014 4:12	4	3.959	4.316	4.941	4.578	1,197	1,078	346	315	2,936	2,276	4.14	1.94		118.13	215.27	234
3/14/2014 5:48	5	4.865	4.991	4.907	4.997	1,173	1,092	320	314	2,900	2,265	4.93	2.73		184.87	214.65	233
3/14/2014 7:24	7	4.806	4.963	4.426	4.982	1,016	1,204	53	271	2,544	2,220	4.88	2.68		178.95	211.97	231
3/14/2014 9:00	9	3.899	4.932	3.106	4.966	983	1,193	31	254	2,462	2,176	4.42	2.22		137.89	209.33	228
3/14/2014 10:36	10	2.646	3.318	2.429	2.835	971	897	340	283	2,490	1,867	2.98	0.78		17.55	190.99	208
3/14/2014 12:12	12	2.184	2.447	2.330	2.112	968	885	549	502	2,904	1,853	2.32	0.12			190.13	207
3/14/2014 13:48	13	2.415	2.048	2.092	2.673	1,022	864	476	552	2,915	1,886	2.23	0.03			192.13	209
3/14/2014 15:24	15	2.227	2.135	2.256	3.055	1,027	966	377	419	2,789	1,993	2.18	-0.02			198.47	216
3/14/2014 17:00	17	2.297	2.612	2.293	2.160	1,041	998	287	271	2,598	2,039	2.45	0.25			201.22	219
3/14/2014 18:36	18	2.145	2.291	2.478	2.466	1,022	922	275	280	2,499	1,944	2.22	0.02			195.57	213
3/14/2014 20:12	20	2.140	2.086	2.041	2.089	1,028	922	277	283	2,511	1,950	2.11	-0.09			195.92	213
3/14/2014 21:48	21	1.976	2.014	2.027	2.117	1,034	981	295	324	2,634	2,015	2.00	-0.20			199.78	217
3/14/2014 23:24	23	2.016	1.983	2.201	2.265	1,152	1,023	302	293	2,770	2,175	2.00	-0.20			209.28	228
3/15/2014 1:00	1	2.404	2.418	2.327	2.402	1,135	1,039	254	293	2,721	2,174	2.41	0.21			209.23	228
3/15/2014 2:36	2	2.535	2.677	2.492	3.211	1,107	1,004	237	298	2,646	2,111	2.61	0.41			205.47	223
3/15/2014 4:12	4	3.145	3.519	3.283	4.088	1,091	991	234	294	2,610	2,082	3.33	1.13		46.90	203.77	222
3/15/2014 5:48	5	3.930	4.620	4.292	4.887	1,048	995	216	286	2,546	2,043	4.28	2.08		121.49	201.44	219
3/15/2014 7:24	7	3.247	4.984	3.367	4.846	753	1,041	136	272	2,201	1,793	4.12	1.92		100.78	186.60	203
3/15/2014 9:00	9	2.901	4.880	2.320	4.536	682	975	105	278	2,040	1,657	3.89	1.69		80.51	178.53	194
3/15/2014 10:36	10	1.862	4.639	1.468	4.184	681	934	135	242	1,992	1,615	3.25	1.05		34.85	176.00	191
3/15/2014 12:12	12	1.486	2.741	0.451	1.564	749	873	241	182	2,045	1,622	2.11	-0.09			176.45	192
3/15/2014 13:48	13	1.514	2.363	0.458	0.520	883	983	324	230	2,420	1,866	1.94	-0.26			190.92	208
3/15/2014 15:24	15	1.838	2.173	0.921	0.933	1,158	1,072	479	421	3,130	2,230	2.01	-0.19			212.57	231
3/15/2014 17:00	17	1.995	2.054	1.134	1.379	1,207	1,134	517	522	3,381	2,342	2.02	-0.18			219.18	238
3/15/2014 18:36	18	2.117	2.059	2.266	2.013	1,257	1,125	418	402	3,203	2,383	2.09	-0.11			221.61	241
3/15/2014 20:12	20	2.084	2.093	1.920	2.105	1,189	1,083	315	326	2,913	2,272	2.09	-0.11			215.03	234
3/15/2014 21:48	21	2.236	2.278	2.278	1.803	1,184	1,077	268	254	2,783	2,261	2.26	0.06			214.38	233
3/15/2014 23:24	23	2.436	2.349	2.172	2.212	1,164	1,016	271	288	2,740	2,181	2.39	0.19			209.63	228
3/16/2014 1:00	1	2.303	2.086	3.176	2.816	1,077	938	320	311	2,645	2,014	2.19	-0.01			199.73	217
3/16/2014 2:36	2	2.415	2.497	3.922	3.568	1,058	942	333	324	2,657	2,000	2.46	0.26			198.86	216
3/16/2014 4:12	4	2.728	2.884	4.604	4.161	1,036	918	334	334	2,623	1,955	2.81	0.61		4.35	196.20	213
3/16/2014 5:48	5	3.170	3.663	4.828	4.933	948	874	277	318	2,418	1,822	3.42	1.22		49.63	188.33	205
3/16/2014 7:24	7	3.722	4.522	4.932	4.786	952	848	263	252	2,314	1,800	4.12	1.92		101.46	186.98	203
3/16/2014 9:00	9	4.574	4.989	4.956	4.996	952	848	260	247	2,307	1,799	4.78	2.58		150.20	186.96	203
3/16/2014 10:36	10	4.447	4.924	4.893	4.895	943	840	252	239	2,275	1,784	4.69	2.49		142.40	186.02	202
3/16/2014 12:12	12	3.107	3.167	3.873	3.293	937	840	250	240	2,267	1,777	3.14	0.94		28.40	185.66	202
3/16/2014 13:48	13	2.300	2.296	1.039	0.928	980	896	346	337	2,560	1,876	2.30	0.10			191.55	208
3/16/2014 15:24	15	1.886	2.033	1.315	1.285	1,029	958	550	499	3,037	1,987	1.96	-0.24			198.13	215
3/16/2014 17:00	17	1.990	1.932	1.975	2.032	1,161	1,033	607	589	3,390	2,194	1.96	-0.24			210.43	229
3/16/2014 18:36	18	2.148	2.102	2.502	2.345	1,255	1,121	454	441	3,272	2,377	2.12	-0.08			221.26	241
3/16/2014 20:12	20	2.392	2.224	2.224	2.195	1,245	1,088	317	337	2,988	2,333	2.31	0.11			218.68	238
3/16/2014 21:48	21	2.129	2.194	1.985	2.236	1,176	1,068	313	327	2,884	2,244	2.16	-0.04			213.37	232
3/16/2014 23:24	23	1.926	1.920	2.049	1.881	1,175	1,067	355	326	2,924	2,242	1.92	-0.28			213.27	232
3/17/2014 1:00	1	1.979	1.922	2.432	2.101	1,184	1,075	359	328	2,947	2,259	1.95	-0.25			214.29	233
3/17/2014 2:36	2	2.360	2.410	3.557	3.214	1,129	1,048	372	340	2,888	2,176	2.38	0.18			209.35	228
3/17/2014 4:12	4	2.699	2.781	4.504	3.943	1,033	911	342	315	2,602	1,944	2.74	0.54			195.57	213
3/17/2014 5:48	5	3.783	3.681	4.795	4.669	890	834	281	314	2,319	1,724	3.73	1.53		70.87	182.48	198
3/17/2014 7:24	7	3.041	3.481	3.273	4.687	701	694	208	283	1,886	1,395	3.26	1.06		32.93	162.94	177
3/17/2014 9:00	9	3.683	3.424	3.445	4.717	881	683	205	279	2,047	1,564	3.55	1.35		54.96	172.98	188
3/17/2014 10:36	10	1.897	3.166	1.632	2.964	722	1,005	316	265	2,309	1,727	2.53	0.33			182.67	199
3/17/2014 12:12	12	2.130	2.811	2.308	1.786	985	946	568	452	2,951	1,931	2.47	0.27			194.79	212
3/17/2014 13:48	13	2.584	2.867	2.001	2.128	972	924	594	524	3,015	1,896	2.73	0.53			192.72	210
3/17/2014 15:24	15	2.341	2.077	2.431	2.041	1,002	927	572	528	3,029	1,929	2.21	0.01			194.64	212
3/17/2014 17:00	17	2.479	2.544	2.725	3.825	1,021	995	490	539	3,045	2,016	2.51	0.31			199.82	217
3/17/2014 18:36	18	2.464	2.587	3.675	4.962	1,015	989	486	537	3,026	2,004	2.53	0.33			199.12	217
3/17/2014 20:12	20	2.176	2.496	4.146	4.999	1,022	996	488	541	3,047	2,018	2.34	0.14			199.94	217
3/17/2014 21:48	21	1.988	2.181	3.702	4.996	1,041	1,014	498	552	3,106	2,055	2.08	-0.12			202.18	220
3/17/2014 23:24	23	1.834	2.172	3.989	4.997	1,145	1,120	539	604	3,408	2,265	2.00	-0.20			214.61	233
3/18/2014 1:00	1	2.136	2.385	4.001	4.999	1,095	1,048	440	541	3,124	2,143	2.26	0.06			207.36	226
3/18/2014 2:36	2	2.613	2.898	4.780	4.944	1,049	1,009	427	562	3,047	2,058	2.76	0.56		0.42	202.32	220
3/18/2014 4:12	4	3.387	3.924	4.997	4.856	993	967	420	582	2,962	1,960	3.66	1.46		70.34	196.50	214
3/18/2014 5:48	5	3.767	4.266	4.797	4.768	853	871	447	593	2,763	1,724	4.02	1.82		91.38	182.48	198
3/18/2014 7:24	7	4.354	4.954	4.585	4.680	828	852	455	597	2,733	1,680	4.65	2.45		135.45	179.89	196

3/18/2014 9:00	9	4.274	4.695	4.373	4.592	821	800	452	588	2,660	1,620	4.48	2.28		120.96	176.34	192
3/18/2014 10:36	10	2.595	2.795	3.944	4.491	890	832	434	506	2,662	1,722	2.69	0.49			182.39	198
3/18/2014 12:12	12	2.513	2.626	2.374	2.614	958	909	460	429	2,757	1,868	2.57	0.37			191.03	208
3/18/2014 13:48	13	2.305	2.435	2.018	2.783	955	938	561	569	3,024	1,894	2.37	0.17			192.57	209
3/18/2014 15:24	15	1.956	2.134	2.287	2.848	983	949	543	511	2,985	1,932	2.05	-0.15			194.82	212
3/18/2014 17:00	17	2.503	2.296	3.304	3.544	1,080	989	474	433	2,977	2,069	2.40	0.20			203.01	221
3/18/2014 18:36	18	2.430	2.378	4.464	4.589	1,076	983	470	430	2,958	2,059	2.40	0.20			202.37	220
3/18/2014 20:12	20	2.585	2.495	4.808	4.857	1,094	1,000	478	436	3,007	2,093	2.54	0.34			204.42	222
3/18/2014 21:48	21	2.358	2.220	4.292	4.427	1,112	1,017	486	443	3,058	2,129	2.29	0.09			206.53	225
3/18/2014 23:24	23	1.904	1.909	3.409	4.103	1,160	1,083	427	448	3,118	2,242	1.91	-0.29			213.26	232
3/19/2014 1:00	1	2.315	2.474	3.478	4.565	1,172	1,128	413	453	3,166	2,300	2.39	0.19			216.70	236
3/19/2014 2:36	2	3.065	3.344	4.738	4.970	1,116	1,097	427	469	3,109	2,213	3.20	1.00		38.04	211.54	230
3/19/2014 4:12	4	3.524	4.051	4.943	4.829	963	985	469	515	2,931	1,948	3.79	1.59		80.30	195.79	213
3/19/2014 5:48	5	3.637	4.447	4.794	4.687	820	864	505	555	2,745	1,684	4.04	1.84		92.05	180.13	196
3/19/2014 7:24	7	3.774	4.911	4.645	4.546	706	817	527	579	2,631	1,524	4.34	2.14		107.46	170.60	186
3/19/2014 9:00	9	4.055	4.863	4.495	4.405	772	868	558	623	2,822	1,640	4.46	2.26		119.99	177.51	193
3/19/2014 10:36	10	3.012	3.525	4.326	4.264	915	746	453	590	2,704	1,661	3.27	1.07		36.67	178.72	194
3/19/2014 12:12	12	2.178	2.034	2.924	3.571	856	711	409	442	2,417	1,567	2.11	-0.09			173.14	188
3/19/2014 13:48	13	2.262	2.211	1.936	2.228	921	743	470	465	2,599	1,665	2.24	0.04			178.96	195
3/19/2014 15:24	15	2.191	1.937	2.428	2.038	993	848	445	436	2,722	1,841	2.06	-0.14			189.46	206
3/19/2014 17:00	17	2.412	2.506	2.525	2.567	1,053	902	316	314	2,584	1,954	2.46	0.26			196.17	213
3/19/2014 18:36	18	2.408	2.517	2.411	2.580	1,031	878	257	295	2,461	1,909	2.46	0.26			193.45	210
3/19/2014 20:12	20	2.159	2.239	2.053	2.090	1,048	893	260	258	2,459	1,941	2.20	0.00			195.36	212
3/19/2014 21:48	21	2.027	2.198	2.303	2.105	1,085	986	367	351	2,789	2,071	2.11	-0.09			203.12	221
3/19/2014 23:24	23	2.191	2.263	2.112	2.327	1,126	974	310	335	2,745	2,100	2.23	0.03			204.83	223
3/20/2014 1:00	1	2.272	2.189	2.299	2.543	1,100	942	316	343	2,701	2,042	2.23	0.03			201.38	219
3/20/2014 2:36	2	2.201	2.229	2.373	2.692	1,087	924	276	322	2,608	2,010	2.22	0.02			199.48	217
3/20/2014 4:12	4	2.581	2.544	2.407	2.558	1,030	845	270	285	2,430	1,875	2.56	0.36			191.47	208
3/20/2014 5:48	5	3.222	3.747	4.272	4.264	880	747	271	298	2,196	1,626	3.48	1.28		51.33	176.69	192
3/20/2014 7:24	7	4.138	4.957	4.908	4.999	755	698	220	312	1,985	1,453	4.55	2.35		118.27	166.37	181
3/20/2014 9:00	9	3.414	4.933	4.592	4.986	726	777	264	340	2,107	1,503	4.17	1.97		95.33	169.36	184
3/20/2014 10:36	10	2.127	3.097	2.864	3.818	821	686	363	321	2,191	1,507	2.61	0.41			169.62	184
3/20/2014 12:12	12	2.587	1.341	2.766	1.251	915	559	481	405	2,360	1,474	1.96	-0.24			167.62	182
3/20/2014 13:48	13	1.916	1.982	1.660	2.475	968	861	520	632	2,981	1,829	1.95	-0.25			188.73	205
3/20/2014 15:24	15	1.914	1.827	1.969	1.713	1,301	1,111	721	678	3,811	2,412	1.87	-0.33			223.35	243
3/20/2014 17:00	17	1.965	1.995	2.270	2.068	1,282	1,179	577	557	3,595	2,461	1.98	-0.22			226.26	246
3/20/2014 18:36	18	1.984	2.077	2.298	2.006	1,217	1,096	442	444	3,198	2,313	2.03	-0.17			217.45	236
3/20/2014 20:12	20	1.879	1.969	2.249	2.036	1,258	1,137	493	488	3,376	2,395	1.92	-0.28			222.33	242
3/20/2014 21:48	21	2.003	2.016	1.876	2.089	1,360	1,217	477	525	3,579	2,577	2.01	-0.19			233.17	254
3/20/2014 23:24	23	1.977	1.979	2.065	1.988	1,385	1,242	507	467	3,602	2,627	1.98	-0.22			236.13	257
3/21/2014 1:00	1	2.086	2.150	2.433	1.463	1,329	1,189	478	390	3,385	2,517	2.12	-0.08			229.60	250
3/21/2014 2:36	2	2.139	2.106	2.770	1.720	1,234	1,096	393	319	3,042	2,330	2.12	-0.08			218.47	238
3/21/2014 4:12	4	2.476	2.683	2.950	1.749	1,199	1,063	322	269	2,853	2,262	2.58	0.38			214.45	233
3/21/2014 5:48	5	3.604	4.253	4.494	3.402	1,209	1,064	282	272	2,826	2,272	3.93	1.73		100.21	215.05	234
3/21/2014 7:24	7	3.896	4.972	3.791	4.697	915	1,126	143	267	2,451	2,041	4.43	2.23		134.07	201.30	219
3/21/2014 9:00	9	2.945	4.709	3.464	4.829	983	1,064	220	290	2,558	2,047	3.83	1.63		85.90	201.67	219
3/21/2014 10:36	10	2.508	2.636	1.812	2.381	1,005	829	343	392	2,569	1,834	2.57	0.37			189.02	206
3/21/2014 12:12	12	1.889	1.898	1.398	2.078	960	835	549	593	2,937	1,796	1.89	-0.31			186.74	203
3/21/2014 13:48	13	1.989	2.164	2.005	2.038	989	911	634	609	3,144	1,901	2.08	-0.12			192.99	210
3/21/2014 15:24	15	1.922	2.044	2.143	2.038	1,020	918	622	585	3,144	1,938	1.98	-0.22			195.17	212
3/21/2014 17:00	17	2.123	2.212	2.412	2.278	1,039	935	443	430	2,847	1,974	2.17	-0.03			197.35	215
3/21/2014 18:36	18	2.309	2.486	2.518	2.411	1,062	970	353	360	2,746	2,032	2.40	0.20			200.79	218
3/21/2014 20:12	20	2.540	2.647	2.250	2.201	1,131	978	298	311	2,718	2,109	2.59	0.39			205.38	223
3/21/2014 21:48	21	2.242	2.107	1.911	1.825	1,126	950	338	349	2,763	2,076	2.17	-0.03			203.39	221
3/21/2014 23:24	23	1.917	2.033	1.991	2.096	1,128	1,017	360	409	2,913	2,145	1.97	-0.23			207.47	226
3/22/2014 1:00	1	2.263	2.335	1.898	3.147	1,170	1,026	314	410	2,920	2,196	2.30	0.10			210.54	229
3/22/2014 2:36	2	2.598	2.981	2.492	3.216	1,152	1,058	255	291	2,755	2,209	2.79	0.59		3.31	211.31	230
3/22/2014 4:12	4	3.354	3.910	2.692	3.596	1,174	1,049	207	273	2,703	2,223	3.63	1.43		74.00	212.15	231
3/22/2014 5:48	5	4.018	4.929	3.972	4.784	1,105	1,068	194	277	2,644	2,173	4.47	2.27		142.54	209.15	227
3/22/2014 7:24	7	3.826	4.918	3.872	4.968	787	1,139	171	293	2,390	1,926	4.37	2.17		124.77	194.49	212
3/22/2014 9:00	9	1.851	4.814	2.638	4.860	582	1,156	171	297	2,206	1,738	3.33	1.13		42.21	183.32	199
3/22/2014 10:36	10	1.309	4.710	1.398	4.752	610	1,070	180	271	2,131	1,680	3.01	0.81		18.44	179.87	196
3/22/2014 12:12	12	1.140	3.878	0.528	2.657	664	955	316	233	2,168	1,619	2.51	0.31			176.24	192
3/22/2014 13:48	13	1.347	2.757	0.905	0.616	820	958	413	214	2,405	1,778	2.05	-0.15			185.69	202
3/22/2014 15:24	15	1.638	2.311	1.165	0.776	980	949	515	385	2,828	1,929	1.97	-0.23			194.66	212
3/22/2014 17:00	17	2.087	2.013	2.243	2.301	1,147	971	654	630	3,402	2,117	2.05	-0.15			205.85	224
3/22/2014 18:36	18	2.022	1.917	2.031	1.961	1,131	962	509	520	3,123	2,094	1.97	-0.23			204.44	222
3/22/2014 20:12	20	2.078	2.001	1.906	1.767	1,076	939	381	393	2,789	2,015	2.04	-0.16			199.77	217
3/22/2014 21:48	21	2.008	2.072	2.103	2.341	1,105	973	358	366	2,803	2,079	2.04	-0.16			203.56	221
3/22/2014 23:24	23	2.472	2.407	2.417	2.115	1,195	987	286	328	2,796	2,183	2.44	0.24			209.72	228
3/23/2014 1:00	1	2.591	2.457	2.048	2.841	1,127	958	237	332	2,655	2,085	2.52	0.32			203.95	222
3/23/2014 2:36	2	2.444	2.651	2.271	3.092	1,056	933	253	288	2,529	1,988	2.55	0.35			198.20	216
3/23/2014 4:12	4	2.651	2.941	2.925	3.411	958	871	265	287	2,382	1,830	2.80	0.60		3.44	188.77	205
3/23/2014 5:48	5	3.437	3.830	4.124	4.407	906	830	268	291	2,296	1,737	3.63	1.43		64.02	183.24	199
3/23/2014 7:24	7	3.285	4.861	4.769	4.979	707	795	271	305	2,078	1,502	4.07	1.87		88.58	169.31	184
3/23/2014 9:00	9	3.442	4.974	4.283	4.722	795	837	169	294	2,095	1,632	4.21	2.01		102.09	177.05	193
3/23/2014 10:36	10	4.847	4.949	4.853	4.464	1,111	984	113	259	2,467	2,095	4.90	2.70		173.72	204.52	222
3/23/2014 12:12	12	3.459	4.263	2.388	3.344	1,110	985	155	253	2,504	2,096	3.86	1.66		89.88	204.56	222
3/23/2014 13:48	13	3.103	3.903	1.095	1.133	1,201	1,117	222	270	2,810	2,318	3.50	1.30	64.86		217.76	237
3/23/2014 15:24	15	2.586	2.972	0.986	1.037	1,128	1,014	372	386	2,900	2,142	2.78	0.58	2.40		207.32	225
3/23/2014 17:00	17	1.989	1.931	1.673	1.832	1,061	919	573	572	3,125	1,980	1.96	-0.24			197.69	215
3/23/2014 18:36	18	2.001	1.991	2.101	2.172	1,124	978	598	567	3,267	2,102	2.00	-0.20			204.94	223
3/23/2014 20:12	20	2.170	2.131	2.169	2.091	1,142	994	459	442	3,038	2,137	2.15	-0.05			207.01	225
3/23/2014 21:48	21	2.118	2.092	2.146	2.255	1,169	1,020	438	449	3,076	2,189	2.10	-0.10			210.11	229
3/23/2014 23:24	23	2.058	1.961	1.925	1.956	1,199	1,056	424	412	3,092	2,255	2.01	-0.19			214.05	233
3/24/2014 1:00	1	2.138	2.106	2.522	2.191	1,198	1,075	437	419	3,129	2,273	2.12	-0.08			215.11	234
3/24/2014 2:36	2	2.613	2.822	3.663	3.830	1,226	1,083	395	385	3,089	2,309	2.72	0.52			217.21	236
3/24/2014 4:12	4	3.492	3.775	4.345	4.444	1,186	1,045	269	322	2,822	2,231	3.63	1.43		74.29	212.59	231
3/24/2014 5:48	5	4.195	4.629	4.419	4.988	977	889	243	327	2,437	1,867	4.41	2.21		125.51	190.97	208
3/24/2014 7:24	7	4.204	4.962	4.854	4.767	794	760	255	343	2,152	1,554	4.58	2.38		124.99	172.41	188
3/24/2014 9:00	9	2.986	4.379	4.479	4.438	816	734	246	331	2,127	1,550	3.68	1.48		63.48	172.16	187
3/24/2014 10:36	10	2.742	2.978	3.119	3.182	893	842	430	317	2,483	1,735	2.86	0.66		7.97	183.17	199
3/24/2014 12:12	12	1.991	3.123	2.677	1.467	905	893	535	388	2,721	1,797	2.56	0.36			186.84	203
3/24/2014 13:48	13	2.301	2.226	2.598	2.197	992	875	549	532	2,947	1,867	2.26	0.06			190.96	208
3/24/2014 15:24	15	2.052	2.158	2.045	2.005	994	895	600	573	3,062	1,889	2.11	-0.09			192.30	209
3/24/2014 17:00	17	2.071	2.136	2.856	3.097	999	902	623	594	3,119	1,901	2.10	-0.10			193.01	210
3/24/2014 18:36	18	2.224	2.381	4.062	4.265	1,065	959	544	531	3,099	2,024	2.30	0.10			200.30	218
3/24/2014 20:12	20	3.103	3.417	3.027	3.926	1,233	1,103	298	351	2,985	2,335	3.26	1.06	44.09		218.81	238
3/24/2014 21:48	21	3.008	3.425	2.298	2.126	1,296	1,141	280	254	2,972	2,437	3.22	1.02	41.50		224.84	245
3/24/2014 23:24	23	2.190	2.259	1.563	1.647	1,268	1,173	385	369	3,194	2,441	2.22	0.02			225.08	245
3/25/2014 1:00	1	2.185	2.552	2.464	2.843	1,247	1,186	388	388	3,209	2,433	2.37	0.17			224.60	244
3/25/2014 2:36	2	2.976	3.429	3.385	3.353	1,258	1,146	308	301	3,013	2,404	3.20	1.00		39.86	222.86	242
3/25/2014 4:12	4	3.361	3.757	3.509	3.941	1,058	961	266	284	2,570	2,020	3.56	1.36		64.00	200.05	218
3/25/2014 5:48	5	3.284	3.609	4.304	4.871	812	733	291	352	2,188	1,545	3.45	1.25		47.32	171.87	187
3/25/2014 7:24	7	4.110	3.813	4.892	4.930	872	655	346	361	2,233	1,527	3.96	1.76		81.82	170.78	186
3/25/2014 9:00	9	3.793	3.671	4.873	4.831	852	634	337	351	2,174	1,487	3.73	1.53		65.39	168.38	183
3/25/2014 10:36	10	2.390	1.818	3.309	3.283	836	616	342	348	2,143	1,452	2.10	-0.10			166.33	181
3/25/2014 12:12	12	2.191	1.706	1.775	1.404	864	734	438	386	2,422	1,598	1.95	-0.25			175.00	190
3/25/2014 13:48	13	2.184	2.057	1.753	1.577	1,061	770	498	478	2,807	1,831	2.12	-0.08			188.83	205
3/25/2014 15:24	15	2.341	2.176	1.687	1.767	984	910	501	521	2,915	1,894	2.26	0.06			192.58	209
3/25/2014 17:00	17	1.896	2.441	2.413	3.225	913	922	546	578	2,959	1,836	2.17	-0.03			189.11	206
3/25/2014 18:36	18	1.787	2.492	3.533	4.724	915	925	549	582	2,972	1,840	2.14	-0.06			189.38	206
3/25/2014 20:12	20	1.827	2.604	4.159	4.997	919	930	553	587	2,989	1,849	2.22	0.02			189.93	207
3/25/2014 21:48	21	1.685	2.369	3.826	4.991	928	941	560	595	3,024	1,869	2.03	-0.17			191.08	208
3/25/2014 23:24	23	1.590	2.251	3.782	4.994	1,039	1,052	626	666	3,383	2,091	1.92	-0.28			204.28	222
3/26/2014 1:00	1	1.959	2.312	4.001	4.799	1,058	951	467	471	2,947	2,009	2.14	-0.06			199.43	217
3/26/2014 2:36	2	2.322	2.353	3.747	3.841	960	853	360	329	2,502	1,813	2.34	0.14			187.79	204
3/26/2014 4:12	4	2.219	2.522	4.507	4.636	847	740	409	368	2,364	1,587	2.37	0.17			174.35	190
3/26/2014 5:48	5	3.904	2.955	4.975	4.965	845	670	436	389	2,339	1,515	3.43	1.23		45.68	170.08	185
3/26/2014 7:24	7	4.457	4.747	4.778	4.675	848	737	429	383	2,397	1,585	4.60	2.40		127.61	174.25	189
3/26/2014 9:00	9	4.305	4.630	4.581	4.385	844	706	442	395	2,389	1,551	4.47	2.27		116.95	172.21	187
3/26/2014 10:36	10	2.691	3.111	4.206	3.875	818	707	435	389	2,348	1,525	2.90	0.70		10.21	170.64	186
3/26/2014 12:12	12	2.158	2.414	2.404	2.076	843	704	463	431	2,440	1,546	2.29	0.09			171.94	187
3/26/2014 13:48	13	2.177	2.053	1.818	1.918	860	712	472	473	2,516	1,572	2.12	-0.08			173.47	189
3/26/2014 15:24	15	2.072	2.027	1.725	1.920	942	767	521	534	2,764	1,709	2.05	-0.15			181.58	197
3/26/2014 17:00	17	2.287	2.183	2.459	2.838	975	798	518	554	2,845	1,773	2.23	0.03			185.41	202
3/26/2014 18:36	18	2.341	2.376	3.953	4.529	987	809	524	561	2,881	1,796	2.36	0.16			186.76	203
3/26/2014 20:12	20	2.411	2.524	4.637	4.999	1,011	829	536	574	2,950	1,840	2.47	0.27			189.36	206
3/26/2014 21:48	21	2.399	2.474	4.592	4.995	1,030	845	546	585	3,005	1,875	2.44	0.24			191.43	208

3/26/2014 23:24	23	2.125	2.189	4.254	4.978	1,040	855	551	591	3,037	1,895	2.16	-0.04			192.65	210
3/27/2014 1:00	1	2.224	2.240	4.578	4.974	1,005	828	569	610	3,012	1,833	2.23	0.03			188.96	206
3/27/2014 2:36	2	2.354	2.459	4.975	4.944	903	731	602	651	2,888	1,634	2.41	0.21			177.16	193
3/27/2014 4:12	4	2.823	2.560	4.860	4.858	777	594	577	659	2,607	1,371	2.69	0.49			161.51	176
3/27/2014 5:48	5	2.151	2.410	4.744	4.771	640	504	364	481	1,989	1,144	2.28	0.08			148.05	161
3/27/2014 7:24	7	2.681	3.358	4.628	4.684	641	506	365	482	1,993	1,147	3.02	0.82		15.81	148.20	161
3/27/2014 9:00	9	2.891	3.327	4.513	4.597	780	537	342	458	2,117	1,317	3.11	0.91		22.46	158.31	172
3/27/2014 10:36	10	3.886	2.481	4.220	4.283	1,042	661	313	419	2,435	1,703	3.18	0.98		31.07	181.21	197
3/27/2014 12:12	12	2.538	3.077	2.085	2.356	896	793	433	439	2,561	1,689	2.81	0.61		4.11	180.42	196
3/27/2014 13:48	13	2.211	2.318	2.095	2.700	873	780	466	531	2,650	1,654	2.26	0.06			178.31	194
3/27/2014 15:24	15	2.349	2.283	2.142	2.235	976	798	541	483	2,798	1,774	2.32	0.12			185.46	202
3/27/2014 17:00	17	2.282	2.269	3.358	2.372	957	801	561	424	2,743	1,758	2.28	0.08			184.50	201
3/27/2014 18:36	18	2.334	2.296	4.700	3.507	963	806	565	425	2,759	1,769	2.31	0.11			185.15	201
3/27/2014 20:12	20	2.395	2.353	4.931	3.682	974	816	573	429	2,792	1,790	2.37	0.17			186.38	203
3/27/2014 21:48	21	2.390	2.295	4.628	3.423	989	828	582	435	2,834	1,816	2.34	0.14			187.97	204
3/27/2014 23:24	23	2.049	1.939	4.156	2.812	1,012	847	553	407	2,819	1,858	1.99	-0.21			190.46	207
3/28/2014 1:00	1	2.515	2.444	3.175	1.912	1,114	924	362	320	2,719	2,038	2.48	0.28			201.12	219
3/28/2014 2:36	2	2.916	3.068	3.470	3.160	1,085	916	276	311	2,587	2,000	2.99	0.79		19.06	198.90	216
3/28/2014 4:12	4	3.755	4.541	3.563	4.328	1,045	949	212	280	2,485	1,994	4.15	1.95		109.74	198.51	216
3/28/2014 5:48	5	4.619	4.973	4.365	4.990	999	974	183	264	2,420	1,973	4.80	2.60		159.62	197.30	215
3/28/2014 7:24	7	4.830	4.917	4.124	4.908	933	947	112	262	2,254	1,880	4.87	2.67		161.01	191.75	209
3/28/2014 9:00	9	3.674	4.861	4.436	4.827	889	904	234	285	2,312	1,792	4.27	2.07		111.96	186.55	203
3/28/2014 10:36	10	2.571	4.097	3.170	3.715	848	866	285	288	2,288	1,715	3.33	1.13		42.00	181.93	198
3/28/2014 12:12	12	2.272	2.702	1.565	1.361	876	768	435	402	2,481	1,644	2.49	0.29			177.73	193
3/28/2014 13:48	13	2.093	2.110	2.296	2.168	915	724	567	490	2,695	1,639	2.10	-0.10			177.43	193
3/28/2014 15:24	15	2.378	2.141	2.655	2.431	950	783	456	553	2,742	1,733	2.26	0.06			183.00	199
3/28/2014 17:00	17	2.563	2.355	3.088	4.125	967	794	400	568	2,729	1,761	2.46	0.26			184.66	201
3/28/2014 18:36	18	2.499	2.329	3.970	4.979	964	788	400	571	2,723	1,752	2.41	0.21			184.16	200
3/28/2014 20:12	20	2.478	2.368	4.126	5.000	964	787	401	575	2,728	1,751	2.42	0.22			184.11	200
3/28/2014 21:48	21	2.447	2.106	3.790	5.000	973	794	406	583	2,756	1,767	2.28	0.08			185.05	201
3/28/2014 23:24	23	2.447	2.151	3.809	5.000	971	790	405	584	2,751	1,761	2.30	0.10			184.71	201
3/29/2014 1:00	1	2.679	2.494	4.505	5.000	978	802	402	577	2,759	1,780	2.59	0.39			185.83	202
3/29/2014 2:36	2	3.046	3.827	3.947	3.930	963	934	237	254	2,387	1,897	3.44	1.24		52.30	192.76	210
3/29/2014 4:12	4	3.679	4.590	4.027	4.335	966	937	237	254	2,394	1,904	4.13	1.93		105.77	193.16	210
3/29/2014 5:48	5	4.690	4.985	4.934	4.988	980	975	230	262	2,447	1,955	4.84	2.64		161.98	196.20	213
3/29/2014 7:24	7	4.877	4.933	4.982	4.951	897	1,006	163	233	2,298	1,903	4.90	2.70		164.57	193.12	210
3/29/2014 9:00	9	4.934	4.881	4.990	4.904	857	994	156	222	2,229	1,851	4.91	2.71		162.16	190.05	207
3/29/2014 10:36	10	4.318	4.829	4.581	4.856	830	966	134	213	2,144	1,797	4.57	2.37		134.72	186.79	203
3/29/2014 12:12	12	2.598	4.461	1.586	2.882	808	936	192	209	2,146	1,744	3.53	1.33		56.63	183.69	200
3/29/2014 13:48	13	1.783	3.175	1.067	1.222	805	872	338	315	2,330	1,678	2.48	0.28			179.73	195
3/29/2014 15:24	15	1.637	2.278	1.235	0.958	839	822	447	358	2,467	1,662	1.96	-0.24			178.78	194
3/29/2014 17:00	17	2.035	2.098	1.507	1.337	934	820	474	449	2,678	1,755	2.07	-0.13			184.30	200
3/29/2014 18:36	18	2.158	2.253	3.576	3.335	927	823	441	454	2,645	1,750	2.21	0.01			184.05	200
3/29/2014 20:12	20	2.517	2.751	3.745	3.714	994	888	335	350	2,567	1,882	2.63	0.43			191.87	209
3/29/2014 21:48	21	2.310	2.296	2.267	2.048	1,068	891	317	331	2,607	1,959	2.30	0.10			196.45	214
3/29/2014 23:24	23	2.338	2.239	1.492	1.297	1,065	892	329	357	2,642	1,957	2.29	0.09			196.31	213
3/30/2014 1:00	1	2.352	2.192	1.574	1.286	1,046	876	331	359	2,612	1,922	2.27	0.07			194.26	211
3/30/2014 2:36	2	2.296	2.164	1.742	1.482	993	812	339	368	2,511	1,804	2.23	0.03			187.27	204
3/30/2014 4:12	4	2.531	2.427	2.231	1.747	972	787	340	369	2,467	1,759	2.48	0.28			184.55	201
3/30/2014 5:48	5	3.163	3.026	3.515	2.922	924	723	347	377	2,371	1,647	3.09	0.89		24.25	177.94	194
3/30/2014 7:24	7	4.115	4.452	4.972	4.898	748	653	368	396	2,165	1,401	4.28	2.08		99.03	163.29	178
3/30/2014 9:00	9	4.984	4.953	4.904	4.943	699	696	371	363	2,129	1,395	4.97	2.77		142.94	162.93	177
3/30/2014 10:36	10	4.380	4.797	4.798	4.858	692	690	368	361	2,111	1,382	4.59	2.39		117.88	162.16	176
3/30/2014 12:12	12	2.913	4.515	4.615	4.713	686	683	365	357	2,091	1,369	3.71	1.51		61.50	161.38	175
3/30/2014 13:48	13	2.323	3.570	3.303	3.438	738	674	361	353	2,126	1,412	2.95	0.75	12.75		163.97	178
3/30/2014 15:24	15	3.026	2.682	2.803	2.099	925	650	350	341	2,266	1,575	2.85	0.65	7.14		173.64	189
3/30/2014 17:00	17	2.420	2.317	2.416	1.920	843	659	354	389	2,246	1,503	2.37	0.17			169.35	184
3/30/2014 18:36	18	2.183	2.088	2.109	2.076	817	654	381	434	2,286	1,470	2.14	-0.06			167.43	182
3/30/2014 20:12	20	2.057	2.064	2.216	2.195	844	672	383	433	2,332	1,516	2.06	-0.14			170.14	185
3/30/2014 21:48	21	2.139	2.251	2.168	2.099	877	712	368	421	2,379	1,590	2.19	-0.01			174.50	190
3/30/2014 23:24	23	1.989	2.050	1.935	1.932	879	718	371	424	2,392	1,597	2.02	-0.18			174.94	190
3/31/2014 1:00	1	2.086	2.099	2.010	2.129	883	722	374	427	2,406	1,605	2.09	-0.11			175.43	191
3/31/2014 2:36	2	2.175	2.229	2.688	2.744	854	702	382	437	2,375	1,556	2.20	0.00			172.51	188
3/31/2014 4:12	4	2.162	2.405	3.701	4.012	744	630	390	458	2,223	1,374	2.28	0.08			161.71	176
3/31/2014 5:48	5	2.899	3.405	4.859	4.993	699	584	367	465	2,115	1,284	3.15	0.95		24.85	156.33	170
3/31/2014 7:24	7	4.480	4.969	4.940	4.973	650	547	376	477	2,050	1,197	4.72	2.52		118.08	151.21	164
3/31/2014 9:00	9	3.721	4.572	4.825	4.944	641	540	380	483	2,043	1,181	4.15	1.95		82.96	150.21	163
3/31/2014 10:36	10	2.941	3.655	4.561	4.925	856	815	445	598	2,714	1,671	3.30	1.10		38.86	179.35	195
3/31/2014 12:12	12	2.869	4.635	3.227	4.674	778	840	394	454	2,466	1,618	3.75	1.55		69.82	176.20	192
3/31/2014 13:48	13	2.509	3.353	3.539	2.988	825	677	487	406	2,395	1,502	2.93	0.73	12.15		169.32	184
3/31/2014 15:24	15	2.336	2.436	2.356	2.343	794	579	420	430	2,223	1,374	2.39	0.19			161.68	176
3/31/2014 17:00	17	1.953	1.963	2.767	2.364	721	563	493	438	2,216	1,285	1.96	-0.24			156.40	170
3/31/2014 18:36	18	1.934	2.281	2.924	2.615	720	621	495	438	2,274	1,340	2.11	-0.09			159.70	174
3/31/2014 20:12	20	1.896	2.242	3.398	3.184	731	632	507	446	2,317	1,364	2.07	-0.13			161.09	175
3/31/2014 21:48	21	1.814	2.380	3.563	3.291	742	643	518	453	2,357	1,386	2.10	-0.10			162.38	177
3/31/2014 23:24	23	1.807	2.407	3.682	3.300	773	641	519	442	2,377	1,415	2.11	-0.09			164.12	178
4/1/2014 1:00	1	2.002	2.117	3.603	2.825	787	576	410	394	2,166	1,362	2.06	-0.14			161.01	175
4/1/2014 2:36	2	2.116	2.094	3.548	3.139	787	574	368	384	2,113	1,361	2.10	-0.10			160.95	175
4/1/2014 4:12	4	2.702	2.578	4.720	4.462	735	539	375	417	2,067	1,275	2.64	0.44			155.81	169
4/1/2014 5:48	5	2.744	4.128	4.944	4.975	566	589	384	434	1,973	1,155	3.44	1.24		40.34	148.71	162
4/1/2014 7:24	7	3.906	4.721	4.844	4.900	571	519	388	439	1,917	1,090	4.31	2.11		89.54	144.84	158
4/1/2014 9:00	9	4.605	4.715	4.744	4.825	821	637	345	443	2,246	1,458	4.66	2.46		125.91	166.68	181
4/1/2014 10:36	10	3.265	3.332	4.200	4.703	793	611	313	436	2,153	1,404	3.30	1.10		35.46	163.46	178
4/1/2014 12:12	12	2.425	2.460	2.401	3.658	782	587	393	489	2,251	1,369	2.44	0.24			161.39	176
4/1/2014 13:48	13	2.270	2.333	2.405	2.540	789	642	422	418	2,271	1,431	2.30	0.10			165.06	180
4/1/2014 15:24	15	2.284	2.223	2.180	2.144	832	629	440	439	2,339	1,461	2.25	0.05			166.84	181
4/1/2014 17:00	17	2.406	2.612	2.325	2.208	842	664	416	418	2,340	1,506	2.51	0.31			169.56	184
4/1/2014 18:36	18	2.497	2.764	3.146	2.991	848	672	418	421	2,360	1,520	2.63	0.43			170.38	185
4/1/2014 20:12	20	2.771	3.050	4.330	4.117	865	687	427	429	2,407	1,552	2.91	0.71	10.92		172.25	187
4/1/2014 21:48	21	2.771	3.051	4.916	4.954	890	709	439	440	2,478	1,599	2.91	0.71	11.14		175.06	190
4/1/2014 23:24	23	2.550	2.743	4.740	4.706	901	727	456	456	2,539	1,627	2.65	0.45			176.75	192
4/2/2014 1:00	1	2.253	2.600	4.855	4.786	808	661	495	493	2,456	1,468	2.43	0.23			167.30	182
4/2/2014 2:36	2	2.123	2.229	4.992	4.984	742	582	525	520	2,369	1,325	2.18	-0.02			158.77	173
4/2/2014 4:12	4	2.710	2.572	4.963	4.907	726	563	532	527	2,348	1,289	2.64	0.44			156.65	170
4/2/2014 5:48	5	3.723	3.587	4.935	4.830	682	541	450	436	2,110	1,223	3.66	1.46		54.67	152.74	166
4/2/2014 7:24	7	4.799	4.934	4.906	4.753	659	559	362	363	1,942	1,218	4.87	2.67		127.57	152.41	166
4/2/2014 9:00	9	4.754	4.989	4.878	4.675	781	688	415	435	2,319	1,469	4.87	2.67		140.39	167.33	182
4/2/2014 10:36	10	3.859	4.089	4.649	4.588	854	716	316	373	2,259	1,570	3.97	1.77		83.92	173.35	189
4/2/2014 12:12	12	2.706	2.799	2.426	2.767	766	628	367	357	2,118	1,394	2.75	0.55		0.14	162.90	177
4/2/2014 13:48	13	2.177	2.236	1.981	2.306	765	653	430	401	2,249	1,418	2.21	0.01			164.33	179
4/2/2014 15:24	15	2.201	2.474	2.247	2.230	785	662	447	412	2,307	1,447	2.34	0.14			166.02	181
4/2/2014 17:00	17	2.230	2.188	2.703	2.557	799	670	404	381	2,254	1,469	2.21	0.01			167.35	182
4/2/2014 18:36	18	2.593	2.856	2.968	2.609	856	710	313	296	2,174	1,566	2.72	0.52			173.09	188
4/2/2014 20:12	20	2.598	2.952	3.616	3.501	846	705	308	287	2,146	1,551	2.77	0.57	1.67		172.22	187
4/2/2014 21:48	21	2.363	2.471	2.292	1.896	875	732	289	279	2,175	1,607	2.42	0.22			175.54	191
4/2/2014 23:24	23	1.936	2.009	1.947	1.924	882	723	400	409	2,413	1,605	1.97	-0.23			175.39	191
4/3/2014 1:00	1	2.037	2.074	2.636	2.688	903	725	439	473	2,539	1,628	2.06	-0.14			176.77	192
4/3/2014 2:36	2	2.095	2.141	3.735	3.945	828	681	417	439	2,364	1,509	2.12	-0.08			169.69	185
4/3/2014 4:12	4	2.533	2.117	4.371	4.048	764	623	350	330	2,066	1,386	2.32	0.12			162.43	177
4/3/2014 5:48	5	3.323	3.229	4.994	4.987	751	621	353	339	2,063	1,371	3.28	1.08		33.60	161.53	176
4/3/2014 7:24	7	4.351	3.716	4.876	4.958	744	597	358	344	2,042	1,341	4.03	1.83		81.07	159.71	174
4/3/2014 9:00	9	3.560	3.475	4.743	4.914	693	605	348	334	1,980	1,298	3.52	1.32		47.72	157.20	171
4/3/2014 10:36	10	2.598	3.197	3.761	3.971	791	693	322	308	2,113	1,483	2.90	0.70		9.81	168.19	183
4/3/2014 12:12	12	2.205	2.416	2.268	2.786	752	664	457	530	2,403	1,416	2.31	0.11			164.18	179
4/3/2014 13:48	13	1.982	2.313	2.226	3.022	764	662	470	523	2,418	1,426	2.15	-0.05			164.77	179
4/3/2014 15:24	15	2.288	2.085	2.204	2.215	866	659	460	483	2,468	1,525	2.19	-0.01			170.68	186
4/3/2014 17:00	17	2.090	2.295	2.354	2.259	841	725	404	384	2,354	1,566	2.19	-0.01			173.10	188
4/3/2014 18:36	18	2.344	2.450	2.385	2.511	880	748	272	300	2,201	1,629	2.40	0.20			176.82	192
4/3/2014 20:12	20	2.381	2.396	2.375	2.202	889	743	271	300	2,202	1,631	2.39	0.19			176.98	192
4/3/2014 21:48	21	2.422	2.420	2.332	2.032	912	766	278	285	2,241	1,678	2.42	0.22			179.78	196
4/3/2014 23:24	23	2.254	2.302	2.053	1.979	924	779	280	304	2,287	1,703	2.28	0.08			181.24	197
4/4/2014 1:00	1	2.437	2.478	2.356	2.394	947	801	276	298	2,322	1,748	2.46	0.26			183.92	200
4/4/2014 2:36	2	2.881	2.762	3.088	2.837	969	823	258	272	2,322	1,792	2.82	0.62		5.29	186.51	203
4/4/2014 4:12	4	3.668	3.626	4.286	4.115	979	833	260	274	2,345	1,812	3.65	1.45		66.54	187.69	204
4/4/2014 5:48	5	4.672	4.563	4.995	4.998	987	840	261	275	2,362	1,826	4.62	2.42		139.24	188.56	205
4/4/2014 7:24	7	4.951	4.972	4.830	4.956	880	868	225	274	2,247	1,748	4.96	2.76		160.82	183.90	200
4/4/2014 9:00	9	3.947	4.726	4.649	4.907	702	888	237	315	2,142	1,590	4.34	2.14		109.50	174.54	190
4/4/2014 10:36	10	2.942	4.073	3.775	4.713	803	741	232	307	2,083	1,544	3.51	1.31		51.49	171.79	187
4/4/2014 12:12	12	2.772	3.220	2.156	2.531	803	702	303	320	2,127	1,505	3.00	0.80		16.51	169.49	184

4/4/2014 13:48	13	2.336	2.386	2.318	2.417	800	656	428	419	2,303	1,456	2.36	0.16			166.57	181
4/4/2014 15:24	15	2.305	2.219	2.379	2.370	854	682	415	434	2,386	1,536	2.26	0.06			171.32	186
4/4/2014 17:00	17	2.332	2.071	2.432	2.275	874	704	324	396	2,298	1,578	2.20	0.00			173.81	189
4/4/2014 18:36	18	2.292	2.380	2.327	2.326	884	725	296	335	2,240	1,609	2.34	0.14			175.63	191
4/4/2014 20:12	20	2.462	2.319	2.522	2.351	925	729	298	337	2,289	1,654	2.39	0.19			178.31	194
4/4/2014 21:48	21	2.307	2.123	2.415	2.092	930	732	343	366	2,371	1,662	2.21	0.01			178.82	194
4/4/2014 23:24	23	2.261	2.030	2.289	2.284	945	742	290	374	2,352	1,687	2.15	-0.05			180.30	196
4/5/2014 1:00	1	2.534	2.165	2.476	2.702	953	749	265	340	2,306	1,702	2.35	0.15			181.15	197
4/5/2014 2:36	2	2.901	2.869	2.599	2.902	960	834	196	286	2,276	1,794	2.89	0.69		9.97	186.64	203
4/5/2014 4:12	4	3.519	4.367	2.242	4.131	953	924	135	259	2,272	1,878	3.94	1.74		90.39	191.63	208
4/5/2014 5:48	5	4.490	4.979	3.272	4.993	951	924	134	258	2,267	1,874	4.73	2.53		150.23	191.43	208
4/5/2014 7:24	7	4.969	4.787	4.640	4.940	910	930	135	260	2,235	1,840	4.88	2.68		159.36	189.37	206
4/5/2014 9:00	9	4.909	4.563	4.987	4.886	836	933	113	258	2,139	1,769	4.74	2.54		145.42	185.16	201
4/5/2014 10:36	10	3.669	4.308	4.529	4.832	761	859	194	250	2,063	1,619	3.99	1.79		86.35	176.27	192
4/5/2014 12:12	12	2.229	3.770	2.997	3.385	730	823	307	260	2,119	1,553	3.00	0.80		17.01	172.32	187
4/5/2014 13:48	13	1.714	2.967	1.388	1.328	752	803	360	261	2,176	1,555	2.34	0.14			172.46	188
4/5/2014 15:24	15	1.784	2.251	1.311	1.186	844	762	404	380	2,391	1,606	2.02	-0.18			175.50	191
4/5/2014 17:00	17	1.804	1.868	1.886	2.089	910	776	466	510	2,662	1,686	1.84	-0.36			180.25	196
4/5/2014 18:36	18	2.049	2.295	2.333	2.350	987	869	377	426	2,658	1,856	2.17	-0.03			190.31	207
4/5/2014 20:12	20	2.500	2.481	2.395	2.354	1,037	864	268	326	2,496	1,902	2.49	0.29			193.05	210
4/5/2014 21:48	21	2.126	2.368	2.117	2.303	982	805	287	313	2,387	1,787	2.25	0.05			186.25	203
4/5/2014 23:24	23	2.642	2.289	2.715	2.531	1,013	827	232	324	2,396	1,839	2.47	0.27			189.34	206
4/6/2014 1:00	1	2.383	2.412	1.757	3.093	938	797	204	341	2,279	1,735	2.40	0.20			183.14	199
4/6/2014 2:36	2	2.526	2.688	1.858	3.457	956	812	207	346	2,320	1,768	2.61	0.41			185.08	201
4/6/2014 4:12	4	2.752	3.039	2.428	4.214	968	824	209	353	2,353	1,791	2.90	0.70		10.70	186.49	203
4/6/2014 5:48	5	3.225	3.936	3.353	4.992	910	800	213	365	2,288	1,710	3.58	1.38		59.66	181.66	198
4/6/2014 7:24	7	3.179	4.164	3.860	4.912	791	725	229	376	2,121	1,516	3.67	1.47		61.99	170.13	185
4/6/2014 9:00	9	4.124	4.811	4.940	4.815	801	770	215	349	2,136	1,571	4.47	2.27		117.76	173.40	189
4/6/2014 10:36	10	4.818	4.927	4.923	4.719	818	916	127	291	2,153	1,735	4.87	2.67		153.72	183.11	199
4/6/2014 12:12	12	3.508	4.824	3.929	4.623	797	895	113	283	2,087	1,691	4.17	1.97		101.08	180.53	196
4/6/2014 13:48	13	2.869	4.391	1.433	3.244	923	874	218	258	2,272	1,796	3.63	1.43	65.01		186.79	203
4/6/2014 15:24	15	2.690	3.260	1.425	1.444	1,021	884	293	330	2,528	1,905	2.97	0.77	17.19		193.23	210
4/6/2014 17:00	17	2.241	2.754	1.597	1.726	957	845	427	460	2,690	1,802	2.50	0.30			187.11	203
4/6/2014 18:36	18	1.853	1.996	2.130	2.069	978	827	514	535	2,854	1,806	1.92	-0.28			187.34	204
4/6/2014 20:12	20	2.044	2.136	3.016	2.581	1,046	888	421	452	2,807	1,934	2.09	-0.11			194.93	212
4/6/2014 21:48	21	2.249	2.307	2.096	2.126	1,104	913	264	354	2,635	2,017	2.28	0.08			199.91	217
4/6/2014 23:24	23	2.217	2.220	1.989	2.281	1,098	910	259	381	2,647	2,007	2.22	0.02			199.32	217
4/7/2014 1:00	1	2.214	2.207	1.904	1.712	1,137	955	280	287	2,661	2,093	2.21	0.01			204.40	222
4/7/2014 2:36	2	2.483	2.870	2.132	1.810	1,109	997	221	298	2,625	2,106	2.68	0.48			205.18	223
4/7/2014 4:12	4	2.820	3.879	1.819	3.302	1,077	1,013	191	302	2,582	2,089	3.35	1.15		48.38	204.19	222
4/7/2014 5:48	5	3.491	4.822	2.807	4.411	1,086	1,022	192	304	2,604	2,108	4.16	1.96		114.18	205.27	223
4/7/2014 7:24	7	3.929	4.870	3.198	4.986	936	1,081	163	267	2,447	2,017	4.40	2.20		130.39	199.89	217
4/7/2014 9:00	9	3.220	4.625	3.278	4.788	756	1,024	142	282	2,204	1,780	3.92	1.72		86.16	185.80	202
4/7/2014 10:36	10	2.459	3.986	2.801	3.879	880	837	322	282	2,320	1,716	3.22	1.02		34.01	182.03	198
4/7/2014 12:12	12	2.714	2.951	2.464	3.239	864	737	361	494	2,457	1,601	2.83	0.63		5.72	175.19	191
4/7/2014 13:48	13	1.981	2.000	1.810	1.807	888	777	486	456	2,607	1,665	1.99	-0.21			178.99	195
4/7/2014 15:24	15	1.877	2.030	1.820	1.988	944	869	553	562	2,928	1,812	1.95	-0.25			187.73	204
4/7/2014 17:00	17	1.929	2.018	2.402	2.275	957	862	612	586	3,017	1,819	1.97	-0.23			188.14	205
4/7/2014 18:36	18	1.971	2.104	3.365	2.847	979	882	636	604	3,101	1,861	2.04	-0.16			190.63	207
4/7/2014 20:12	20	2.026	2.174	4.341	3.944	970	871	635	604	3,080	1,842	2.10	-0.10			189.48	206
4/7/2014 21:48	21	1.889	1.954	4.454	4.089	967	866	636	606	3,074	1,832	1.92	-0.28			188.91	205
4/7/2014 23:24	23	1.929	2.092	4.627	3.839	1,008	928	570	509	3,015	1,936	2.01	-0.19			195.09	212
4/8/2014 1:00	1	2.479	2.568	1.879	1.448	1,087	968	228	264	2,548	2,055	2.52	0.32			202.17	220
4/8/2014 2:36	2	2.591	2.593	1.394	1.327	1,068	924	210	251	2,454	1,992	2.59	0.39			198.41	216
4/8/2014 4:12	4	2.895	2.697	1.281	1.439	1,008	851	185	227	2,271	1,859	2.80	0.60		3.45	190.53	207
4/8/2014 5:48	5	2.998	3.385	2.104	2.202	962	843	198	226	2,229	1,805	3.19	0.99		32.71	187.29	204
4/8/2014 7:24	7	2.990	4.714	2.247	3.671	783	866	163	247	2,060	1,650	3.85	1.65		77.60	178.07	194
4/8/2014 9:00	9	3.610	4.865	4.465	4.500	906	794	293	257	2,250	1,700	4.24	2.04		106.53	181.07	197
4/8/2014 10:36	10	3.040	3.608	3.477	3.240	867	753	245	318	2,183	1,620	3.32	1.12		40.02	176.31	192
4/8/2014 12:12	12	2.176	2.330	2.046	2.397	846	712	495	513	2,566	1,558	2.25	0.05			172.65	188
4/8/2014 13:48	13	1.876	1.952	1.916	1.826	820	692	514	514	2,541	1,512	1.91	-0.29			169.92	185
4/8/2014 15:24	15	1.927	2.062	2.207	2.550	882	779	605	614	2,881	1,662	1.99	-0.21			178.79	194
4/8/2014 17:00	17	1.962	2.167	2.548	2.708	875	783	611	581	2,850	1,658	2.06	-0.14			178.55	194
4/8/2014 18:36	18	1.827	2.107	3.634	4.115	810	716	562	538	2,626	1,527	1.97	-0.23			170.77	186
4/8/2014 20:12	20	1.904	2.213	4.237	4.604	831	734	578	552	2,695	1,564	2.06	-0.14			173.01	188
4/8/2014 21:48	21	1.832	2.156	4.323	4.525	850	750	592	565	2,758	1,600	1.99	-0.21			175.12	190
4/8/2014 23:24	23	1.719	2.044	4.081	4.472	894	795	524	524	2,736	1,689	1.88	-0.32			180.39	196
4/9/2014 1:00	1	2.280	3.153	2.146	2.063	991	886	275	209	2,361	1,877	2.72	0.52			191.58	208
4/9/2014 2:36	2	2.726	3.805	2.480	2.289	1,030	809	272	210	2,320	1,839	3.27	1.07		38.62	189.29	206
4/9/2014 4:12	4	3.046	4.662	2.261	3.315	956	744	176	206	2,083	1,700	3.85	1.65		79.07	181.08	197
4/9/2014 5:48	5	3.012	4.990	2.376	4.619	815	775	185	218	1,994	1,590	4.00	1.80		86.34	174.55	190
4/9/2014 7:24	7	3.203	4.980	2.887	4.971	733	804	148	224	1,909	1,537	4.09	1.89		90.91	171.35	186
4/9/2014 9:00	9	3.566	4.971	4.077	4.870	780	905	331	496	2,512	1,685	4.27	2.07		108.21	180.18	196
4/9/2014 10:36	10	2.919	4.737	4.420	4.769	811	818	375	529	2,532	1,629	3.83	1.63		75.38	176.82	192
4/9/2014 12:12	12	2.406	2.810	1.478	3.940	787	664	384	345	2,180	1,451	2.61	0.41			166.30	181
4/9/2014 13:48	13	2.182	2.211	2.216	2.227	801	651	501	325	2,278	1,452	2.20	0.00			166.33	181
4/9/2014 15:24	15	2.240	2.280	2.505	2.306	846	669	463	299	2,276	1,514	2.26	0.06			170.03	185
4/9/2014 17:00	17	2.405	2.665	2.732	2.375	892	693	384	217	2,186	1,585	2.54	0.34			174.22	189
4/9/2014 18:36	18	2.646	2.646	2.517	2.367	955	639	313	183	2,090	1,594	2.65	0.45			174.79	190
4/9/2014 20:12	20	2.619	2.497	2.637	2.141	985	635	317	203	2,139	1,620	2.56	0.36			176.32	192
4/9/2014 21:48	21	2.505	2.185	2.274	2.019	991	649	326	239	2,205	1,640	2.35	0.15			177.48	193
4/9/2014 23:24	23	1.945	1.842	1.993	2.208	988	673	400	272	2,333	1,661	1.89	-0.31			178.76	194
4/10/2014 1:00	1	2.047	2.045	2.259	2.430	995	677	402	272	2,347	1,672	2.05	-0.15			179.43	195
4/10/2014 2:36	2	2.554	3.410	2.188	3.635	1,022	746	250	249	2,267	1,768	2.98	0.78		16.98	185.10	201
4/10/2014 4:12	4	3.489	4.986	2.842	4.917	1,039	765	241	249	2,294	1,803	4.24	2.04		110.14	187.20	204
4/10/2014 5:48	5	4.395	4.885	4.196	4.767	1,009	786	235	248	2,278	1,795	4.64	2.44		139.53	186.69	203
4/10/2014 7:24	7	4.509	4.773	4.619	4.456	872	826	206	249	2,153	1,697	4.64	2.44		135.27	180.90	197
4/10/2014 9:00	9	3.967	4.661	4.543	4.145	818	788	191	292	2,089	1,606	4.31	2.11		108.53	175.49	191
4/10/2014 10:36	10	2.596	3.961	2.477	3.792	788	608	331	248	1,974	1,396	3.28	1.08		34.08	163.01	177
4/10/2014 12:12	12	2.248	1.968	2.403	2.109	848	666	479	368	2,360	1,513	2.11	-0.09			169.97	185
4/10/2014 13:48	13	1.972	1.983	1.877	2.030	834	708	515	449	2,505	1,542	1.98	-0.22			171.66	187
4/10/2014 15:24	15	1.919	2.048	2.025	2.354	881	772	579	414	2,647	1,654	1.98	-0.22			178.32	194
4/10/2014 17:00	17	1.933	2.360	2.449	2.673	931	758	481	289	2,460	1,689	2.15	-0.05			180.42	196
4/10/2014 18:36	18	2.496	2.334	2.394	2.566	982	677	311	245	2,215	1,659	2.41	0.21			178.65	194
4/10/2014 20:12	20	2.399	2.546	2.524	2.544	967	698	318	206	2,190	1,665	2.47	0.27			179.01	195
4/10/2014 21:48	21	2.305	2.420	2.323	2.117	976	704	320	225	2,225	1,680	2.36	0.16			179.86	196
4/10/2014 23:24	23	1.998	2.132	1.948	1.905	961	724	330	232	2,247	1,685	2.07	-0.13			180.19	196
4/11/2014 1:00	1	1.999	2.494	2.186	2.321	944	737	348	240	2,268	1,681	2.25	0.05			179.93	196
4/11/2014 2:36	2	2.178	2.876	3.091	3.238	909	670	352	242	2,173	1,579	2.53	0.33			173.90	189
4/11/2014 4:12	4	2.521	3.602	4.181	4.164	884	628	357	245	2,113	1,511	3.06	0.86		20.92	169.86	185
4/11/2014 5:48	5	3.380	4.628	4.963	4.922	872	614	348	254	2,088	1,486	4.00	1.80		83.48	168.34	183
4/11/2014 7:24	7	4.083	4.975	4.894	4.899	863	617	344	256	2,080	1,480	4.53	2.33		118.22	168.00	183
4/11/2014 9:00	9	4.273	4.920	4.748	4.755	844	604	337	251	2,035	1,448	4.60	2.40		121.27	166.07	181
4/11/2014 10:36	10	3.117	3.618	4.193	4.238	827	593	331	246	1,997	1,420	3.37	1.17		40.15	164.42	179
4/11/2014 12:12	12	2.267	2.252	1.984	2.036	794	648	340	262	2,044	1,442	2.26	0.06			165.76	180
4/11/2014 13:48	13	1.949	2.030	1.375	2.228	808	682	440	412	2,342	1,490	1.99	-0.21			168.60	183
4/11/2014 15:24	15	2.014	2.025	2.343	3.202	900	774	538	496	2,708	1,674	2.02	-0.18			179.53	195
4/11/2014 17:00	17	2.074	2.048	2.152	2.047	938	814	362	378	2,492	1,752	2.06	-0.14			184.13	200
4/11/2014 18:36	18	2.154	2.164	2.306	2.574	937	811	318	363	2,428	1,747	2.16	-0.04			183.87	200
4/11/2014 20:12	20	2.232	2.209	2.247	1.999	961	836	300	335	2,433	1,797	2.22	0.02			186.85	203
4/11/2014 21:48	21	2.238	2.146	2.113	2.069	964	840	337	367	2,508	1,804	2.19	-0.01			187.22	204
4/11/2014 23:24	23	2.268	2.230	2.340	2.272	980	855	352	388	2,576	1,835	2.25	0.05			189.10	206
4/12/2014 1:00	1	2.472	2.551	2.891	2.752	987	871	344	357	2,559	1,857	2.51	0.31			190.42	207
4/12/2014 2:36	2	2.815	3.015	3.571	2.817	982	860	340	311	2,493	1,842	2.91	0.71		12.34	189.50	206
4/12/2014 4:12	4	3.567	3.874	4.674	3.914	970	836	348	318	2,472	1,806	3.72	1.52		71.89	187.37	204
4/12/2014 5:48	5	4.357	4.750	4.932	4.946	928	790	362	331	2,411	1,718	4.55	2.35		129.89	182.15	198
4/12/2014 7:24	7	4.582	4.961	4.736	4.809	882	728	376	343	2,329	1,610	4.77	2.57		140.46	175.71	191
4/12/2014 9:00	9	4.669	4.958	4.540	4.539	825	664	370	337	2,197	1,490	4.81	2.61		137.55	168.57	183
4/12/2014 10:36	10	3.842	3.997	4.344	4.231	787	633	352	320	2,092	1,420	3.92	1.72		76.07	164.43	179
4/12/2014 12:12	12	2.472	2.117	2.388	1.627	784	632	261	273	1,950	1,416	2.29	0.09			164.19	179
4/12/2014 13:48	13	2.012	1.873	1.012	1.049	861	727	380	386	2,354	1,588	1.94	-0.26			174.41	190
4/12/2014 15:24	15	1.994	2.077	1.618	1.862	929	826	519	568	2,843	1,756	2.04	-0.16			184.37	201
4/12/2014 17:00	17	1.908	2.023	1.992	2.324	990	884	529	600	3,003	1,874	1.97	-0.23			191.38	208
4/12/2014 18:36	18	1.958	1.989	2.355	2.065	980	879	463	453	2,775	1,859	1.97	-0.23			190.50	207
4/12/2014 20:12	20	2.116	2.204	1.902	2.054	981	879	314	324	2,498	1,860	2.16	-0.04			190.58	207
4/12/2014 21:48	21	2.180	2.341	2.230	2.150	962	843	355	348	2,508	1,805	2.26	0.06			187.32	204
4/12/2014 23:24	23	2.318	2.410	2.533	2.499	979	851	338	350	2,519	1,831	2.36	0.16			188.82	205
4/13/2014 1:00	1	2.600	2.387	2.972	3.025	1,009	877	347	336	2,568	1,886	2.49	0.29			192.10	209
4/13/2014 2:36	2	3.081	3.273	3.773	3.632	1,030	872	354	342	2,598	1,902	3.18	0.98		32.60	193.07	210

4/13/2014 4:12	4	3.558	3.003	4.673	4.532	1,036	857	358	348	2,599	1,893	3.28	1.08		40.37	192.52	209
4/13/2014 5:48	5	4.114	3.385	4.983	4.998	988	827	339	354	2,508	1,815	3.75	1.55		74.24	187.87	204
4/13/2014 7:24	7	4.139	3.439	4.871	4.846	848	740	357	374	2,319	1,587	3.79	1.59		71.68	174.38	190
4/13/2014 9:00	9	4.327	3.981	4.710	4.677	812	728	224	322	2,086	1,540	4.15	1.95		95.25	171.58	187
4/13/2014 10:36	10	4.391	4.468	4.622	4.509	803	729	189	299	2,020	1,532	4.43	2.23		113.64	171.09	186
4/13/2014 12:12	12	3.477	2.950	2.476	3.823	855	726	211	281	2,072	1,581	3.21	1.01		31.86	173.98	189
4/13/2014 13:48	13	2.446	1.915	1.160	1.156	819	700	372	328	2,219	1,519	2.18	-0.02			170.30	185
4/13/2014 15:24	15	2.000	1.807	1.046	1.574	881	770	489	549	2,690	1,652	1.90	-0.30			178.20	194
4/13/2014 17:00	17	1.994	1.940	1.692	1.511	961	850	590	505	2,906	1,811	1.97	-0.23			187.64	204
4/13/2014 18:36	18	1.984	1.946	2.131	1.760	1,016	888	480	505	2,890	1,905	1.96	-0.24			193.24	210
4/13/2014 20:12	20	2.013	2.026	2.138	1.610	1,038	909	404	366	2,716	1,946	2.02	-0.18			195.70	213
4/13/2014 21:48	21	1.964	1.985	1.719	1.770	1,014	885	338	356	2,593	1,900	1.97	-0.23			192.92	210
4/13/2014 23:24	23	1.935	2.047	2.169	1.956	1,047	919	352	355	2,674	1,967	1.99	-0.21			196.89	214
4/14/2014 1:00	1	1.976	1.995	1.137	1.206	992	864	290	297	2,443	1,856	1.99	-0.21			190.32	207
4/14/2014 2:36	2	1.998	2.016	1.856	1.872	970	842	303	314	2,429	1,812	2.01	-0.19			187.73	204
4/14/2014 4:12	4	2.555	2.782	2.691	2.830	984	837	297	319	2,438	1,821	2.67	0.47			188.28	205
4/14/2014 5:48	5	3.365	3.378	3.792	3.806	972	774	311	335	2,392	1,745	3.37	1.17		45.17	183.76	200
4/14/2014 7:24	7	3.759	2.858	4.667	4.639	871	707	307	341	2,227	1,578	3.31	1.11		38.41	173.83	189
4/14/2014 9:00	9	3.607	3.660	4.404	4.842	779	683	271	312	2,045	1,462	3.63	1.43		58.31	166.90	182
4/14/2014 10:36	10	2.773	2.643	3.203	3.756	779	691	249	287	2,006	1,470	2.71	0.51			167.39	182
4/14/2014 12:12	12	2.102	2.003	1.635	1.980	798	708	439	445	2,391	1,507	2.05	-0.15			169.57	184
4/14/2014 13:48	13	2.047	2.006	1.685	1.966	911	793	586	601	2,891	1,704	2.03	-0.17			181.27	197
4/14/2014 15:24	15	2.067	1.998	1.830	2.320	977	849	646	706	3,177	1,825	2.03	-0.17			188.49	205
4/14/2014 17:00	17	1.967	2.173	1.989	3.055	945	883	565	709	3,102	1,828	2.07	-0.13			188.65	205
4/14/2014 18:36	18	1.875	2.003	1.932	4.542	937	842	431	647	2,857	1,779	1.94	-0.26			185.76	202
4/14/2014 20:12	20	2.010	2.083	2.499	5.000	916	823	363	609	2,711	1,739	2.05	-0.15			183.37	199
4/14/2014 21:48	21	1.815	2.182	2.135	5.000	876	829	329	540	2,573	1,705	2.00	-0.20			181.34	197
4/14/2014 23:24	23	1.857	2.121	2.299	5.000	932	876	344	550	2,702	1,808	1.99	-0.21			187.49	204
4/15/2014 1:00	1	1.928	2.027	2.373	4.995	917	836	329	494	2,577	1,753	1.98	-0.22			184.24	200
4/15/2014 2:36	2	1.950	1.912	2.587	4.140	883	790	302	351	2,327	1,673	1.93	-0.27			179.47	195
4/15/2014 4:12	4	2.281	2.111	2.482	2.972	886	772	253	261	2,173	1,658	2.20	0.00			178.59	194
4/15/2014 5:48	5	2.889	2.576	2.967	3.290	891	775	242	261	2,169	1,666	2.73	0.53			179.06	195
4/15/2014 7:24	7	3.911	3.439	2.903	4.334	866	797	164	266	2,093	1,663	3.68	1.48		65.44	178.85	195
4/15/2014 9:00	9	3.945	3.920	3.153	4.992	848	793	162	265	2,068	1,641	3.93	1.73		83.04	177.58	193
4/15/2014 10:36	10	3.267	3.307	2.526	4.508	839	784	157	262	2,041	1,623	3.29	1.09		37.48	176.48	192
4/15/2014 12:12	12	2.097	2.394	2.146	1.900	715	700	435	303	2,152	1,415	2.25	0.05			164.13	178
4/15/2014 13:48	13	1.946	1.922	1.617	1.985	819	739	522	504	2,584	1,558	1.93	-0.27			172.65	188
4/15/2014 15:24	15	2.293	2.476	2.453	2.260	958	893	681	591	3,124	1,852	2.38	0.18			190.08	207
4/15/2014 17:00	17	1.946	2.202	2.528	2.310	876	803	611	532	2,821	1,678	2.07	-0.13			179.77	196
4/15/2014 18:36	18	1.943	2.048	3.280	3.108	854	781	591	503	2,728	1,635	2.00	-0.20			177.19	193
4/15/2014 20:12	20	1.941	1.940	4.300	4.123	865	789	602	510	2,765	1,653	1.94	-0.26			178.29	194
4/15/2014 21:48	21	1.965	2.151	4.615	4.588	853	775	595	502	2,724	1,628	2.06	-0.14			176.77	192
4/15/2014 23:24	23	1.915	2.017	4.862	4.855	885	794	606	505	2,790	1,679	1.97	-0.23			179.80	196
4/16/2014 1:00	1	2.362	2.490	4.998	4.850	939	847	567	416	2,769	1,786	2.43	0.23			186.16	202
4/16/2014 2:36	2	2.905	3.342	4.998	4.972	957	865	521	376	2,719	1,821	3.12	0.92		27.83	188.26	205
4/16/2014 4:12	4	3.672	3.907	4.998	5.000	931	853	400	289	2,473	1,784	3.79	1.59		76.47	186.08	202
4/16/2014 5:48	5	4.207	4.282	4.998	5.000	813	745	320	304	2,182	1,557	4.24	2.04		102.01	172.59	188
4/16/2014 7:24	7	4.848	4.562	4.998	5.000	803	754	347	428	2,332	1,558	4.70	2.50		133.44	172.61	188
4/16/2014 9:00	9	4.992	4.993	4.998	5.000	1,569	1,570	1,044	1,388	5,572	3,139	4.99	2.79		236.35	266.54	290
4/16/2014 10:36	10	4.677	4.904	4.998	5.000	1,069	1,013	689	931	3,702	2,082	4.79	2.59		164.47	203.77	222
4/16/2014 12:12	12	3.923	4.792	3.645	4.921	1,001	935	365	479	2,780	1,936	4.36	2.16		123.99	195.07	212
4/16/2014 13:48	13	3.901	4.635	3.066	3.591	1,136	1,028	442	409	3,015	2,164	4.27	2.07	125.23		208.64	227
4/16/2014 15:24	15	3.829	4.263	2.476	2.248	910	793	468	339	2,511	1,703	4.05	1.85	92.86		181.24	197
4/16/2014 17:00	17	0.000	0.000	0.000	0.000	859	762	383	369	2,374	1,621	0.00	-2.20			176.40	192
4/16/2014 18:36	18	0.000	0.000	0.000	0.000	802	717	291	254	2,064	1,519	0.00	-2.20			170.31	185
4/16/2014 20:12	20	0.000	0.000	0.000	0.000	854	691	271	256	2,073	1,546	0.00	-2.20			171.89	187
4/16/2014 21:48	21	0.000	0.000	0.000	0.000	874	707	261	260	2,102	1,581	0.00	-2.20			173.96	189
4/16/2014 23:24	23	0.000	0.000	0.000	0.000	813	747	319	274	2,153	1,560	0.00	-2.20			172.76	188
4/17/2014 1:00	1	1.710	2.169	2.896	2.968	770	743	349	278	2,141	1,514	1.94	-0.26			170.00	185
4/17/2014 2:36	2	1.948	2.267	3.457	3.400	757	730	342	274	2,103	1,486	2.11	-0.09			168.38	183
4/17/2014 4:12	4	2.571	2.883	4.601	4.528	766	740	346	276	2,129	1,506	2.73	0.53			169.54	184
4/17/2014 5:48	5	3.616	3.652	4.998	4.997	771	738	349	278	2,137	1,509	3.63	1.43		59.35	169.74	185
4/17/2014 7:24	7	4.801	4.514	4.839	4.970	761	706	351	280	2,097	1,466	4.66	2.46		126.09	167.18	182
4/17/2014 9:00	9	4.589	4.402	4.613	4.943	714	670	342	274	2,000	1,384	4.50	2.30		112.03	162.30	177
4/17/2014 10:36	10	3.052	3.174	4.387	4.913	693	658	336	271	1,957	1,351	3.11	0.91		23.02	160.34	174
4/17/2014 12:12	12	2.347	2.469	2.973	2.754	772	684	346	330	2,132	1,455	2.41	0.21			166.52	181
4/17/2014 13:48	13	3.372	3.291	3.172	3.243	1,223	1,022	608	488	3,340	2,245	3.33	1.13	49.10		213.41	232
4/17/2014 15:24	15	3.213	3.183	3.570	2.937	954	744	481	387	2,566	1,698	3.20	1.00	32.05		180.96	197
4/17/2014 17:00	17	2.468	1.924	2.158	2.176	872	688	359	408	2,327	1,560	2.20	0.00			172.76	188
4/17/2014 18:36	18	2.085	2.145	2.894	1.835	815	712	353	265	2,145	1,528	2.11	-0.09			170.82	186
4/17/2014 20:12	20	2.217	2.243	2.202	2.457	844	743	255	264	2,106	1,587	2.23	0.03			174.38	190
4/17/2014 21:48	21	2.154	2.198	1.856	1.818	855	755	307	269	2,188	1,611	2.18	-0.02			175.76	191
4/17/2014 23:24	23	2.109	2.108	2.059	2.265	868	769	288	289	2,214	1,637	2.11	-0.09			177.33	193
4/18/2014 1:00	1	2.266	2.252	2.410	2.693	876	781	299	291	2,247	1,657	2.26	0.06			178.50	194
4/18/2014 2:36	2	2.615	2.647	3.365	3.616	889	794	303	295	2,281	1,684	2.63	0.43			180.09	196
4/18/2014 4:12	4	3.473	3.449	4.614	4.737	898	805	305	297	2,306	1,703	3.46	1.26		50.99	181.27	197
4/18/2014 5:48	5	4.536	4.507	4.973	4.985	899	808	305	297	2,309	1,706	4.52	2.32		127.11	181.44	197
4/18/2014 7:24	7	4.978	4.958	4.896	4.941	896	807	298	295	2,295	1,703	4.97	2.77		158.93	181.22	197
4/18/2014 9:00	9	4.759	4.789	4.819	4.897	880	793	276	287	2,236	1,673	4.77	2.57		143.68	179.48	195
4/18/2014 10:36	10	4.359	4.370	4.742	4.853	873	787	273	286	2,218	1,659	4.36	2.16		114.06	178.66	194
4/18/2014 12:12	12	3.223	3.412	3.242	3.351	856	773	265	280	2,173	1,629	3.32	1.12		39.67	176.83	192
4/18/2014 13:48	13	2.585	2.636	1.282	1.417	832	750	287	294	2,162	1,581	2.61	0.41			174.02	189
4/18/2014 15:24	15	2.010	2.121	1.346	1.687	808	739	412	405	2,364	1,547	2.07	-0.13			171.96	187
4/18/2014 17:00	17	1.913	2.134	1.806	1.748	867	812	431	386	2,496	1,679	2.02	-0.18			179.83	196
4/18/2014 18:36	18	2.291	1.968	2.729	2.598	970	808	384	401	2,563	1,777	2.13	-0.07			185.66	202
4/18/2014 20:12	20	2.276	2.447	2.159	2.246	921	878	290	313	2,402	1,799	2.36	0.16			186.96	203
4/18/2014 21:48	21	1.870	1.894	2.068	1.681	1,022	911	372	342	2,647	1,934	1.88	-0.32			194.95	212
4/18/2014 23:24	23	1.958	2.059	1.673	2.170	1,136	1,044	401	393	2,974	2,181	2.01	-0.19			209.60	228
4/19/2014 1:00	1	2.006	2.094	2.599	1.854	1,064	980	410	334	2,788	2,043	2.05	-0.15			201.46	219
4/19/2014 2:36	2	2.305	2.308	3.310	2.508	1,071	991	371	319	2,753	2,062	2.31	0.11			202.57	220
4/19/2014 4:12	4	3.108	3.318	3.016	3.037	1,105	1,033	259	271	2,669	2,138	3.21	1.01		37.92	207.09	225
4/19/2014 5:48	5	3.962	4.359	3.928	4.203	1,121	1,050	262	274	2,706	2,170	4.16	1.96		116.60	209.00	227
4/19/2014 7:24	7	4.836	4.974	4.835	4.986	1,100	1,062	225	278	2,664	2,162	4.91	2.71		177.70	208.50	227
4/19/2014 9:00	9	4.878	4.953	4.924	4.958	988	1,008	187	261	2,444	1,996	4.92	2.72		170.11	198.66	216
4/19/2014 10:36	10	4.068	4.822	4.405	4.906	939	962	179	248	2,328	1,901	4.44	2.24		129.36	193.00	210
4/19/2014 12:12	12	2.861	3.714	1.893	2.783	918	940	231	242	2,330	1,858	3.29	1.09		40.47	190.42	207
4/19/2014 13:48	13	1.928	2.411	1.266	1.256	869	887	393	368	2,517	1,756	2.17	-0.03			184.39	201
4/19/2014 15:24	15	1.780	2.233	1.591	1.618	964	929	521	470	2,885	1,893	2.01	-0.19			192.55	209
4/19/2014 17:00	17	2.131	1.906	2.320	2.127	1,097	959	538	539	3,133	2,056	2.02	-0.18			202.21	220
4/19/2014 18:36	18	2.144	2.018	2.247	1.982	1,072	958	380	373	2,782	2,029	2.08	-0.12			200.63	218
4/19/2014 20:12	20	2.080	1.915	2.562	2.321	1,043	956	338	356	2,692	1,998	2.00	-0.20			198.79	216
4/19/2014 21:48	21	2.294	2.269	2.525	2.571	1,091	1,015	294	300	2,700	2,106	2.28	0.08			205.17	223
4/19/2014 23:24	23	2.506	2.605	2.233	2.101	1,137	1,065	264	277	2,742	2,202	2.56	0.36			210.86	229
4/20/2014 1:00	1	2.709	2.785	2.520	2.609	1,160	1,084	269	286	2,799	2,244	2.75	0.55			213.37	232
4/20/2014 2:36	2	3.182	3.154	3.250	3.314	1,184	1,077	272	296	2,829	2,261	3.17	0.97		35.47	214.36	233
4/20/2014 4:12	4	3.355	3.391	3.634	4.284	1,055	982	236	311	2,583	2,037	3.37	1.17		49.53	201.07	219
4/20/2014 5:48	5	3.402	3.336	3.954	4.348	969	867	242	262	2,340	1,836	3.37	1.17		46.30	189.14	206
4/20/2014 7:24	7	3.824	3.991	4.811	4.688	918	834	248	258	2,258	1,752	3.91	1.71		84.28	184.14	200
4/20/2014 9:00	9	4.426	4.588	4.821	4.949	879	812	237	248	2,176	1,691	4.51	2.31		125.47	180.53	196
4/20/2014 10:36	10	4.500	4.758	4.433	4.740	949	864	220	231	2,264	1,813	4.63	2.43		139.55	187.79	204
4/20/2014 12:12	12	3.428	3.777	3.141	2.812	1,015	936	205	216	2,371	1,951	3.60	1.40		66.10	195.98	213
4/20/2014 13:48	13	2.709	2.754	1.183	1.096	1,081	985	263	294	2,623	2,066	2.73	0.53			202.79	221
4/20/2014 15:24	15	2.248	2.267	1.099	1.295	1,045	983	387	399	2,814	2,028	2.26	0.06			200.55	218
4/20/2014 17:00	17	2.038	1.990	1.809	1.280	1,064	1,004	528	424	3,020	2,068	2.01	-0.19			202.94	221
4/20/2014 18:36	18	1.999	1.935	2.959	1.518	1,059	1,000	530	424	3,012	2,058	1.97	-0.23			202.34	220
4/20/2014 20:12	20	2.208	2.204	3.816	3.268	1,077	1,020	408	433	2,938	2,097	2.21	0.01			204.66	223
4/20/2014 21:48	21	2.311	2.426	3.961	4.073	1,093	1,037	409	441	2,981	2,130	2.37	0.17			206.62	225
4/20/2014 23:24	23	2.203	2.332	3.628	3.752	1,121	1,068	400	444	3,034	2,190	2.27	0.07			210.15	229
4/21/2014 1:00	1	2.647	2.593	2.704	2.679	1,209	1,063	315	329	2,916	2,272	2.62	0.42			215.04	234
4/21/2014 2:36	2	2.536	2.272	3.064	3.059	1,043	939	279	334	2,595	1,982	2.40	0.20			197.80	215
4/21/2014 4:12	4	2.572	2.367	3.122	2.940	969	882	267	287	2,404	1,851	2.47	0.27			190.01	207
4/21/2014 5:48	5	2.970	2.759	3.818	3.873	940	803	234	296	2,274	1,744	2.86	0.66		8.30	183.66	200
4/21/2014 7:24	7	3.832	3.445	4.613	4.845	921	775	251	296	2,242	1,695	3.64	1.44		63.53	180.79	197
4/21/2014 9:00	9	3.678	3.561	4.873	4.991	869	735	271	284	2,159	1,604	3.62	1.42		60.32	175.35	191
4/21/2014 10:36	10	2.579	2.538	3.637	3.092	807	774	254	269	2,104	1,581	2.56	0.36			174.01	189
4/21/2014 12:12	12	1.990	1.989	1.672	1.694	912	845	489	477	2,723	1,757	1.99	-0.21			184.45	201
4/21/2014 13:48	13	1.995	2.363	2.067	2.199	1,025	972	579	569	3,144	1,997	2.18	-0.02			198.68	216
4/21/2014 15:24	15	1.968	2.113	2.243	1.988	1,109	1,062	662	598	3,432	2,171	2.04	-0.16			209.06	227
4/21/2014 17:00	17	1.987	2.150	2.284	1.880	1,118	1,073	673	605	3,469	2,191	2.07	-0.13			210.20	229

4/21/2014 18:36	18	1.993	2.147	3.590	2.547	1,094	1,051	660	592	3,397	2,145	2.07	-0.13			207.48	226
4/21/2014 20:12	20	1.975	2.086	4.520	3.607	1,053	1,008	606	535	3,203	2,061	2.03	-0.17			202.53	220
4/21/2014 21:48	21	1.976	2.137	2.520	2.358	1,058	1,017	301	359	2,735	2,075	2.06	-0.14			203.32	221
4/21/2014 23:24	23	1.906	2.027	1.312	1.606	1,072	1,032	319	357	2,780	2,104	1.97	-0.23			205.05	223
4/22/2014 1:00	1	1.959	2.210	2.024	2.304	1,071	1,035	341	381	2,828	2,106	2.08	-0.12			205.18	223
4/22/2014 2:36	2	2.307	2.548	3.194	3.546	1,037	980	353	396	2,766	2,017	2.43	0.23			199.89	217
4/22/2014 4:12	4	2.554	2.388	4.290	4.502	960	846	355	399	2,560	1,806	2.47	0.27			187.35	204
4/22/2014 5:48	5	2.568	2.761	4.578	4.222	893	819	335	347	2,395	1,712	2.66	0.46			181.80	198
4/22/2014 7:24	7	3.397	3.617	4.992	4.984	871	800	347	371	2,390	1,672	3.51	1.31		53.71	179.39	195
4/22/2014 9:00	9	3.339	3.755	4.832	4.927	837	766	335	358	2,297	1,603	3.55	1.35		55.25	175.32	191
4/22/2014 10:36	10	2.672	1.968	3.984	3.253	875	663	320	357	2,214	1,538	2.32	0.12			171.42	186
4/22/2014 12:12	12	1.938	1.961	1.829	2.010	895	849	494	513	2,751	1,744	1.95	-0.25			183.68	200
4/22/2014 13:48	13	2.058	1.909	2.221	2.274	996	939	626	601	3,162	1,934	1.98	-0.22			194.97	212
4/22/2014 15:24	15	2.236	2.485	2.277	2.399	1,261	1,191	751	765	3,969	2,453	2.36	0.16			225.76	246
4/22/2014 17:00	17	3.694	4.878	4.626	4.880	1,563	1,567	955	966	5,051	3,130	4.29	2.09	161.59		266.00	289
4/22/2014 18:36	18	4.123	4.991	4.784	4.881	1,403	1,599	856	804	4,662	3,002	4.56	2.36	184.67		258.38	281
4/22/2014 20:12	20	4.031	4.269	4.211	4.668	1,097	1,038	633	626	3,393	2,135	4.15	1.95	114.55		206.90	225
4/22/2014 21:48	21	1.852	1.999	2.022	2.471	969	844	355	354	2,522	1,812	1.93	-0.27			187.72	204
4/22/2014 23:24	23	1.941	2.130	1.961	1.719	1,022	900	373	357	2,653	1,923	2.04	-0.16			194.29	211
4/23/2014 1:00	1	1.982	2.155	1.825	1.906	964	841	336	337	2,478	1,805	2.07	-0.13			187.31	204
4/23/2014 2:36	2	2.159	2.316	2.486	2.482	940	815	328	329	2,412	1,755	2.24	0.04			184.34	200
4/23/2014 4:12	4	2.552	3.004	3.170	3.124	924	793	285	293	2,295	1,717	2.78	0.58		1.99	182.08	198
4/23/2014 5:48	5	3.066	3.203	3.060	3.662	876	752	249	273	2,149	1,628	3.13	0.93		26.87	176.79	192
4/23/2014 7:24	7	3.632	3.179	3.739	4.022	765	708	264	261	1,998	1,473	3.41	1.21		43.45	167.57	182
4/23/2014 9:00	9	4.528	4.313	4.681	4.809	1,135	1,089	378	387	2,989	2,224	4.42	2.22		140.17	212.18	231
4/23/2014 10:36	10	3.965	3.799	4.511	4.192	974	918	327	323	2,542	1,892	3.88	1.68		86.16	192.46	209
4/23/2014 12:12	12	2.301	2.269	2.079	2.184	734	660	421	392	2,206	1,394	2.29	0.09			162.89	177
4/23/2014 13:48	13	2.162	2.066	1.999	2.229	744	677	456	455	2,332	1,421	2.11	-0.09			164.50	179
4/23/2014 15:24	15	2.265	2.275	2.104	2.132	788	711	414	413	2,325	1,499	2.27	0.07			169.10	184
4/23/2014 17:00	17	1.967	1.862	1.825	2.783	813	741	402	471	2,426	1,554	1.91	-0.29			172.39	187
4/23/2014 18:36	18	1.875	2.115	2.374	3.435	798	759	383	445	2,386	1,558	1.99	-0.21			172.60	188
4/23/2014 20:12	20	1.801	2.210	2.236	3.348	813	773	386	447	2,419	1,586	2.01	-0.19			174.28	190
4/23/2014 21:48	21	1.885	2.221	2.120	3.230	829	787	392	454	2,463	1,616	2.05	-0.15			176.09	191
4/23/2014 23:24	23	1.755	2.148	1.905	3.103	849	803	381	425	2,458	1,652	1.95	-0.25			178.20	194
4/24/2014 1:00	1	2.105	2.275	1.544	1.403	897	791	319	274	2,280	1,687	2.19	-0.01			180.31	196
4/24/2014 2:36	2	2.102	2.142	2.566	2.253	807	734	296	281	2,118	1,542	2.12	-0.08			171.65	187
4/24/2014 4:12	4	2.157	2.059	2.335	2.655	746	661	249	251	1,907	1,407	2.11	-0.09			163.63	178
4/24/2014 5:48	5	2.365	2.036	2.333	3.192	676	609	217	255	1,756	1,284	2.20	0.00			156.36	170
4/24/2014 7:24	7	2.590	2.712	2.693	4.026	641	617	218	256	1,732	1,258	2.65	0.45			154.82	168
4/24/2014 9:00	9	2.585	2.727	2.919	4.223	680	661	219	252	1,811	1,341	2.66	0.46			159.71	174
4/24/2014 10:36	10	2.961	3.274	2.632	3.119	824	791	321	308	2,244	1,615	3.12	0.92		25.60	176.00	191
4/24/2014 12:12	12	2.216	2.077	2.136	2.185	811	728	469	474	2,482	1,540	2.15	-0.05			171.54	187
4/24/2014 13:48	13	1.993	1.940	1.888	2.004	855	787	544	525	2,712	1,642	1.97	-0.23			177.64	193
4/24/2014 15:24	15	1.974	1.924	1.829	1.762	881	814	538	516	2,749	1,695	1.95	-0.25			180.75	197
4/24/2014 17:00	17	1.962	1.969	2.420	1.949	918	859	583	549	2,910	1,777	1.97	-0.23			185.65	202
4/24/2014 18:36	18	2.134	2.040	4.010	3.250	932	881	578	551	2,942	1,813	2.09	-0.11			187.80	204
4/24/2014 20:12	20	2.070	1.976	4.810	4.331	900	851	533	529	2,813	1,751	2.02	-0.18			184.10	200
4/24/2014 21:48	21	2.066	1.916	4.762	4.635	902	856	511	529	2,798	1,758	1.99	-0.21			184.50	201
4/24/2014 23:24	23	2.025	1.956	4.666	4.664	950	910	532	550	2,942	1,860	1.99	-0.21			190.58	207
4/25/2014 1:00	1	2.407	2.279	4.218	3.846	1,028	991	409	394	2,823	2,020	2.34	0.14			200.05	218
4/25/2014 2:36	2	3.304	3.399	4.028	3.308	1,116	1,090	295	265	2,767	2,207	3.35	1.15		50.22	211.16	230
4/25/2014 4:12	4	4.023	4.183	4.628	3.994	1,083	1,090	285	270	2,729	2,174	4.10	1.90		111.98	209.21	228
4/25/2014 5:48	5	4.371	4.750	4.911	4.971	1,026	1,091	273	285	2,674	2,117	4.56	2.36		147.36	205.81	224
4/25/2014 7:24	7	4.540	4.989	4.985	4.828	967	1,072	236	299	2,575	2,039	4.76	2.56		160.31	201.21	219
4/25/2014 9:00	9	4.013	4.904	4.823	4.583	914	1,021	220	318	2,473	1,935	4.46	2.26		131.76	195.03	212
4/25/2014 10:36	10	3.947	4.913	4.259	4.339	1,060	1,164	263	398	2,884	2,224	4.43	2.23		140.98	212.17	231
4/25/2014 12:12	12	2.505	2.981	1.941	2.381	801	721	415	327	2,264	1,522	2.74	0.54			170.50	185
4/25/2014 13:48	13	1.929	1.953	1.861	2.020	813	681	516	512	2,523	1,494	1.94	-0.26			168.85	184
4/25/2014 15:24	15	2.218	2.395	2.721	2.641	922	759	562	580	2,823	1,681	2.31	0.11			179.93	196
4/25/2014 17:00	17	2.096	2.000	1.644	2.703	898	709	393	530	2,530	1,606	2.05	-0.15			175.50	191
4/25/2014 18:36	18	2.142	2.079	2.634	3.823	912	736	394	534	2,575	1,647	2.11	-0.09			177.94	194
4/25/2014 20:12	20	2.235	2.223	3.354	4.746	932	773	399	543	2,647	1,705	2.23	0.03			181.33	197
4/25/2014 21:48	21	2.357	2.430	3.597	4.961	951	803	405	551	2,711	1,754	2.39	0.19			184.28	200
4/25/2014 23:24	23	2.512	2.418	3.967	4.999	973	834	398	543	2,748	1,806	2.47	0.27			187.39	204
4/26/2014 1:00	1	2.854	2.774	4.024	4.999	1,042	877	338	439	2,696	1,919	2.81	0.61		4.94	194.06	211
4/26/2014 2:36	2	3.495	3.819	3.598	4.190	1,073	942	249	282	2,546	2,015	3.66	1.46		71.63	199.77	217
4/26/2014 4:12	4	4.207	4.399	4.004	4.787	1,053	935	246	285	2,519	1,989	4.30	2.10		121.74	198.21	216
4/26/2014 5:48	5	4.886	4.880	4.811	4.994	1,062	944	248	287	2,541	2,006	4.88	2.68		168.10	199.25	217
4/26/2014 7:24	7	4.968	4.919	4.971	4.977	952	944	212	282	2,390	1,896	4.94	2.74		167.16	192.70	210
4/26/2014 9:00	9	4.566	4.814	4.780	4.960	836	944	197	279	2,256	1,780	4.69	2.49		142.57	185.83	202
4/26/2014 10:36	10	3.601	4.595	3.847	4.769	849	874	199	244	2,166	1,722	4.10	1.90		97.21	182.38	198
4/26/2014 12:12	12	2.925	3.457	2.539	2.540	835	722	305	296	2,159	1,558	3.19	0.99		30.11	172.61	188
4/26/2014 13:48	13	2.328	2.233	1.811	2.305	865	686	412	495	2,457	1,551	2.28	0.08			172.19	187
4/26/2014 15:24	15	2.025	2.068	2.060	2.003	903	744	532	525	2,704	1,646	2.05	-0.15			177.88	193
4/26/2014 17:00	17	1.887	2.020	1.857	2.252	945	795	517	592	2,848	1,739	1.95	-0.25			183.40	199
4/26/2014 18:36	18	1.991	2.021	2.548	2.905	986	828	505	616	2,934	1,814	2.01	-0.19			187.82	204
4/26/2014 20:12	20	2.161	2.071	3.502	4.023	972	800	465	591	2,829	1,773	2.12	-0.08			185.40	202
4/26/2014 21:48	21	2.078	2.004	3.974	4.438	950	779	455	579	2,763	1,729	2.04	-0.16			182.77	199
4/26/2014 23:24	23	2.126	2.047	3.986	4.650	965	787	458	588	2,798	1,752	2.09	-0.11			184.13	200
4/27/2014 1:00	1	2.324	2.102	4.176	4.652	983	780	445	592	2,799	1,763	2.21	0.01			184.79	201
4/27/2014 2:36	2	2.745	2.709	4.919	4.858	1,001	777	424	593	2,794	1,778	2.73	0.53			185.69	202
4/27/2014 4:12	4	3.153	2.894	4.046	3.777	840	680	233	316	2,068	1,520	3.02	0.82		18.42	170.35	185
4/27/2014 5:48	5	2.731	2.840	2.841	3.287	760	647	218	259	1,884	1,407	2.79	0.59		2.28	163.66	178
4/27/2014 7:24	7	3.449	3.600	3.452	4.039	689	653	224	254	1,819	1,342	3.52	1.32		48.95	159.81	174
4/27/2014 9:00	9	3.825	4.921	4.263	4.878	687	752	237	272	1,948	1,439	4.37	2.17		106.25	165.56	180
4/27/2014 10:36	10	3.980	4.881	4.812	4.822	685	756	238	272	1,951	1,442	4.43	2.23		110.11	165.71	180
4/27/2014 12:12	12	2.871	3.587	2.919	3.458	850	729	229	261	2,069	1,579	3.23	1.03		32.95	173.87	189
4/27/2014 13:48	13	2.564	2.991	1.330	1.556	841	799	335	369	2,345	1,641	2.78	0.58	1.93		177.53	193
4/27/2014 15:24	15	2.291	2.560	1.198	1.575	946	824	387	445	2,602	1,770	2.43	0.23			185.21	201
4/27/2014 17:00	17	2.029	2.458	1.227	1.730	937	850	413	481	2,682	1,788	2.24	0.04			186.28	203
4/27/2014 18:36	18	1.933	2.168	1.695	2.144	943	861	415	484	2,704	1,805	2.05	-0.15			187.27	204
4/27/2014 20:12	20	1.976	1.946	2.784	3.117	952	874	419	488	2,734	1,826	1.96	-0.24			188.57	205
4/27/2014 21:48	21	2.027	2.155	3.201	3.449	968	893	426	495	2,781	1,861	2.09	-0.11			190.62	207
4/27/2014 23:24	23	1.921	2.099	3.338	3.721	987	914	433	502	2,835	1,900	2.01	-0.19			192.96	210
4/28/2014 1:00	1	2.142	2.294	3.570	4.107	1,015	942	398	477	2,833	1,958	2.22	0.02			196.37	214
4/28/2014 2:36	2	2.206	2.309	3.431	3.184	878	863	317	287	2,345	1,741	2.26	0.06			183.52	200
4/28/2014 4:12	4	2.255	2.432	3.371	2.882	854	812	303	269	2,238	1,667	2.34	0.14			179.09	195
4/28/2014 5:48	5	2.618	3.006	3.735	3.489	810	785	264	277	2,137	1,595	2.81	0.61		4.31	174.84	190
4/28/2014 7:24	7	3.252	3.852	4.138	4.256	798	774	258	273	2,103	1,572	3.55	1.35		55.02	173.46	189
4/28/2014 9:00	9	3.835	4.538	4.749	4.777	948	910	296	316	2,469	1,858	4.19	1.99		108.19	190.43	207
4/28/2014 10:36	10	3.504	3.819	3.644	3.844	949	821	301	342	2,414	1,771	3.66	1.46		66.77	185.25	201
4/28/2014 12:12	12	2.455	2.292	1.747	1.840	885	671	405	433	2,394	1,556	2.37	0.17			172.52	188
4/28/2014 13:48	13	1.971	2.074	1.506	2.089	908	775	529	606	2,819	1,683	2.02	-0.18			180.05	196
4/28/2014 15:24	15	1.980	2.177	2.182	2.431	958	841	649	646	3,094	1,799	2.08	-0.12			186.96	203
4/28/2014 17:00	17	1.862	2.046	3.049	2.621	956	852	646	640	3,094	1,807	1.95	-0.25			187.42	204
4/28/2014 18:36	18	1.918	2.079	4.648	4.277	914	817	594	610	2,934	1,730	2.00	-0.20			182.87	199
4/28/2014 20:12	20	1.918	2.086	4.932	4.708	890	794	575	593	2,852	1,684	2.00	-0.20			180.09	196
4/28/2014 21:48	21	1.978	2.188	4.999	4.960	892	798	578	595	2,863	1,690	2.08	-0.12			180.44	196
4/28/2014 23:24	23	1.917	2.164	4.999	4.946	912	819	588	606	2,924	1,730	2.04	-0.16			182.87	199
4/29/2014 1:00	1	2.198	2.583	4.999	5.000	943	842	567	589	2,941	1,785	2.39	0.19			186.11	202
4/29/2014 2:36	2	2.966	2.856	4.968	4.870	990	783	521	505	2,798	1,773	2.91	0.71		11.78	185.39	202
4/29/2014 4:12	4	3.475	3.048	4.920	4.602	918	710	386	355	2,369	1,628	3.26	1.06		35.75	176.79	192
4/29/2014 5:48	5	3.344	2.949	4.645	4.369	810	687	264	301	2,061	1,496	3.15	0.95		26.48	168.96	184
4/29/2014 7:24	7	3.578	3.851	3.928	4.659	770	699	219	289	1,976	1,468	3.71	1.51		63.81	167.31	182
4/29/2014 9:00	9	3.401	3.990	4.272	4.999	771	701	219	289	1,979	1,472	3.70	1.50		62.61	167.49	182
4/29/2014 10:36	10	2.534	2.967	2.627	3.492	772	702	219	288	1,981	1,474	2.75	0.55		0.03	167.63	182
4/29/2014 12:12	12	2.324	2.566	2.211	2.599	856	752	496	535	2,639	1,608	2.44	0.24			175.62	191
4/29/2014 13:48	13	2.059	2.337	2.478	2.539	845	759	570	547	2,721	1,604	2.20	0.00			175.35	191
4/29/2014 15:24	15	2.055	2.334	2.173	2.156	929	783	490	535	2,737	1,712	2.19	-0.01			181.77	198
4/29/2014 17:00	17	2.409	1.945	1.166	1.602	996	742	383	481	2,601	1,737	2.18	-0.02			183.28	199
4/29/2014 18:36	18	2.524	1.958	2.670	2.305	1,000	743	384	482	2,609	1,743	2.24	0.04			183.62	200
4/29/2014 20:12	20	2.663	1.992	4.092	3.675	1,016	753	389	489	2,647	1,768	2.33	0.13			185.13	201
4/29/2014 21:48	21	2.548	1.918	4.042	3.789	1,029	762	394	495	2,679	1,790	2.23	0.03			186.43	203
4/29/2014 23:24	23	2.373	1.652	3.677	3.295	1,023	779	397	500	2,698	1,802	2.01	-0.19			187.09	203
4/30/2014 1:00	1	2.200	2.057	3.975	3.612	933	810	410	469	2,622	1,743	2.13	-0.07			183.64	200
4/30/2014 2:36	2	2.174	2.134	4.609	3.915	830	765	392	370	2,356	1,595	2.15	-0.05			174.81	190
4/30/2014 4:12	4	2.478	2.560	4.527	4.492	814	744	334	356	2,249	1,559	2.52	0.32			172.67	188
4/30/2014 5:48	5	2.990	2.806	4.618	4.771	815	679	274	317	2,085	1,494	2.90	0.70		9.88	168.83	184
4/30/2014 7:24	7	3.281	2.806	4.568	4.722	809	656	256	304	2,025	1,465	3.04	0.84		19.40	167.11	182

4/30/2014 9:00	9	3.742	3.705	4.779	4.828	945	764	295	354	2,359	1,709	3.72	1.52		69.91	181.61	198
4/30/2014 10:36	10	2.971	2.840	3.460	3.637	757	635	282	297	1,971	1,392	2.91	0.71		9.99	162.75	177
4/30/2014 12:12	12	2.281	2.079	2.149	2.014	740	590	322	344	1,995	1,330	2.18	-0.02			159.07	173
4/30/2014 13:48	13	2.317	2.100	1.818	2.023	794	672	443	452	2,360	1,466	2.21	0.01			167.14	182
4/30/2014 15:24	15	2.275	2.456	2.644	2.915	823	736	455	486	2,500	1,559	2.37	0.17			172.70	188
4/30/2014 17:00	17	2.221	2.220	2.459	2.349	802	713	418	405	2,338	1,515	2.22	0.02			170.06	185
4/30/2014 18:36	18	2.167	2.202	2.211	2.304	794	709	358	361	2,223	1,503	2.18	-0.02			169.38	184
4/30/2014 20:12	20	2.023	2.119	2.407	2.156	779	754	346	344	2,223	1,533	2.07	-0.13			171.16	186
4/30/2014 21:48	21	2.103	2.160	1.914	1.936	845	778	345	347	2,315	1,623	2.13	-0.07			176.50	192
4/30/2014 23:24	23	1.985	1.915	1.866	1.560	975	822	402	375	2,574	1,797	1.95	-0.25			186.82	203
5/1/2014 1:00	1	2.476	1.864	2.972	1.434	1,039	779	446	374	2,637	1,818	2.17	-0.03			188.05	205
5/1/2014 2:36	2	2.677	2.077	3.821	1.927	1,020	773	445	372	2,610	1,793	2.38	0.18			186.56	203
5/1/2014 4:12	4	3.582	2.994	4.798	3.478	995	775	417	364	2,551	1,770	3.29	1.09		39.42	185.23	201
5/1/2014 5:48	5	4.959	4.452	4.882	4.985	838	747	304	311	2,200	1,584	4.71	2.51		134.71	174.18	189
5/1/2014 7:24	7	4.770	4.984	4.666	4.871	680	721	270	288	1,959	1,401	4.88	2.68		137.35	163.28	178
5/1/2014 9:00	9	3.526	4.507	4.450	4.757	672	713	267	285	1,937	1,385	4.02	1.82		81.30	162.32	177
5/1/2014 10:36	10	2.417	3.444	2.946	3.473	663	703	264	281	1,911	1,366	2.93	0.73		11.52	161.22	175
5/1/2014 12:12	12	2.284	2.524	2.033	2.180	749	629	316	324	2,017	1,377	2.40	0.20			161.89	176
5/1/2014 13:48	13	2.461	2.086	2.178	2.488	767	607	328	411	2,113	1,374	2.27	0.07			161.69	176
5/1/2014 15:24	15	2.086	2.020	2.094	2.291	709	626	363	386	2,084	1,335	2.05	-0.15			159.38	173
5/1/2014 17:00	17	2.208	2.178	2.381	2.164	734	641	303	319	1,996	1,375	2.19	-0.01			161.76	176
5/1/2014 18:36	18	2.132	2.168	2.469	2.387	725	656	246	257	1,884	1,382	2.15	-0.05			162.14	176
5/1/2014 20:12	20	2.142	2.309	2.259	2.110	750	683	213	214	1,859	1,433	2.23	0.03			165.20	180
5/1/2014 21:48	21	2.172	2.215	2.092	2.162	780	691	230	238	1,939	1,471	2.19	-0.01			167.47	182
5/1/2014 23:24	23	2.312	1.892	2.345	1.933	849	693	234	303	2,079	1,542	2.10	-0.10			171.65	187
5/2/2014 1:00	1	2.119	2.134	1.636	3.422	805	737	216	386	2,144	1,541	2.13	-0.07			171.64	187
5/2/2014 2:36	2	2.806	2.844	2.553	4.461	860	784	224	359	2,227	1,645	2.82	0.62		5.25	177.78	193
5/2/2014 4:12	4	4.633	4.144	4.415	4.973	897	820	230	365	2,312	1,717	4.39	2.19		117.99	182.08	198
5/2/2014 5:48	5	4.933	4.959	4.918	4.809	892	837	229	347	2,306	1,730	4.95	2.75		158.78	182.84	199
5/2/2014 7:24	7	4.821	4.980	4.671	4.645	818	864	220	278	2,180	1,682	4.90	2.70		153.06	179.98	196
5/2/2014 9:00	9	4.320	4.960	4.425	4.481	765	845	214	270	2,094	1,610	4.64	2.44		131.34	175.72	191
5/2/2014 10:36	10	2.736	3.875	2.493	3.360	729	794	227	255	2,004	1,523	3.31	1.11		37.47	170.54	185
5/2/2014 12:12	12	2.255	2.448	2.086	1.821	744	671	403	386	2,204	1,416	2.35	0.15			164.16	179
5/2/2014 13:48	13	2.021	2.134	1.996	2.425	744	678	427	432	2,280	1,422	2.08	-0.12			164.53	179
5/2/2014 15:24	15	2.231	1.996	2.698	2.364	794	687	365	372	2,218	1,481	2.11	-0.09			168.05	183
5/2/2014 17:00	17	2.261	2.539	2.522	2.597	798	758	238	248	2,043	1,556	2.40	0.20			172.53	188
5/2/2014 18:36	18	2.695	2.994	2.192	2.171	844	781	209	183	2,017	1,625	2.84	0.64	6.59		176.60	192
5/2/2014 20:12	20	2.443	2.565	2.199	2.208	803	756	198	200	1,958	1,560	2.50	0.30			172.74	188
5/2/2014 21:48	21	2.463	2.591	2.456	2.468	821	773	242	232	2,069	1,594	2.53	0.33			174.78	190
5/2/2014 23:24	23	2.582	2.390	2.771	2.600	860	761	253	243	2,117	1,620	2.49	0.29			176.32	192
5/3/2014 1:00	1	2.749	2.794	3.100	3.066	880	778	247	248	2,153	1,658	2.77	0.57		1.53	178.58	194
5/3/2014 2:36	2	3.212	3.256	3.674	3.783	872	801	252	255	2,180	1,673	3.23	1.03		34.35	179.47	195
5/3/2014 4:12	4	4.425	3.920	4.692	4.855	884	815	255	258	2,212	1,699	4.17	1.97		101.81	180.99	197
5/3/2014 5:48	5	4.984	4.971	4.944	4.907	888	820	257	260	2,225	1,708	4.98	2.78		159.91	181.54	197
5/3/2014 7:24	7	4.966	4.930	4.781	4.736	861	824	256	258	2,199	1,685	4.95	2.75		156.60	180.17	196
5/3/2014 9:00	9	4.937	4.806	4.617	4.564	778	786	242	248	2,054	1,564	4.87	2.67		145.11	172.98	188
5/3/2014 10:36	10	3.567	4.307	4.268	4.368	726	764	223	238	1,951	1,491	3.94	1.74		79.13	168.63	183
5/3/2014 12:12	12	2.264	3.093	2.213	2.146	712	717	310	242	1,982	1,430	2.68	0.48			165.00	179
5/3/2014 13:48	13	1.866	2.085	1.539	1.344	792	723	340	359	2,215	1,515	1.98	-0.22			170.09	185
5/3/2014 15:24	15	1.916	1.969	1.078	1.708	868	768	362	438	2,435	1,636	1.94	-0.26			177.26	193
5/3/2014 17:00	17	2.075	1.836	2.248	2.186	914	771	389	412	2,486	1,685	1.96	-0.24			180.17	196
5/3/2014 18:36	18	2.320	2.301	2.185	2.492	927	785	256	312	2,280	1,712	2.31	0.11			181.78	198
5/3/2014 20:12	20	2.611	2.666	2.337	2.908	943	818	201	243	2,206	1,762	2.64	0.44			184.72	201
5/3/2014 21:48	21	2.588	2.409	2.149	2.007	917	712	213	233	2,075	1,629	2.50	0.30			176.86	192
5/3/2014 23:24	23	2.231	2.045	2.124	2.162	865	734	254	243	2,096	1,599	2.14	-0.06			175.09	190
5/4/2014 1:00	1	2.541	2.142	3.573	2.220	872	717	315	242	2,146	1,590	2.34	0.14			174.50	190
5/4/2014 2:36	2	3.055	2.255	4.052	2.643	857	709	315	241	2,122	1,566	2.65	0.45			173.09	188
5/4/2014 4:12	4	3.374	3.003	4.769	3.662	780	734	311	249	2,075	1,515	3.19	0.99		29.52	170.05	185
5/4/2014 5:48	5	4.280	4.031	4.984	4.886	740	718	294	251	2,003	1,457	4.16	1.96		92.62	166.64	181
5/4/2014 7:24	7	4.657	4.653	4.873	4.953	680	701	226	235	1,842	1,381	4.66	2.46		122.15	162.12	176
5/4/2014 9:00	9	4.990	4.927	4.763	4.887	838	847	170	197	2,052	1,685	4.96	2.76		157.35	180.15	196
5/4/2014 10:36	10	4.521	4.541	4.520	4.812	883	842	154	187	2,066	1,725	4.53	2.33		128.57	182.55	199
5/4/2014 12:12	12	3.421	3.798	2.246	2.313	938	832	145	184	2,099	1,770	3.61	1.41		62.97	185.24	201
5/4/2014 13:48	13	2.612	2.722	1.274	1.191	914	793	260	297	2,264	1,707	2.67	0.47			181.46	197
5/4/2014 15:24	15	2.023	1.935	1.199	1.291	894	758	385	411	2,448	1,652	1.98	-0.22			178.22	194
5/4/2014 17:00	17	1.977	2.008	2.013	1.770	959	819	476	477	2,730	1,777	1.99	-0.21			185.66	202
5/4/2014 18:36	18	2.034	2.018	2.156	2.195	960	810	339	396	2,505	1,770	2.03	-0.17			185.21	201
5/4/2014 20:12	20	2.186	2.064	2.211	2.121	1,020	859	259	276	2,414	1,879	2.12	-0.08			191.68	208
5/4/2014 21:48	21	2.061	2.063	1.995	1.883	1,016	870	285	295	2,466	1,887	2.06	-0.14			192.14	209
5/4/2014 23:24	23	1.979	1.947	2.217	2.012	1,038	890	305	325	2,559	1,928	1.96	-0.24			194.60	212
5/5/2014 1:00	1	2.240	2.265	1.740	2.383	1,053	911	252	323	2,538	1,964	2.25	0.05			196.73	214
5/5/2014 2:36	2	2.749	2.675	2.343	3.100	1,076	895	226	292	2,489	1,971	2.71	0.51			197.15	214
5/5/2014 4:12	4	3.093	3.279	3.145	3.762	957	842	222	257	2,278	1,799	3.19	0.99		32.22	186.95	203
5/5/2014 5:48	5	3.694	3.946	3.930	4.351	844	756	211	225	2,036	1,600	3.82	1.62		74.10	175.14	190
5/5/2014 7:24	7	4.420	4.530	4.952	4.986	781	700	214	228	1,923	1,481	4.48	2.28		114.66	168.07	183
5/5/2014 9:00	9	3.536	3.911	4.817	4.642	774	684	209	222	1,889	1,458	3.72	1.52		64.17	166.71	181
5/5/2014 10:36	10	3.117	3.390	2.595	2.578	958	816	262	302	2,338	1,773	3.25	1.05		36.92	185.41	202
5/5/2014 12:12	12	2.157	2.248	2.084	2.169	856	739	448	470	2,512	1,595	2.20	0.00			174.83	190
5/5/2014 13:48	13	2.330	2.036	1.880	2.072	890	776	515	535	2,716	1,666	2.18	-0.02			179.06	195
5/5/2014 15:24	15	1.992	2.040	2.326	2.019	932	811	526	536	2,805	1,743	2.02	-0.18			183.61	200
5/5/2014 17:00	17	2.045	1.947	2.906	2.592	923	806	440	474	2,643	1,730	2.00	-0.20			182.84	199
5/5/2014 18:36	18	2.154	2.105	4.125	4.059	897	782	425	458	2,562	1,679	2.13	-0.07			179.81	196
5/5/2014 20:12	20	2.256	2.260	4.358	4.424	901	791	427	459	2,579	1,693	2.26	0.06			180.63	196
5/5/2014 21:48	21	2.343	2.529	4.651	4.749	924	817	438	471	2,649	1,741	2.44	0.24			183.49	200
5/5/2014 23:24	23	2.255	2.449	4.657	4.873	942	838	439	474	2,694	1,781	2.35	0.15			185.85	202
5/6/2014 1:00	1	2.622	2.737	4.321	4.385	1,006	865	350	379	2,600	1,871	2.68	0.48			191.22	208
5/6/2014 2:36	2	3.196	3.027	4.311	4.354	1,039	838	300	317	2,494	1,878	3.11	0.91		27.39	191.62	208
5/6/2014 4:12	4	3.472	3.153	4.278	4.152	920	742	238	282	2,182	1,663	3.31	1.11		39.78	178.86	195
5/6/2014 5:48	5	3.663	3.677	4.315	4.835	807	693	224	289	2,013	1,501	3.67	1.47		61.55	169.23	184
5/6/2014 7:24	7	4.082	4.237	4.974	4.976	734	630	221	286	1,871	1,364	4.16	1.96		89.80	161.11	175
5/6/2014 9:00	9	3.341	3.826	4.994	4.928	740	671	249	286	1,945	1,411	3.58	1.38		54.04	163.90	178
5/6/2014 10:36	10	3.046	2.919	3.347	3.105	894	732	254	298	2,178	1,626	2.98	0.78		16.27	176.66	192
5/6/2014 12:12	12	2.097	2.135	2.203	1.854	822	718	469	452	2,460	1,540	2.12	-0.08			171.55	187
5/6/2014 13:48	13	2.007	2.036	1.358	1.905	870	772	412	481	2,535	1,642	2.02	-0.18			177.62	193
5/6/2014 15:24	15	1.898	1.929	2.156	2.062	961	849	563	563	2,937	1,810	1.91	-0.29			187.58	204
5/6/2014 17:00	17	2.085	2.000	4.117	3.704	958	851	565	562	2,935	1,809	2.04	-0.16			187.51	204
5/6/2014 18:36	18	2.101	2.070	4.947	4.721	913	810	536	533	2,792	1,723	2.09	-0.11			182.40	198
5/6/2014 20:12	20	2.063	2.057	4.891	4.705	922	822	543	539	2,826	1,744	2.06	-0.14			183.68	200
5/6/2014 21:48	21	2.010	2.017	4.800	4.766	942	843	556	550	2,891	1,785	2.01	-0.19			186.10	202
5/6/2014 23:24	23	2.073	2.000	4.895	4.739	987	892	582	574	3,034	1,878	2.04	-0.16			191.64	208
5/7/2014 1:00	1	2.172	2.218	4.955	4.883	954	861	501	504	2,819	1,815	2.19	-0.01			187.87	204
5/7/2014 2:36	2	2.564	2.632	4.999	4.812	974	877	439	415	2,705	1,851	2.60	0.40			190.02	207
5/7/2014 4:12	4	3.055	3.164	4.979	4.768	928	838	355	319	2,440	1,765	3.11	0.91		26.30	184.95	201
5/7/2014 5:48	5	3.748	3.510	4.959	4.477	812	719	260	255	2,047	1,531	3.63	1.43		59.45	171.05	186
5/7/2014 7:24	7	4.796	3.712	4.994	4.946	774	670	238	255	1,937	1,444	4.25	2.05		98.68	165.88	180
5/7/2014 9:00	9	4.020	3.466	4.842	4.585	732	632	225	242	1,831	1,364	3.74	1.54		63.26	161.12	175
5/7/2014 10:36	10	3.320	4.040	3.797	4.258	968	993	381	465	2,807	1,961	3.68	1.48		72.30	196.54	214
5/7/2014 12:12	12	2.678	2.945	2.868	3.542	800	700	361	416	2,277	1,500	2.81	0.61		4.11	169.19	184
5/7/2014 13:48	13	2.055	2.259	1.981	2.047	782	675	467	374	2,297	1,456	2.16	-0.04			166.60	181
5/7/2014 15:24	15	2.224	1.951	2.049	2.096	819	707	379	412	2,317	1,526	2.09	-0.11			170.72	186
5/7/2014 17:00	17	2.207	2.340	2.482	2.167	854	762	320	301	2,237	1,616	2.27	0.07			176.06	191
5/7/2014 18:36	18	2.021	1.941	1.970	1.855	885	751	293	283	2,213	1,636	1.98	-0.22			177.27	193
5/7/2014 20:12	20	1.927	1.930	2.051	2.064	930	789	315	352	2,386	1,719	1.93	-0.27			182.21	198
5/7/2014 21:48	21	2.167	2.318	2.147	2.123	979	871	322	321	2,492	1,850	2.24	0.04			189.96	207
5/7/2014 23:24	23	2.160	2.371	2.306	2.210	1,015	884	333	331	2,562	1,899	2.27	0.07			192.87	210
5/8/2014 1:00	1	2.378	2.391	2.867	2.545	1,001	837	352	348	2,538	1,838	2.38	0.18			189.23	206
5/8/2014 2:36	2	2.528	2.631	3.806	3.354	977	795	357	339	2,467	1,772	2.58	0.38			185.32	202
5/8/2014 4:12	4	3.102	3.030	4.633	4.034	945	777	335	328	2,385	1,722	3.07	0.87		22.79	182.39	198
5/8/2014 5:48	5	3.927	3.679	4.990	4.957	904	773	327	336	2,340	1,677	3.80	1.60		74.80	179.69	195
5/8/2014 7:24	7	4.036	4.085	4.893	4.931	773	716	274	291	2,053	1,488	4.06	1.86		87.33	168.48	183
5/8/2014 9:00	9	3.396	3.595	4.721	4.818	756	698	269	284	2,006	1,454	3.50	1.30		49.07	166.43	181
5/8/2014 10:36	10	2.337	2.526	2.716	2.903	758	700	273	287	2,018	1,458	2.43	0.23			166.68	181
5/8/2014 12:12	12	2.200	2.297	1.731	1.804	858	743	505	493	2,599	1,601	2.25	0.05			175.19	191
5/8/2014 13:48	13	2.197	2.102	2.120	2.027	855	724	538	523	2,640	1,578	2.15	-0.05			173.84	189
5/8/2014 15:24	15	2.196	2.153	2.251	2.153	848	733	519	536	2,636	1,581	2.17	-0.03			174.01	189
5/8/2014 17:00	17	2.404	2.449	2.478	2.423	922	785	379	395	2,480	1,706	2.43	0.23			181.43	197
5/8/2014 18:36	18	2.458	2.865	2.420	2.200	836	795	276	318	2,225	1,631	2.66	0.46			176.95	192
5/8/2014 20:12	20	2.105	2.195	2.470	2.411	778	695	307	294	2,075	1,474	2.15	-0.05			167.64	182
5/8/2014 21:48	21	2.043	2.074	2.061	2.149	783	701	290	299	2,073	1,484	2.06	-0.14			168.23	183

5/8/2014 23:24	23	2.004	2.116	2.240	1.861	859	739	326	300	2,223	1,598	2.06	-0.14			174.99	190
5/9/2014 1:00	1	2.645	2.342	3.068	2.372	930	754	309	318	2,311	1,684	2.49	0.29			180.11	196
5/9/2014 2:36	2	2.749	2.653	3.191	3.159	888	719	245	303	2,154	1,606	2.70	0.50			175.50	191
5/9/2014 4:12	4	3.244	2.918	3.205	3.853	874	708	231	295	2,108	1,581	3.08	0.88		22.78	174.01	189
5/9/2014 5:48	5	3.980	3.700	4.210	4.763	846	713	232	277	2,068	1,558	3.84	1.64		74.42	172.65	188
5/9/2014 7:24	7	4.736	4.885	4.913	4.996	784	723	235	276	2,018	1,507	4.81	2.61		138.20	169.60	184
5/9/2014 9:00	9	4.313	4.248	4.865	4.950	756	719	233	274	1,982	1,475	4.28	2.08		101.49	167.69	182
5/9/2014 10:36	10	2.746	3.178	2.691	3.408	748	711	246	272	1,977	1,459	2.96	0.76		13.97	166.75	181
5/9/2014 12:12	12	2.241	2.532	1.436	1.495	717	679	368	356	2,120	1,396	2.39	0.19			162.99	177
5/9/2014 13:48	13	2.024	2.241	1.683	1.441	713	652	442	396	2,203	1,365	2.13	-0.07			161.17	175
5/9/2014 15:24	15	2.037	2.159	2.501	2.346	747	688	427	433	2,296	1,435	2.10	-0.10			165.31	180
5/9/2014 17:00	17	2.368	2.237	2.364	2.262	839	682	299	335	2,155	1,521	2.30	0.10			170.45	185
5/9/2014 18:36	18	2.325	2.331	2.203	2.338	812	707	248	293	2,060	1,520	2.33	0.13			170.34	185
5/9/2014 20:12	20	2.453	2.287	2.538	2.190	881	716	277	299	2,172	1,597	2.37	0.17			174.93	190
5/9/2014 21:48	21	2.008	2.388	2.181	2.028	837	743	307	322	2,209	1,580	2.20	0.00			173.94	189
5/9/2014 23:24	23	2.053	2.051	2.140	2.000	880	728	346	352	2,306	1,607	2.05	-0.15			175.56	191
5/10/2014 1:00	1	2.065	2.087	2.552	2.216	886	743	327	351	2,307	1,629	2.08	-0.12			176.84	192
5/10/2014 2:36	2	2.497	2.335	3.086	2.910	883	739	319	347	2,289	1,622	2.42	0.22			176.45	192
5/10/2014 4:12	4	3.172	3.217	4.123	3.991	871	728	315	343	2,257	1,599	3.19	0.99		30.78	175.08	190
5/10/2014 5:48	5	4.254	4.155	4.930	4.951	866	723	313	341	2,243	1,589	4.20	2.00		100.38	174.48	190
5/10/2014 7:24	7	4.958	4.968	4.975	4.915	794	795	249	292	2,130	1,589	4.96	2.76		152.69	174.45	190
5/10/2014 9:00	9	4.869	4.809	4.817	4.795	730	851	193	245	2,019	1,581	4.84	2.64		143.74	173.99	189
5/10/2014 10:36	10	3.493	4.513	3.393	4.498	707	826	183	237	1,953	1,533	4.00	1.80		84.81	171.16	186
5/10/2014 12:12	12	2.067	3.649	1.275	2.035	649	752	298	254	1,954	1,402	2.86	0.66		7.00	163.34	178
5/10/2014 13:48	13	1.594	2.371	1.194	1.500	702	739	401	419	2,261	1,441	1.98	-0.22			165.67	180
5/10/2014 15:24	15	1.732	2.345	1.436	1.556	848	772	476	471	2,566	1,619	2.04	-0.16			176.28	192
5/10/2014 17:00	17	2.009	1.852	2.006	1.900	943	773	415	440	2,571	1,716	1.93	-0.27			182.02	198
5/10/2014 18:36	18	1.980	2.028	2.209	2.279	940	784	313	386	2,423	1,724	2.00	-0.20			182.51	198
5/10/2014 20:12	20	2.125	2.271	2.099	2.225	943	796	267	309	2,314	1,739	2.20	0.00			183.36	199
5/10/2014 21:48	21	2.083	2.154	2.177	2.224	952	803	277	327	2,359	1,755	2.12	-0.08			184.36	200
5/10/2014 23:24	23	2.443	2.475	2.409	2.539	963	811	280	311	2,365	1,775	2.46	0.26			185.49	202
5/11/2014 1:00	1	2.658	2.840	3.050	2.879	967	780	253	294	2,294	1,747	2.75	0.55			183.87	200
5/11/2014 2:36	2	2.940	2.758	2.936	3.386	943	755	232	297	2,226	1,698	2.85	0.65		7.10	180.93	197
5/11/2014 4:12	4	3.259	3.396	3.483	3.712	881	743	246	285	2,155	1,624	3.33	1.13		40.35	176.54	192
5/11/2014 5:48	5	3.769	3.681	4.356	4.612	808	713	263	277	2,061	1,521	3.73	1.53		65.73	170.45	185
5/11/2014 7:24	7	4.632	4.646	4.985	4.979	755	686	272	263	1,976	1,441	4.64	2.44		123.75	165.66	180
5/11/2014 9:00	9	4.984	4.791	4.923	4.998	752	686	248	239	1,925	1,438	4.89	2.69		139.92	165.52	180
5/11/2014 10:36	10	4.601	4.923	4.826	4.995	784	738	233	225	1,981	1,522	4.76	2.56		135.68	170.49	185
5/11/2014 12:12	12	3.504	3.743	3.275	2.378	937	759	259	227	2,182	1,696	3.62	1.42		62.48	180.82	197
5/11/2014 13:48	13	2.612	2.603	1.320	1.723	863	732	309	424	2,329	1,596	2.61	0.41			174.86	190
5/11/2014 15:24	15	1.980	1.983	1.289	1.589	852	718	425	474	2,468	1,570	1.98	-0.22			173.32	188
5/11/2014 17:00	17	1.951	2.027	2.017	1.970	889	756	429	467	2,540	1,645	1.99	-0.21			177.78	193
5/11/2014 18:36	18	2.018	2.124	2.116	2.078	898	763	316	359	2,335	1,661	2.07	-0.13			178.73	194
5/11/2014 20:12	20	2.290	2.475	2.366	2.348	926	775	254	285	2,240	1,701	2.38	0.18			181.15	197
5/11/2014 21:48	21	2.289	2.282	2.367	2.605	862	729	234	274	2,099	1,591	2.29	0.09			174.61	190
5/11/2014 23:24	23	2.099	2.000	2.162	1.762	895	745	272	265	2,177	1,640	2.05	-0.15			177.50	193
5/12/2014 1:00	1	2.132	2.369	2.349	2.130	896	786	276	290	2,248	1,682	2.25	0.05			179.99	196
5/12/2014 2:36	2	2.201	2.706	2.839	2.909	890	774	282	296	2,242	1,664	2.45	0.25			178.94	195
5/12/2014 4:12	4	2.880	3.147	3.462	3.433	842	713	254	269	2,077	1,555	3.01	0.81		18.00	172.42	188
5/12/2014 5:48	5	3.628	3.578	4.045	4.115	788	707	246	259	1,999	1,495	3.60	1.40		56.99	168.90	184
5/12/2014 7:24	7	4.700	4.910	4.897	4.977	758	702	242	255	1,958	1,460	4.81	2.61		135.58	166.81	181
5/12/2014 9:00	9	4.721	4.961	4.814	4.944	833	757	215	225	2,030	1,590	4.84	2.64		144.32	174.52	190
5/12/2014 10:36	10	3.498	4.060	3.000	3.001	913	773	211	252	2,150	1,687	3.78	1.58		73.36	180.27	196
5/12/2014 12:12	12	2.299	2.261	1.264	1.917	812	688	363	438	2,301	1,500	2.28	0.08			169.17	184
5/12/2014 13:48	13	2.616	1.966	1.455	1.613	854	741	474	500	2,568	1,595	2.29	0.09			174.83	190
5/12/2014 15:24	15	2.156	1.886	1.475	1.614	865	753	505	541	2,665	1,618	2.02	-0.18			176.18	192
5/12/2014 17:00	17	2.148	1.840	2.192	2.252	874	765	523	567	2,729	1,639	1.99	-0.21			177.43	193
5/12/2014 18:36	18	2.160	1.822	3.917	3.927	854	746	507	549	2,655	1,599	1.99	-0.21			175.09	190
5/12/2014 20:12	20	2.266	1.782	4.489	4.763	825	716	468	531	2,541	1,541	2.02	-0.18			171.62	187
5/12/2014 21:48	21	2.205	1.870	4.455	4.761	807	698	457	521	2,483	1,505	2.04	-0.16			169.46	184
5/12/2014 23:24	23	2.097	1.733	4.335	4.743	843	736	446	529	2,555	1,579	1.92	-0.28			173.88	189
5/13/2014 1:00	1	2.598	2.427	3.697	3.917	930	823	324	347	2,425	1,753	2.51	0.31			184.23	200
5/13/2014 2:36	2	3.311	3.380	3.826	3.877	949	817	287	299	2,352	1,766	3.35	1.15		43.56	184.99	201
5/13/2014 4:12	4	3.265	3.283	3.736	3.666	787	713	254	275	2,029	1,501	3.27	1.07		35.05	169.23	184
5/13/2014 5:48	5	3.686	3.954	4.047	4.332	761	709	238	249	1,957	1,470	3.82	1.62		70.83	167.39	182
5/13/2014 7:24	7	4.504	4.362	4.773	4.988	723	645	240	251	1,858	1,368	4.43	2.23		107.38	161.31	175
5/13/2014 9:00	9	4.504	4.365	4.962	4.813	716	638	237	248	1,840	1,355	4.43	2.23		106.96	160.57	175
5/13/2014 10:36	10	3.133	3.100	3.452	3.663	710	632	235	246	1,823	1,342	3.12	0.92		23.19	159.78	174
5/13/2014 12:12	12	2.458	2.476	2.200	2.743	746	684	478	563	2,472	1,430	2.47	0.27			165.05	179
5/13/2014 13:48	13	2.153	2.091	1.820	2.226	767	692	474	492	2,425	1,459	2.12	-0.08			166.76	181
5/13/2014 15:24	15	2.205	2.053	1.913	1.807	813	708	500	517	2,537	1,520	2.13	-0.07			170.39	185
5/13/2014 17:00	17	2.256	1.940	3.184	3.172	814	707	498	536	2,556	1,521	2.10	-0.10			170.45	185
5/13/2014 18:36	18	2.375	2.036	4.643	4.551	822	715	504	543	2,583	1,536	2.21	0.01			171.33	186
5/13/2014 20:12	20	2.601	2.328	4.988	4.982	848	741	522	562	2,673	1,589	2.46	0.26			174.44	190
5/13/2014 21:48	21	2.636	2.488	4.936	4.870	871	767	539	579	2,755	1,637	2.56	0.36			177.33	193
5/13/2014 23:24	23	2.383	2.211	4.883	4.753	895	795	537	573	2,800	1,690	2.30	0.10			180.48	196
5/14/2014 1:00	1	2.893	3.104	4.503	4.195	925	880	384	355	2,544	1,805	3.00	0.80		18.42	187.31	204
5/14/2014 2:36	2	3.275	3.835	4.219	3.780	895	765	283	272	2,215	1,659	3.56	1.36		56.88	178.65	194
5/14/2014 4:12	4	3.367	3.442	3.851	3.724	767	696	247	250	1,960	1,463	3.40	1.20		43.21	166.97	182
5/14/2014 5:48	5	3.766	4.228	4.386	4.590	754	698	248	250	1,950	1,453	4.00	1.80		82.04	166.36	181
5/14/2014 7:24	7	4.496	4.787	4.978	4.995	747	675	245	248	1,915	1,421	4.64	2.44		123.07	164.52	179
5/14/2014 9:00	9	4.908	4.967	4.652	4.540	849	757	276	278	2,160	1,606	4.94	2.74		151.78	175.47	191
5/14/2014 10:36	10	3.795	3.917	4.199	3.671	883	859	393	316	2,451	1,742	3.86	1.66		80.27	183.56	200
5/14/2014 12:12	12	2.802	2.592	2.130	2.384	729	726	387	428	2,270	1,455	2.70	0.50			166.52	181
5/14/2014 13:48	13	2.205	2.441	2.358	2.089	725	731	498	406	2,359	1,456	2.32	0.12			166.56	181
5/14/2014 15:24	15	2.327	2.086	2.357	2.395	820	728	435	407	2,390	1,548	2.21	0.01			172.02	187
5/14/2014 17:00	17	2.231	2.208	3.174	2.764	815	761	421	349	2,346	1,575	2.22	0.02			173.65	189
5/14/2014 18:36	18	2.365	2.318	4.341	3.797	829	776	430	354	2,389	1,605	2.34	0.14			175.44	191
5/14/2014 20:12	20	2.382	2.478	4.624	4.185	845	793	439	360	2,436	1,637	2.43	0.23			177.34	193
5/14/2014 21:48	21	2.159	2.199	4.209	3.612	851	802	444	363	2,460	1,653	2.18	-0.02			178.27	194
5/14/2014 23:24	23	1.914	1.992	3.692	2.897	860	810	449	366	2,485	1,670	1.95	-0.25			179.29	195
5/15/2014 1:00	1	2.115	2.206	3.964	3.038	872	823	440	345	2,480	1,695	2.16	-0.04			180.77	197
5/15/2014 2:36	2	2.488	2.537	4.723	3.790	869	806	387	319	2,380	1,674	2.51	0.31			179.53	195
5/15/2014 4:12	4	3.006	3.125	4.648	4.134	851	765	304	280	2,200	1,616	3.07	0.87		21.99	176.10	192
5/15/2014 5:48	5	3.119	2.924	4.570	4.519	752	704	256	271	1,982	1,456	3.02	0.82		17.91	166.57	181
5/15/2014 7:24	7	3.470	3.627	4.747	4.942	736	703	251	264	1,954	1,439	3.55	1.35		52.26	165.59	180
5/15/2014 9:00	9	3.874	3.852	4.994	4.949	724	691	247	260	1,922	1,416	3.86	1.66		72.25	164.17	179
5/15/2014 10:36	10	2.884	2.877	3.826	4.022	708	676	247	261	1,892	1,384	2.88	0.68		8.38	162.31	177
5/15/2014 12:12	12	2.035	2.014	1.570	1.741	726	715	437	434	2,312	1,440	2.02	-0.18			165.64	180
5/15/2014 13:48	13	1.903	1.889	1.470	1.773	788	717	504	506	2,514	1,504	1.90	-0.30			169.43	184
5/15/2014 15:24	15	2.174	1.833	1.832	2.049	820	720	540	550	2,629	1,540	2.00	-0.20			171.55	187
5/15/2014 17:00	17	2.085	1.714	2.274	2.388	829	734	515	536	2,613	1,563	1.90	-0.30			172.93	188
5/15/2014 18:36	18	2.085	1.984	2.514	2.362	864	798	354	347	2,364	1,663	2.03	-0.17			178.84	194
5/15/2014 20:12	20	1.986	2.522	2.182	2.075	822	849	311	289	2,271	1,671	2.25	0.05			179.32	195
5/15/2014 21:48	21	2.187	2.375	2.468	1.780	900	842	309	287	2,339	1,742	2.28	0.08			183.57	200
5/15/2014 23:24	23	1.985	2.132	1.954	2.749	893	847	307	391	2,438	1,741	2.06	-0.14			183.47	200
5/16/2014 1:00	1	2.102	2.254	2.445	3.267	885	839	304	368	2,396	1,724	2.18	-0.02			182.49	198
5/16/2014 2:36	2	2.624	2.825	2.753	3.355	936	884	235	256	2,312	1,820	2.72	0.52			188.22	205
5/16/2014 4:12	4	3.438	3.788	3.435	3.872	946	893	229	245	2,312	1,838	3.61	1.41		64.59	189.28	206
5/16/2014 5:48	5	4.031	4.442	4.187	4.775	937	895	195	247	2,275	1,833	4.24	2.04		111.08	188.96	205
5/16/2014 7:24	7	4.306	4.844	3.966	4.953	885	879	163	253	2,181	1,765	4.57	2.37		133.43	184.91	201
5/16/2014 9:00	9	4.277	4.649	4.072	4.789	873	870	162	252	2,157	1,743	4.46	2.26		124.40	183.64	200
5/16/2014 10:36	10	3.396	3.694	1.921	3.441	871	869	159	251	2,150	1,740	3.54	1.34		57.66	183.46	200
5/16/2014 12:12	12	2.439	2.694	1.296	1.249	791	782	400	371	2,344	1,573	2.57	0.37			173.54	189
5/16/2014 13:48	13	2.130	2.344	1.435	1.384	775	764	415	394	2,348	1,539	2.24	0.04			171.51	187
5/16/2014 15:24	15	1.898	2.039	2.117	2.208	761	751	407	435	2,355	1,513	1.97	-0.23			169.92	185
5/16/2014 17:00	17	2.185	2.185	2.329	2.089	859	784	329	303	2,275	1,643	2.18	-0.02			177.66	193
5/16/2014 18:36	18	2.391	2.205	2.298	2.286	890	783	267	323	2,264	1,673	2.30	0.10			179.47	195
5/16/2014 20:12	20	2.126	2.081	2.076	2.264	891	817	269	288	2,265	1,708	2.10	-0.10			181.56	197
5/16/2014 21:48	21	2.068	2.073	2.046	1.800	901	809	290	316	2,316	1,710	2.07	-0.13			181.64	198
5/16/2014 23:24	23	2.035	2.045	2.270	2.536	922	829	273	308	2,333	1,752	2.04	-0.16			184.13	200
5/17/2014 1:00	1	2.397	2.305	2.166	2.015	939	827	234	249	2,248	1,765	2.35	0.15			184.94	201
5/17/2014 2:36	2	2.552	2.453	1.903	2.197	563	837	200	231	1,832	1,401	2.50	0.30			163.30	178
5/17/2014 4:12	4	2.783	2.669	1.605	1.995	468	852	204	236	1,761	1,321	2.73	0.53			158.53	172
5/17/2014 5:48	5	3.833	3.903	3.307	3.843	488	886	210	244	1,827	1,373	3.87	1.67		71.47	161.66	176
5/17/2014 7:24	7	4.654	4.810	4.776	4.999	560	943	205	238	1,946	1,503	4.73	2.53		132.71	169.33	184
5/17/2014 9:00	9	4.940	4.956	4.918	4.989	949	927	198	229	2,301	1,875	4.95	2.75		166.43	191.47	208
5/17/2014 10:36	10	4.589	4.599	4.546	4.977	965	896	190	217	2,269	1,861	4.59	2.39		139.04	190.63	207
5/17/2014 12:12	12	3.902	3.800	2.334	2.483	947	877	187	220	2,231	1,824	3.85	1.65		82.04	188.42	205

5/17/2014 13:48	13	2.661	2.579	0.950	0.888	896	822	256	296	2,270	1,718	2.62	0.42			182.16	198
5/17/2014 15:24	15	1.910	1.893	1.031	1.083	906	832	385	427	2,550	1,739	1.90	-0.30			183.36	199
5/17/2014 17:00	17	2.049	2.055	1.997	1.535	980	864	437	468	2,750	1,844	2.05	-0.15			189.63	206
5/17/2014 18:36	18	2.151	1.929	2.201	2.246	984	864	276	335	2,459	1,848	2.04	-0.16			189.85	206
5/17/2014 20:12	20	2.340	2.119	2.246	2.055	975	862	247	284	2,369	1,837	2.23	0.03			189.21	206
5/17/2014 21:48	21	2.389	2.644	2.153	2.443	906	902	218	226	2,252	1,808	2.52	0.32			187.47	204
5/17/2014 23:24	23	2.086	2.181	2.234	2.036	873	822	242	222	2,158	1,694	2.13	-0.07			180.73	197
5/18/2014 1:00	1	2.262	2.212	2.488	2.412	880	810	248	249	2,188	1,690	2.24	0.04			180.49	196
5/18/2014 2:36	2	2.457	2.408	3.112	3.302	864	783	255	255	2,157	1,647	2.43	0.23			177.90	193
5/18/2014 4:12	4	2.743	2.507	3.585	3.554	798	692	249	243	1,982	1,490	2.63	0.43			168.60	183
5/18/2014 5:48	5	3.313	3.116	4.516	4.492	722	697	255	249	1,923	1,420	3.21	1.01		30.20	164.41	179
5/18/2014 7:24	7	3.700	4.210	4.980	4.977	649	684	248	241	1,823	1,333	3.95	1.75		75.89	159.27	173
5/18/2014 9:00	9	4.575	4.796	4.776	4.687	724	746	251	235	1,956	1,470	4.69	2.49		128.13	167.43	182
5/18/2014 10:36	10	4.585	4.594	4.573	4.397	820	827	245	238	2,129	1,647	4.59	2.39		129.39	177.89	193
5/18/2014 12:12	12	3.734	3.857	3.658	3.352	895	869	231	223	2,219	1,765	3.80	1.60		76.46	184.90	201
5/18/2014 13:48	13	2.797	3.016	1.444	1.339	908	844	299	329	2,381	1,752	2.91	0.71	11.39		184.17	200
5/18/2014 15:24	15	2.170	1.997	1.237	1.331	908	817	401	463	2,589	1,726	2.08	-0.12			182.58	199
5/18/2014 17:00	17	1.970	1.976	2.018	2.168	945	867	426	490	2,729	1,813	1.97	-0.23			187.75	204
5/18/2014 18:36	18	2.070	2.267	2.207	2.212	966	886	316	374	2,542	1,852	2.17	-0.03			190.06	207
5/18/2014 20:12	20	2.310	2.496	2.463	2.475	956	936	256	264	2,412	1,892	2.40	0.20			192.48	209
5/18/2014 21:48	21	2.085	2.474	1.797	2.014	946	870	250	237	2,303	1,816	2.28	0.08			187.96	204
5/18/2014 23:24	23	1.992	1.961	1.946	1.934	1,031	943	299	295	2,569	1,974	1.98	-0.22			197.34	215
5/19/2014 1:00	1	2.544	2.327	2.535	1.783	1,068	952	287	271	2,578	2,019	2.44	0.24			200.03	218
5/19/2014 2:36	2	2.719	2.998	3.087	2.998	992	921	268	282	2,462	1,912	2.86	0.66		8.32	193.68	211
5/19/2014 4:12	4	2.840	3.305	3.647	4.107	892	820	277	295	2,284	1,712	3.07	0.87		23.19	181.77	198
5/19/2014 5:48	5	3.881	4.530	4.799	4.960	863	749	278	296	2,187	1,613	4.21	2.01		101.21	175.87	191
5/19/2014 7:24	7	4.022	4.477	4.956	4.931	742	623	254	266	1,885	1,364	4.25	2.05		95.54	161.13	175
5/19/2014 9:00	9	3.476	3.486	4.851	4.834	696	610	240	258	1,803	1,306	3.48	1.28		45.56	157.65	171
5/19/2014 10:36	10	2.056	3.079	2.545	4.294	700	762	294	346	2,103	1,462	2.57	0.37			166.94	182
5/19/2014 12:12	12	2.224	2.364	2.085	2.196	822	760	462	517	2,562	1,582	2.29	0.09			174.08	189
5/19/2014 13:48	13	2.010	1.976	2.027	2.131	919	823	595	583	2,921	1,742	1.99	-0.21			183.57	200
5/19/2014 15:24	15	2.043	1.909	2.184	2.044	948	844	605	588	2,986	1,792	1.98	-0.22			186.54	203
5/19/2014 17:00	17	2.091	1.934	3.346	2.130	944	841	581	538	2,904	1,785	2.01	-0.19			186.12	202
5/19/2014 18:36	18	2.145	1.898	4.795	3.971	908	803	532	515	2,758	1,711	2.02	-0.18			181.69	198
5/19/2014 20:12	20	2.087	1.854	4.957	4.545	895	790	524	507	2,716	1,685	1.97	-0.23			180.16	196
5/19/2014 21:48	21	2.065	1.831	4.952	4.493	916	811	535	518	2,780	1,727	1.95	-0.25			182.65	199
5/19/2014 23:24	23	2.092	1.959	4.983	4.722	994	895	549	558	2,995	1,888	2.03	-0.17			192.26	209
5/20/2014 1:00	1	2.360	2.194	4.433	4.074	1,026	933	382	386	2,726	1,959	2.28	0.08			196.43	214
5/20/2014 2:36	2	3.307	3.404	3.539	3.589	1,068	990	259	267	2,583	2,057	3.36	1.16		48.45	202.29	220
5/20/2014 4:12	4	3.960	4.104	3.938	3.726	1,048	908	255	222	2,433	1,956	4.03	1.83		99.51	196.26	213
5/20/2014 5:48	5	4.174	4.317	4.682	4.415	912	767	238	242	2,159	1,679	4.25	2.05		106.37	179.81	196
5/20/2014 7:24	7	3.909	4.318	4.994	4.988	758	665	236	257	1,916	1,423	4.11	1.91		88.78	164.63	179
5/20/2014 9:00	9	3.610	3.698	4.779	4.984	706	690	220	322	1,938	1,396	3.65	1.45		58.28	163.03	177
5/20/2014 10:36	10	2.463	2.636	2.208	3.587	764	737	252	297	2,049	1,501	2.55	0.35			169.22	184
5/20/2014 12:12	12	2.013	2.118	1.907	2.128	851	719	517	547	2,634	1,569	2.07	-0.13			173.30	188
5/20/2014 13:48	13	2.036	1.858	1.890	2.157	940	820	546	570	2,876	1,760	1.95	-0.25			184.62	201
5/20/2014 15:24	15	1.983	1.950	2.008	1.908	965	869	615	600	3,049	1,834	1.97	-0.23			189.01	206
5/20/2014 17:00	17	1.982	1.967	3.429	3.172	955	867	591	635	3,048	1,822	1.97	-0.23			188.33	205
5/20/2014 18:36	18	2.120	1.952	4.963	5.000	887	798	515	578	2,779	1,686	2.04	-0.16			180.21	196
5/20/2014 20:12	20	2.066	1.962	4.952	4.936	895	806	511	579	2,790	1,700	2.01	-0.19			181.07	197
5/20/2014 21:48	21	1.950	1.934	4.823	4.872	899	809	515	584	2,807	1,708	1.94	-0.26			181.55	197
5/20/2014 23:24	23	1.952	1.898	4.925	4.809	1,002	922	548	653	3,125	1,924	1.92	-0.28			194.35	211
5/21/2014 1:00	1	2.190	2.268	3.714	4.662	960	896	334	448	2,639	1,856	2.23	0.03			190.35	207
5/21/2014 2:36	2	2.929	3.071	3.353	4.261	1,014	912	265	308	2,500	1,926	3.00	0.80		19.26	194.51	212
5/21/2014 4:12	4	3.041	3.502	3.523	3.824	861	799	254	244	2,157	1,659	3.27	1.07		36.84	178.65	194
5/21/2014 5:48	5	3.137	3.507	4.028	4.105	820	736	263	251	2,070	1,557	3.32	1.12		39.05	172.55	188
5/21/2014 7:24	7	3.759	4.504	4.893	4.901	800	721	262	249	2,032	1,521	4.13	1.93		93.12	170.44	185
5/21/2014 9:00	9	4.439	4.833	4.809	4.585	1,067	1,025	249	239	2,581	2,093	4.64	2.44		152.40	204.38	222
5/21/2014 10:36	10	4.030	4.274	3.202	3.511	934	982	199	205	2,321	1,916	4.15	1.95		107.49	193.92	211
5/21/2014 12:12	12	3.237	2.896	0.656	1.595	757	777	324	220	2,078	1,534	3.07	0.87		21.42	171.20	186
5/21/2014 13:48	13	2.016	1.926	0.524	0.851	685	737	364	298	2,083	1,422	1.97	-0.23			164.55	179
5/21/2014 15:24	15	2.121	2.166	1.266	2.009	765	784	411	417	2,378	1,550	2.14	-0.06			172.13	187
5/21/2014 17:00	17	2.162	1.857	2.062	1.938	795	759	332	278	2,164	1,554	2.01	-0.19			172.39	187
5/21/2014 18:36	18	2.094	2.179	2.233	2.419	772	812	309	242	2,135	1,584	2.14	-0.06			174.18	189
5/21/2014 20:12	20	2.303	2.319	2.182	2.282	830	835	288	224	2,178	1,666	2.31	0.11			179.02	195
5/21/2014 21:48	21	1.950	2.015	1.976	1.916	1,051	993	335	280	2,658	2,043	1.98	-0.22			201.45	219
5/21/2014 23:24	23	1.970	2.143	1.798	1.831	1,199	1,129	372	323	3,022	2,328	2.06	-0.14			218.34	237
5/22/2014 1:00	1	2.045	2.018	1.759	1.638	1,079	1,003	336	295	2,714	2,082	2.03	-0.17			203.75	222
5/22/2014 2:36	2	2.122	1.946	2.203	1.982	1,006	923	314	272	2,514	1,929	2.03	-0.17			194.64	212
5/22/2014 4:12	4	2.572	2.246	2.747	2.427	976	892	302	267	2,437	1,868	2.41	0.21			191.05	208
5/22/2014 5:48	5	3.044	2.950	3.145	3.376	928	878	247	247	2,301	1,806	3.00	0.80		18.31	187.38	204
5/22/2014 7:24	7	2.877	3.101	3.390	3.697	811	775	247	227	2,061	1,587	2.99	0.79		16.45	174.32	190
5/22/2014 9:00	9	3.688	3.043	3.791	3.942	796	756	247	226	2,025	1,552	3.37	1.17		41.92	172.27	187
5/22/2014 10:36	10	2.429	2.226	1.722	1.834	797	747	308	298	2,149	1,544	2.33	0.13			171.81	187
5/22/2014 12:12	12	2.078	1.780	0.684	1.355	838	780	456	490	2,564	1,618	1.93	-0.27			176.17	192
5/22/2014 13:48	13	1.898	2.139	1.129	2.235	964	887	563	647	3,061	1,851	2.02	-0.18			190.05	207
5/22/2014 15:24	15	2.097	2.074	1.229	2.187	970	853	561	581	2,964	1,823	2.09	-0.11			188.38	205
5/22/2014 17:00	17	2.038	2.010	2.301	2.200	922	814	532	415	2,683	1,736	2.02	-0.18			183.18	199
5/22/2014 18:36	18	2.313	2.371	2.457	2.265	986	892	276	264	2,417	1,878	2.34	0.14			191.62	208
5/22/2014 20:12	20	2.420	2.374	2.066	2.158	977	865	286	281	2,410	1,842	2.40	0.20			189.50	206
5/22/2014 21:48	21	2.110	2.113	2.014	1.773	956	851	315	290	2,412	1,807	2.11	-0.09			187.44	204
5/22/2014 23:24	23	2.077	1.958	1.876	2.569	1,007	885	307	321	2,520	1,892	2.02	-0.18			192.45	209
5/23/2014 1:00	1	2.292	2.147	2.517	1.818	991	867	307	256	2,421	1,858	2.22	0.02			190.44	207
5/23/2014 2:36	2	2.526	2.281	2.610	2.630	975	868	253	265	2,361	1,844	2.40	0.20			189.60	206
5/23/2014 4:12	4	2.864	2.877	3.033	3.439	978	871	253	265	2,366	1,848	2.87	0.67		9.02	189.87	206
5/23/2014 5:48	5	3.487	4.082	3.573	4.656	909	902	205	273	2,289	1,811	3.78	1.58		76.77	187.66	204
5/23/2014 7:24	7	4.196	4.888	4.168	4.997	849	901	206	245	2,202	1,750	4.54	2.34		130.42	184.05	200
5/23/2014 9:00	9	4.287	4.859	4.907	4.988	875	876	201	235	2,186	1,750	4.57	2.37		132.69	184.05	200
5/23/2014 10:36	10	3.284	3.642	2.971	3.630	921	828	232	261	2,242	1,749	3.46	1.26		51.89	184.00	200
5/23/2014 12:12	12	2.074	2.062	1.452	1.615	833	750	477	442	2,502	1,583	2.07	-0.13			174.10	189
5/23/2014 13:48	13	1.927	1.899	1.261	1.662	854	791	519	477	2,641	1,645	1.91	-0.29			177.80	193
5/23/2014 15:24	15	1.872	2.049	1.539	1.891	941	884	572	548	2,945	1,825	1.96	-0.24			188.47	205
5/23/2014 17:00	17	2.056	2.127	2.675	2.508	985	879	396	371	2,630	1,864	2.09	-0.11			190.80	207
5/23/2014 18:36	18	2.000	2.021	2.041	1.827	932	849	291	278	2,349	1,780	2.01	-0.19			185.84	202
5/23/2014 20:12	20	1.963	2.016	2.049	2.205	955	873	311	283	2,422	1,828	1.99	-0.21			188.68	205
5/23/2014 21:48	21	1.889	1.921	2.058	2.276	958	870	321	342	2,491	1,828	1.90	-0.30			188.68	205
5/23/2014 23:24	23	1.973	2.055	2.097	2.143	976	894	298	309	2,477	1,870	2.01	-0.19			191.16	208
5/24/2014 1:00	1	2.541	2.601	2.245	2.772	1,006	928	254	265	2,454	1,935	2.57	0.37			194.99	212
5/24/2014 2:36	2	3.177	3.024	2.741	3.088	999	954	232	238	2,424	1,953	3.10	0.90		27.18	196.11	213
5/24/2014 4:12	4	3.189	3.666	2.905	3.785	1,003	982	220	235	2,439	1,985	3.43	1.23		53.05	197.97	215
5/24/2014 5:48	5	3.782	4.511	3.861	4.805	1,007	989	220	235	2,451	1,996	4.15	1.95		109.71	198.66	216
5/24/2014 7:24	7	4.728	4.987	4.870	4.939	965	986	223	239	2,414	1,952	4.86	2.66		163.37	196.01	213
5/24/2014 9:00	9	4.977	4.982	4.882	4.727	922	975	224	239	2,360	1,897	4.98	2.78		169.98	192.75	210
5/24/2014 10:36	10	4.496	4.971	4.707	4.514	892	950	217	232	2,291	1,842	4.73	2.53		148.61	189.47	206
5/24/2014 12:12	12	3.054	4.085	3.297	3.734	884	942	215	228	2,269	1,825	3.57	1.37		61.08	188.51	205
5/24/2014 13:48	13	1.587	2.388	0.428	0.829	933	1,015	355	370	2,674	1,948	1.99	-0.21			195.81	213
5/24/2014 15:24	15	1.657	2.347	0.539	1.014	1,065	1,044	519	492	3,120	2,109	2.00	-0.20			205.38	223
5/24/2014 17:00	17	1.469	1.963	0.761	1.207	868	934	461	522	2,785	1,802	1.72	-0.48			187.13	204
5/24/2014 18:36	18	1.997	2.164	1.629	2.207	1,217	1,028	712	390	3,347	2,245	2.08	-0.12			213.45	232
5/24/2014 20:12	20	1.811	2.086	1.945	1.915	965	929	445	281	2,620	1,895	1.95	-0.25			192.63	209
5/24/2014 21:48	21	1.660	1.915	1.651	1.709	977	860	409	285	2,532	1,838	1.79	-0.41			189.25	206
5/24/2014 23:24	23	1.838	1.884	1.693	1.664	988	908	367	244	2,507	1,896	1.86	-0.34			192.71	210
5/25/2014 1:00	1	1.720	2.332	0.933	1.957	915	907	324	227	2,374	1,823	2.03	-0.17			188.35	205
5/25/2014 2:36	2	2.017	2.004	1.762	2.062	926	809	332	228	2,296	1,736	2.01	-0.19			183.18	199
5/25/2014 4:12	4	2.295	2.073	1.412	2.206	849	737	259	215	2,060	1,586	2.18	-0.02			174.29	190
5/25/2014 5:48	5	2.407	2.464	2.430	3.278	768	701	328	273	2,070	1,469	2.44	0.24			167.33	182
5/25/2014 7:24	7	3.071	3.515	3.886	4.857	701	682	357	308	2,049	1,383	3.29	1.09		34.83	162.25	176
5/25/2014 9:00	9	3.479	4.018	4.748	4.930	652	647	364	306	1,968	1,299	3.75	1.55		62.09	157.23	171
5/25/2014 10:36	10	2.914	3.582	4.722	4.776	630	626	346	325	1,928	1,257	3.25	1.05		30.45	154.73	168
5/25/2014 12:12	12	1.876	2.131	1.736	3.089	710	682	350	312	2,055	1,392	2.00	-0.20			162.79	177
5/25/2014 13:48	13	1.936	2.289	0.909	1.939	889	850	547	417	2,703	1,739	2.11	-0.09			183.40	199
5/25/2014 15:24	15	2.065	2.098	1.424	1.678	959	880	613	429	2,881	1,839	2.08	-0.12			189.34	206
5/25/2014 17:00	17	1.716	1.673	1.925	1.927	913	838	552	367	2,670	1,751	1.69	-0.51			184.08	200
5/25/2014 18:36	18	1.943	2.003	1.979	1.964	964	879	393	274	2,509	1,842	1.97	-0.23			189.52	206
5/25/2014 20:12	20	2.069	2.080	2.196	2.047	939	802	329	246	2,316	1,741	2.07	-0.13			183.47	200
5/25/2014 21:48	21	2.024	1.970	2.160	2.130	896	809	312	230	2,246	1,705	2.00	-0.20			181.37	197
5/25/2014 23:24	23	1.955	1.990	2.174	2.159	891	800	298	227	2,215	1,691	1.97	-0.23			180.50	196
5/26/2014 1:00	1	2.006	2.020	2.795	1.666	890	795	403	212	2,300	1,685	2.01	-0.19			180.18	196
5/26/2014 2:36	2	2.289	2.127	2.404	2.121	887	779	251	215	2,132	1,666	2.21	0.01			179.05	195

5/26/2014 4:12	4	2.936	2.331	1.712	2.533	910	735	221	212	2,079	1,645	2.63	0.43			177.79	193
5/26/2014 5:48	5	3.597	2.812	2.442	3.201	877	723	217	209	2,026	1,600	3.20	1.00		31.46	175.11	190
5/26/2014 7:24	7	3.600	3.601	2.770	4.064	741	719	215	207	1,882	1,459	3.60	1.40		56.10	166.77	181
5/26/2014 9:00	9	4.542	4.356	3.549	4.950	731	710	212	202	1,855	1,441	4.45	2.25		111.33	165.67	180
5/26/2014 10:36	10	4.052	4.581	4.406	4.781	659	798	272	210	1,940	1,457	4.32	2.12		103.23	166.64	181
5/26/2014 12:12	12	1.821	3.003	2.197	3.433	614	741	322	291	1,968	1,355	2.41	0.21			160.58	175
5/26/2014 13:48	13	1.470	2.341	0.907	2.371	724	857	496	449	2,527	1,581	1.91	-0.29			174.02	189
5/26/2014 15:24	15	1.360	2.434	0.896	1.953	789	876	553	463	2,682	1,666	1.90	-0.30			179.02	195
5/26/2014 17:00	17	1.451	1.617	1.072	1.405	849	845	586	393	2,673	1,694	1.53	-0.67			180.68	196
5/26/2014 18:36	18	1.484	1.776	1.986	1.932	884	877	520	345	2,626	1,761	1.63	-0.57			184.69	201
5/26/2014 20:12	20	1.986	2.109	1.991	2.073	968	875	375	281	2,499	1,843	2.05	-0.15			189.57	206
5/26/2014 21:48	21	1.964	2.097	1.876	1.909	937	868	333	261	2,400	1,805	2.03	-0.17			187.33	204
5/26/2014 23:24	23	2.040	2.296	1.924	2.379	993	954	359	284	2,590	1,947	2.17	-0.03			195.74	213
5/27/2014 1:00	1	1.959	2.041	2.059	1.775	971	906	367	257	2,502	1,878	2.00	-0.20			191.61	208
5/27/2014 2:36	2	1.940	2.130	2.126	1.811	869	805	311	231	2,216	1,674	2.03	-0.17			179.51	195
5/27/2014 4:12	4	2.211	2.315	2.149	1.878	824	759	296	219	2,098	1,583	2.26	0.06			174.10	189
5/27/2014 5:48	5	3.175	3.056	2.919	2.683	841	747	286	225	2,100	1,588	3.12	0.92		25.19	174.39	190
5/27/2014 7:24	7	4.434	3.415	3.814	3.779	831	726	273	225	2,055	1,557	3.92	1.72		80.17	172.59	188
5/27/2014 9:00	9	4.288	3.711	4.244	4.360	763	714	258	228	1,962	1,477	4.00	1.80		82.90	167.82	183
5/27/2014 10:36	10	2.184	2.359	1.958	2.482	748	721	326	280	2,076	1,469	2.27	0.07			167.35	182
5/27/2014 12:12	12	2.385	2.136	1.180	1.636	841	861	596	537	2,836	1,702	2.26	0.06			181.19	197
5/27/2014 13:48	13	2.013	2.132	1.842	2.167	1,031	1,027	803	666	3,527	2,058	2.07	-0.13			202.32	220
5/27/2014 15:24	15	2.618	2.370	2.662	2.952	1,046	1,035	869	677	3,627	2,081	2.49	0.29			203.70	222
5/27/2014 17:00	17	2.802	2.678	4.637	4.753	1,049	1,051	904	691	3,696	2,100	2.74	0.54			204.81	223
5/27/2014 18:36	18	3.516	2.823	4.825	5.000	1,052	1,049	918	695	3,715	2,102	3.17	0.97	33.97		204.91	223
5/27/2014 20:12	20	3.684	3.029	4.553	5.000	1,065	1,061	941	710	3,777	2,126	3.36	1.16	49.49		206.35	224
5/27/2014 21:48	21	1.961	2.331	3.363	5.000	779	891	389	545	2,604	1,670	2.15	-0.05			179.26	195
5/27/2014 23:24	23	1.806	2.203	1.992	5.000	876	981	384	555	2,796	1,857	2.00	-0.20			190.41	207
5/28/2014 1:00	1	1.909	2.162	2.198	5.000	809	854	355	512	2,531	1,663	2.04	-0.16			178.88	195
5/28/2014 2:36	2	1.969	2.101	2.319	4.809	743	760	328	470	2,300	1,503	2.03	-0.17			169.35	184
5/28/2014 4:12	4	2.453	2.233	2.672	4.504	734	750	323	465	2,272	1,484	2.34	0.14			168.25	183
5/28/2014 5:48	5	2.753	3.045	3.193	4.199	726	764	309	396	2,195	1,490	2.90	0.70		9.94	168.59	183
5/28/2014 7:24	7	4.028	3.964	4.130	3.894	736	773	311	372	2,191	1,509	4.00	1.80		83.62	169.71	185
5/28/2014 9:00	9	4.755	4.495	4.863	3.589	1,059	1,119	411	504	3,093	2,178	4.62	2.42		155.29	209.45	228
5/28/2014 10:36	10	3.591	3.397	3.339	3.242	924	971	382	438	2,715	1,895	3.49	1.29		56.69	192.64	210
5/28/2014 12:12	12	2.013	2.165	1.154	1.449	734	788	515	413	2,450	1,522	2.09	-0.11			170.49	185
5/28/2014 13:48	13	1.927	2.014	1.295	1.925	771	836	607	506	2,720	1,607	1.97	-0.23			175.54	191
5/28/2014 15:24	15	1.868	1.978	1.362	1.593	769	835	620	477	2,700	1,603	1.92	-0.28			175.31	191
5/28/2014 17:00	17	1.891	2.018	2.034	2.448	776	841	634	481	2,731	1,617	1.95	-0.25			176.11	192
5/28/2014 18:36	18	1.908	2.110	3.645	4.190	784	849	647	485	2,765	1,633	2.01	-0.19			177.07	193
5/28/2014 20:12	20	1.852	2.047	4.591	4.911	780	840	648	482	2,751	1,621	1.95	-0.25			176.35	192
5/28/2014 21:48	21	1.914	2.176	4.877	4.926	823	890	690	505	2,909	1,713	2.04	-0.16			181.84	198
5/28/2014 23:24	23	1.798	2.113	4.991	4.964	887	963	751	541	3,142	1,850	1.96	-0.24			189.96	207
5/29/2014 1:00	1	1.859	2.124	5.000	4.982	803	858	678	457	2,795	1,661	1.99	-0.21			178.76	194
5/29/2014 2:36	2	2.415	2.668	4.976	4.987	816	867	682	403	2,767	1,682	2.54	0.34			180.01	196
5/29/2014 4:12	4	3.690	3.677	4.938	4.922	856	891	657	337	2,741	1,748	3.68	1.48		67.88	183.90	200
5/29/2014 5:48	5	4.777	4.512	4.899	4.857	847	876	480	306	2,510	1,723	4.64	2.44		136.69	182.44	198
5/29/2014 7:24	7	4.421	4.436	4.860	4.793	679	728	309	322	2,038	1,406	4.43	2.23		108.60	163.62	178
5/29/2014 9:00	9	3.553	3.508	4.437	4.728	642	692	292	302	1,929	1,335	3.53	1.33		49.19	159.36	173
5/29/2014 10:36	10	2.090	2.265	2.360	2.757	687	689	423	312	2,111	1,376	2.18	-0.02			161.80	176
5/29/2014 12:12	12	2.034	2.066	1.689	1.751	752	783	550	477	2,563	1,536	2.05	-0.15			171.31	186
5/29/2014 13:48	13	1.882	2.035	1.704	1.952	801	824	663	561	2,850	1,625	1.96	-0.24			176.62	192
5/29/2014 15:24	15	1.924	2.123	2.189	2.130	826	845	676	529	2,876	1,671	2.02	-0.18			179.33	195
5/29/2014 17:00	17	1.956	1.987	2.435	2.204	891	870	548	440	2,749	1,761	1.97	-0.23			184.68	201
5/29/2014 18:36	18	1.906	2.031	2.113	1.728	866	883	415	294	2,458	1,749	1.97	-0.23			184.00	200
5/29/2014 20:12	20	1.984	2.079	2.290	2.339	884	868	376	286	2,414	1,752	2.03	-0.17			184.18	200
5/29/2014 21:48	21	2.234	2.154	2.158	2.026	925	892	346	282	2,445	1,817	2.19	-0.01			188.02	204
5/29/2014 23:24	23	2.007	2.052	2.116	2.096	937	930	355	303	2,525	1,867	2.03	-0.17			191.00	208
5/30/2014 1:00	1	2.300	2.510	2.398	2.737	957	951	342	304	2,555	1,909	2.41	0.21			193.45	210
5/30/2014 2:36	2	3.071	3.405	1.840	3.535	991	982	221	275	2,470	1,973	3.24	1.04		38.04	197.31	215
5/30/2014 4:12	4	3.746	4.142	2.209	4.337	988	978	221	277	2,464	1,966	3.94	1.74		92.96	196.88	214
5/30/2014 5:48	5	4.430	4.843	2.906	4.931	962	981	221	277	2,441	1,944	4.64	2.44		145.85	195.53	213
5/30/2014 7:24	7	4.842	4.909	3.468	4.964	941	935	221	279	2,375	1,875	4.88	2.68		160.95	191.47	208
5/30/2014 9:00	9	4.689	4.791	3.776	4.838	890	874	212	263	2,239	1,764	4.74	2.54		145.47	184.86	201
5/30/2014 10:36	10	3.496	3.573	1.866	3.742	829	812	192	241	2,074	1,641	3.53	1.33		55.07	177.55	193
5/30/2014 12:12	12	2.546	2.458	0.525	1.032	789	783	336	294	2,202	1,572	2.50	0.30			173.46	189
5/30/2014 13:48	13	1.970	2.126	1.076	1.450	767	790	475	436	2,468	1,557	2.05	-0.15			172.56	188
5/30/2014 15:24	15	1.883	2.016	1.621	1.528	791	820	570	442	2,623	1,611	1.95	-0.25			175.78	191
5/30/2014 17:00	17	2.018	2.202	2.546	2.433	834	849	517	408	2,608	1,683	2.11	-0.09			180.07	196
5/30/2014 18:36	18	1.939	2.036	2.227	2.011	856	820	400	333	2,409	1,676	1.99	-0.21			179.62	195
5/30/2014 20:12	20	2.018	2.124	1.811	1.960	865	826	362	292	2,344	1,690	2.07	-0.13			180.49	196
5/30/2014 21:48	21	2.071	2.127	2.183	2.148	900	830	370	307	2,407	1,730	2.10	-0.10			182.87	199
5/30/2014 23:24	23	2.351	2.431	2.384	2.305	931	859	357	299	2,446	1,790	2.39	0.19			186.41	203
5/31/2014 1:00	1	2.753	2.781	2.954	2.795	944	872	361	302	2,478	1,816	2.77	0.57		1.28	187.93	204
5/31/2014 2:36	2	3.396	3.432	3.816	3.640	960	886	365	305	2,516	1,846	3.41	1.21		49.84	189.75	206
5/31/2014 4:12	4	4.528	4.402	4.863	4.715	971	896	367	307	2,541	1,867	4.46	2.26		129.49	190.97	208
5/31/2014 5:48	5	4.984	4.970	4.966	4.986	964	934	325	299	2,522	1,898	4.98	2.78		169.84	192.82	210
5/31/2014 7:24	7	4.973	4.981	4.707	4.867	891	976	218	272	2,357	1,868	4.98	2.78		168.25	191.02	208
5/31/2014 9:00	9	4.906	4.966	4.493	4.749	854	939	207	258	2,259	1,793	4.94	2.74		161.36	186.62	203
5/31/2014 10:36	10	4.240	4.902	3.409	4.614	844	925	203	255	2,227	1,769	4.57	2.37		133.37	185.17	201
5/31/2014 12:12	12	2.779	3.950	0.691	2.418	837	918	233	257	2,245	1,755	3.36	1.16		44.80	184.32	200
5/31/2014 13:48	13	2.084	3.072	0.265	0.953	831	911	237	285	2,263	1,741	2.58	0.38			183.52	200
5/31/2014 15:24	15	1.713	2.382	0.428	1.061	844	868	383	407	2,502	1,712	2.05	-0.15			181.78	198
5/31/2014 17:00	17	2.057	2.056	1.973	2.154	962	893	596	441	2,893	1,855	2.06	-0.14			190.29	207
5/31/2014 18:36	18	2.068	2.057	2.148	2.227	950	870	445	342	2,608	1,820	2.06	-0.14			188.18	205
5/31/2014 20:12	20	1.958	1.982	2.096	1.996	952	837	343	305	2,436	1,788	1.97	-0.23			186.30	203
5/31/2014 21:48	21	2.330	2.290	2.490	2.233	958	866	332	277	2,433	1,824	2.31	0.11			188.45	205
5/31/2014 23:24	23	2.490	2.524	2.379	2.326	948	875	283	241	2,347	1,823	2.51	0.31			188.37	205
6/1/2014 1:00	1	2.269	2.396	1.192	1.463	889	809	242	194	2,134	1,698	2.33	0.13			180.95	197
6/1/2014 2:36	2	2.531	2.401	1.966	1.711	868	772	257	197	2,095	1,640	2.47	0.27			177.49	193
6/1/2014 4:12	4	2.511	2.794	1.904	2.148	805	753	230	192	1,980	1,558	2.65	0.45			172.64	188
6/1/2014 5:48	5	3.067	3.513	2.460	2.662	819	767	233	190	2,009	1,586	3.29	1.09		37.23	174.31	190
6/1/2014 7:24	7	3.846	3.962	3.059	3.262	828	744	224	180	1,976	1,572	3.90	1.70		79.16	173.46	189
6/1/2014 9:00	9	4.310	4.145	3.406	3.557	802	699	211	189	1,901	1,501	4.23	2.03		98.89	169.25	184
6/1/2014 10:36	10	4.247	4.195	3.324	4.506	744	720	194	237	1,896	1,464	4.22	2.02		97.18	167.04	182
6/1/2014 12:12	12	2.486	2.981	1.302	3.377	721	721	207	244	1,894	1,442	2.73	0.53			165.76	180
6/1/2014 13:48	13	1.622	2.263	0.188	1.164	727	799	217	360	2,103	1,526	1.94	-0.26			170.75	186
6/1/2014 15:24	15	1.730	2.254	0.350	1.385	876	857	390	453	2,577	1,733	1.99	-0.21			183.04	199
6/1/2014 17:00	17	2.009	1.935	2.019	1.934	976	901	631	440	2,947	1,877	1.97	-0.23			191.56	208
6/1/2014 18:36	18	1.894	2.082	2.299	1.801	980	913	425	308	2,626	1,893	1.99	-0.21			192.52	209
6/1/2014 20:12	20	1.923	2.106	2.076	2.121	995	927	330	313	2,565	1,922	2.01	-0.19			194.26	211
6/1/2014 21:48	21	1.966	2.048	1.984	2.060	973	882	328	298	2,481	1,855	2.01	-0.19			190.27	207
6/1/2014 23:24	23	1.922	2.022	2.010	1.947	1,093	974	315	279	2,661	2,067	1.97	-0.23			202.87	221
6/2/2014 1:00	1	1.994	2.084	1.377	1.283	1,066	941	265	230	2,502	2,007	2.04	-0.16			199.31	217
6/2/2014 2:36	2	2.184	2.227	1.520	1.616	1,022	861	221	203	2,308	1,883	2.21	0.01			191.95	209
6/2/2014 4:12	4	2.233	2.313	1.461	1.399	941	756	217	176	2,090	1,698	2.27	0.07			180.91	197
6/2/2014 5:48	5	2.377	2.998	1.601	1.647	880	787	199	172	2,039	1,667	2.69	0.49			179.11	195
6/2/2014 7:24	7	3.045	2.701	2.452	2.203	935	725	199	185	2,044	1,660	2.87	0.67		8.70	178.66	194
6/2/2014 9:00	9	2.825	2.370	1.995	2.845	838	705	170	189	1,901	1,542	2.60	0.40			171.70	187
6/2/2014 10:36	10	2.350	2.102	1.759	2.092	819	732	297	236	2,084	1,551	2.23	0.03			172.23	187
6/2/2014 12:12	12	1.945	1.980	1.760	1.685	825	778	491	417	2,513	1,604	1.96	-0.24			175.35	191
6/2/2014 13:48	13	1.871	2.134	1.984	1.832	923	856	572	543	2,894	1,778	2.00	-0.20			185.72	202
6/2/2014 15:24	15	1.605	1.685	1.596	1.715	1,026	992	642	581	3,242	2,019	1.64	-0.56			199.99	217
6/2/2014 17:00	17	4.304	3.652	4.448	4.657	1,400	1,357	937	837	4,531	2,758	3.98	1.78	118.47		243.90	265
6/2/2014 18:36	18	4.987	3.967	4.820	4.975	1,433	1,380	965	856	4,634	2,813	4.48	2.28	168.82		247.16	269
6/2/2014 20:12	20	4.407	3.731	4.392	4.935	1,204	1,191	805	794	3,994	2,395	4.07	1.87	115.99		222.34	242
6/2/2014 21:48	21	2.058	2.012	2.595	4.782	897	927	373	549	2,746	1,824	2.04	-0.16			188.40	205
6/2/2014 23:24	23	2.017	1.975	1.485	4.442	953	988	388	467	2,796	1,941	2.00	-0.20			195.36	212
6/3/2014 1:00	1	2.059	1.921	1.646	2.046	950	967	356	247	2,521	1,917	1.99	-0.21			193.97	211
6/3/2014 2:36	2	2.005	2.298	1.697	1.531	922	905	311	206	2,344	1,827	2.15	-0.05			188.58	205
6/3/2014 4:12	4	2.249	2.246	1.961	2.060	898	782	233	198	2,112	1,681	2.25	0.05			179.92	196
6/3/2014 5:48	5	2.279	2.450	2.032	2.164	865	753	253	182	2,053	1,619	2.36	0.16			176.23	192
6/3/2014 7:24	7	2.686	2.533	2.799	2.521	871	728	247	175	2,021	1,599	2.61	0.41			175.06	190
6/3/2014 9:00	9	2.384	2.390	2.501	2.656	790	736	219	188	1,933	1,526	2.39	0.19			170.71	186
6/3/2014 10:36	10	2.005	2.087	1.397	1.992	855	811	456	385	2,507	1,666	2.05	-0.15			179.05	195
6/3/2014 12:12	12	2.046	2.201	2.050	2.074	952	945	713	582	3,192	1,897	2.12	-0.08			192.77	210
6/3/2014 13:48	13	2.165	2.238	2.207	2.119	919	985	722	528	3,154	1,904	2.20	0.00			193.18	210
6/3/2014 15:24	15	1.783	2.384	2.613	2.003	848	998	670	478	2,994	1,846	2.08	-0.12			189.74	206
6/3/2014 17:00	17	1.341	2.453	3.316	3.798	747	1,000	646	486	2,879	1,747	1.90	-0.30			183.86	200

6/3/2014 18:36	18	1.304	2.842	4.065	4.964	766	1,029	666	500	2,961	1,795	2.07	-0.13			186.72	203
6/3/2014 20:12	20	1.371	3.084	4.620	4.717	805	1,030	635	589	3,059	1,835	2.23	0.03			189.08	206
6/3/2014 21:48	21	1.543	2.399	3.022	4.357	937	1,029	475	634	3,074	1,965	1.97	-0.23			196.82	214
6/3/2014 23:24	23	2.853	3.048	3.153	4.653	1,191	1,342	535	646	3,714	2,533	2.95	0.75		18.29	230.52	251
6/4/2014 1:00	1	2.387	2.030	1.959	2.516	859	916	338	218	2,331	1,775	2.21	0.01			185.52	202
6/4/2014 2:36	2	2.018	2.073	1.503	1.374	792	885	326	200	2,202	1,676	2.05	-0.15			179.66	195
6/4/2014 4:12	4	2.658	2.311	1.896	1.827	807	836	301	153	2,096	1,642	2.48	0.28			177.63	193
6/4/2014 5:48	5	3.298	2.545	2.604	1.731	818	832	293	145	2,089	1,650	2.92	0.72		12.06	178.11	194
6/4/2014 7:24	7	3.360	3.016	2.736	2.753	804	848	269	182	2,102	1,652	3.19	0.99		30.89	178.18	194
6/4/2014 9:00	9	4.137	4.265	3.607	4.006	1,152	1,299	364	254	3,070	2,451	4.20	2.00		129.48	225.66	245
6/4/2014 10:36	10	2.798	2.932	2.581	2.614	897	963	346	269	2,474	1,859	2.87	0.67		8.70	190.53	207
6/4/2014 12:12	12	1.931	1.936	1.080	1.652	853	850	577	522	2,801	1,703	1.93	-0.27			181.22	197
6/4/2014 13:48	13	1.903	2.010	1.308	1.741	867	877	579	523	2,845	1,744	1.96	-0.24			183.65	200
6/4/2014 15:24	15	2.286	2.280	2.003	2.085	1,045	1,005	651	505	3,206	2,050	2.28	0.08			201.83	219
6/4/2014 17:00	17	1.984	1.993	1.940	1.958	915	898	414	297	2,525	1,813	1.99	-0.21			187.79	204
6/4/2014 18:36	18	2.155	2.068	1.710	1.857	905	881	359	261	2,405	1,785	2.11	-0.09			186.11	202
6/4/2014 20:12	20	2.211	2.168	2.054	2.032	913	900	410	267	2,490	1,813	2.19	-0.01			187.77	204
6/4/2014 21:48	21	2.239	2.118	2.292	2.059	901	887	390	269	2,448	1,788	2.18	-0.02			186.31	203
6/4/2014 23:24	23	2.167	2.045	1.811	1.812	930	939	406	286	2,562	1,870	2.11	-0.09			191.15	208
6/5/2014 1:00	1	2.128	1.988	1.617	1.599	942	954	404	257	2,557	1,896	2.06	-0.14			192.70	210
6/5/2014 2:36	2	2.064	1.772	1.818	1.417	866	896	350	231	2,344	1,762	1.92	-0.28			184.76	201
6/5/2014 4:12	4	2.501	2.250	2.036	1.919	786	848	310	210	2,154	1,634	2.38	0.18			177.15	193
6/5/2014 5:48	5	3.580	3.091	2.561	2.651	774	868	292	189	2,122	1,642	3.34	1.14		41.15	177.61	193
6/5/2014 7:24	7	3.165	3.295	2.970	3.098	765	873	292	189	2,119	1,638	3.23	1.03		33.68	177.37	193
6/5/2014 9:00	9	2.475	3.044	2.900	3.084	778	866	291	188	2,124	1,644	2.76	0.56		0.65	177.76	193
6/5/2014 10:36	10	2.134	2.145	1.246	1.319	812	846	399	325	2,382	1,658	2.14	-0.06			178.57	194
6/5/2014 12:12	12	2.005	1.984	1.263	1.970	831	863	579	554	2,827	1,694	1.99	-0.21			180.70	197
6/5/2014 13:48	13	2.028	2.019	1.580	2.109	865	900	623	545	2,933	1,765	2.02	-0.18			184.90	201
6/5/2014 15:24	15	2.029	1.956	2.327	2.047	852	883	532	426	2,693	1,735	1.99	-0.21			183.14	199
6/5/2014 17:00	17	2.023	2.042	1.926	2.141	840	870	398	323	2,430	1,709	2.03	-0.17			181.62	198
6/5/2014 18:36	18	2.123	1.878	2.024	2.183	818	844	344	266	2,272	1,662	2.00	-0.20			178.81	194
6/5/2014 20:12	20	2.166	1.987	2.209	1.749	821	847	355	253	2,276	1,668	2.08	-0.12			179.17	195
6/5/2014 21:48	21	2.030	1.925	2.052	1.843	844	873	358	291	2,367	1,717	1.98	-0.22			182.10	198
6/5/2014 23:24	23	2.015	1.870	1.764	1.536	862	892	354	262	2,370	1,754	1.94	-0.26			184.28	200
6/6/2014 1:00	1	2.167	1.891	1.798	2.070	849	879	337	289	2,354	1,728	2.03	-0.17			182.72	199
6/6/2014 2:36	2	2.608	2.511	1.899	2.431	774	916	287	225	2,202	1,690	2.56	0.36			180.47	196
6/6/2014 4:12	4	3.085	3.481	2.234	3.425	738	948	271	227	2,184	1,686	3.28	1.08		38.01	180.26	196
6/6/2014 5:48	5	3.363	3.553	2.711	4.122	721	901	270	223	2,114	1,622	3.46	1.26		49.39	176.44	192
6/6/2014 7:24	7	3.550	3.154	3.132	4.064	719	809	272	220	2,020	1,528	3.35	1.15		40.65	170.83	186
6/6/2014 9:00	9	2.504	2.615	2.708	3.892	686	767	257	234	1,945	1,453	2.56	0.36			166.39	181
6/6/2014 10:36	10	2.121	2.210	1.263	2.155	716	770	309	293	2,088	1,487	2.17	-0.03			168.39	183
6/6/2014 12:12	12	1.831	2.236	2.019	2.282	856	845	557	472	2,730	1,701	2.03	-0.17			181.13	197
6/6/2014 13:48	13	2.036	2.133	2.140	2.411	909	845	453	435	2,642	1,754	2.08	-0.12			184.26	200
6/6/2014 15:24	15	2.048	1.932	1.981	2.165	819	829	389	360	2,397	1,649	1.99	-0.21			178.01	194
6/6/2014 17:00	17	2.254	2.082	2.399	2.223	921	965	393	320	2,599	1,885	2.17	-0.03			192.08	209
6/6/2014 18:36	18	2.063	2.078	1.977	2.136	868	951	366	305	2,490	1,819	2.07	-0.13			188.14	205
6/6/2014 20:12	20	1.965	1.894	2.043	2.086	860	937	370	300	2,467	1,797	1.93	-0.27			186.81	203
6/6/2014 21:48	21	2.215	2.182	2.288	2.231	913	1,014	399	306	2,632	1,927	2.20	0.00			194.56	212
6/6/2014 23:24	23	2.116	2.102	2.245	2.067	884	961	351	272	2,468	1,845	2.11	-0.09			189.67	206
6/7/2014 1:00	1	2.469	2.205	1.825	2.052	901	971	321	266	2,458	1,872	2.34	0.14			191.27	208
6/7/2014 2:36	2	2.505	2.633	1.905	2.486	822	962	290	232	2,306	1,785	2.57	0.37			186.09	202
6/7/2014 4:12	4	2.857	4.122	2.414	2.519	735	985	311	212	2,244	1,721	3.49	1.29		53.29	182.29	198
6/7/2014 5:48	5	2.494	3.302	3.097	3.364	704	898	320	218	2,140	1,602	2.90	0.70		10.24	175.25	191
6/7/2014 7:24	7	3.158	3.232	3.404	3.693	691	836	313	212	2,052	1,527	3.19	0.99		30.04	170.81	186
6/7/2014 9:00	9	2.646	2.649	3.346	3.475	665	797	296	204	1,961	1,462	2.65	0.45			166.91	182
6/7/2014 10:36	10	2.660	2.641	2.712	3.166	688	790	273	215	1,966	1,478	2.65	0.45			167.90	183
6/7/2014 12:12	12	1.940	2.163	1.275	1.719	734	804	305	234	2,077	1,539	2.05	-0.15			171.47	186
6/7/2014 13:48	13	1.832	2.034	1.051	1.137	875	952	464	381	2,672	1,827	1.93	-0.27			188.60	205
6/7/2014 15:24	15	1.805	2.206	1.311	1.584	1,057	1,053	581	486	3,176	2,109	2.01	-0.19			205.36	223
6/7/2014 17:00	17	2.631	2.415	2.745	2.890	1,366	1,191	433	460	3,451	2,558	2.52	0.32			232.02	252
6/7/2014 18:36	18	2.632	2.318	2.113	2.134	1,213	1,110	311	251	2,885	2,323	2.48	0.28			218.05	237
6/7/2014 20:12	20	2.415	2.089	2.428	2.425	1,088	1,051	366	306	2,810	2,138	2.25	0.05			207.10	225
6/7/2014 21:48	21	2.213	2.056	2.156	2.008	1,047	1,004	324	256	2,631	2,050	2.13	-0.07			201.87	220
6/7/2014 23:24	23	1.988	1.962	1.991	1.932	1,069	996	296	256	2,617	2,065	1.98	-0.22			202.73	220
6/8/2014 1:00	1	1.938	2.064	2.179	1.953	968	958	370	232	2,527	1,926	2.00	-0.20			194.46	211
6/8/2014 2:36	2	2.052	2.112	3.110	2.116	926	913	359	222	2,421	1,839	2.08	-0.12			189.34	206
6/8/2014 4:12	4	2.330	2.654	1.943	2.332	885	937	221	189	2,232	1,822	2.49	0.29			188.31	205
6/8/2014 5:48	5	2.725	3.225	2.313	2.377	851	946	310	157	2,265	1,797	2.98	0.78		16.63	186.82	203
6/8/2014 7:24	7	2.657	3.377	3.633	2.641	812	911	319	159	2,202	1,723	3.02	0.82		19.27	182.45	198
6/8/2014 9:00	9	2.724	3.017	3.323	2.806	786	842	284	170	2,082	1,629	2.87	0.67		8.44	176.82	192
6/8/2014 10:36	10	2.496	2.795	2.981	2.662	750	796	269	161	1,977	1,546	2.65	0.45			171.92	187
6/8/2014 12:12	12	1.836	2.097	1.810	1.761	827	835	324	260	2,247	1,662	1.97	-0.23			178.83	194
6/8/2014 13:48	13	1.696	1.806	1.142	1.441	955	967	519	475	2,916	1,922	1.75	-0.45			194.28	211
6/8/2014 15:24	15	1.463	1.539	1.228	1.585	597	676	344	378	1,995	1,273	1.50	-0.70			155.70	169
6/8/2014 17:00	17	0.782	1.484	0.495	2.071	842	1,181	598	659	3,279	2,023	1.13	-1.07			200.23	218
6/8/2014 18:36	18	1.453	2.090	1.523	2.180	1,016	1,252	713	346	3,328	2,269	1.77	-0.43			214.83	234
6/8/2014 20:12	20	1.726	2.100	2.526	2.309	1,119	1,136	447	292	2,993	2,254	1.91	-0.29			213.98	233
6/8/2014 21:48	21	2.247	2.113	2.304	2.228	1,205	1,171	322	278	2,976	2,376	2.18	-0.02			221.19	241
6/8/2014 23:24	23	2.885	2.162	1.993	2.087	1,164	1,224	327	274	2,988	2,388	2.52	0.32			221.90	241
6/9/2014 1:00	1	2.035	2.240	1.798	1.835	974	1,153	369	230	2,727	2,128	2.14	-0.06			206.48	225
6/9/2014 2:36	2	1.956	2.230	2.151	2.044	864	994	315	222	2,395	1,858	2.09	-0.11			190.45	207
6/9/2014 4:12	4	2.133	2.157	1.539	2.025	778	880	288	196	2,141	1,657	2.14	-0.06			178.51	194
6/9/2014 5:48	5	2.481	2.443	2.192	2.199	775	874	293	195	2,137	1,649	2.46	0.26			178.06	194
6/9/2014 7:24	7	2.706	2.636	2.589	2.496	774	873	293	197	2,137	1,647	2.67	0.47			177.92	193
6/9/2014 9:00	9	1.828	2.352	2.463	2.592	776	874	295	215	2,159	1,650	2.09	-0.11			178.07	194
6/9/2014 10:36	10	1.709	2.096	1.795	2.115	899	1,008	457	418	2,783	1,907	1.90	-0.30			193.36	210
6/9/2014 12:12	12	1.641	2.079	1.454	2.865	978	1,136	713	716	3,542	2,114	1.86	-0.34			205.64	224
6/9/2014 13:48	13	2.021	2.435	1.898	3.241	1,055	1,224	787	598	3,664	2,279	2.23	0.03			215.45	234
6/9/2014 15:24	15	2.021	2.434	1.900	3.235	1,055	1,223	784	596	3,658	2,277	2.23	0.03			215.36	234
6/9/2014 17:00	17	2.020	2.433	1.902	3.229	1,055	1,221	781	595	3,652	2,276	2.23	0.03			215.26	234
6/9/2014 18:36	18	2.020	2.432	1.904	3.223	1,055	1,219	779	593	3,646	2,274	2.23	0.03			215.17	234
6/9/2014 20:12	20	2.020	2.431	1.906	3.216	1,055	1,217	776	591	3,640	2,273	2.23	0.03			215.08	234
6/9/2014 21:48	21	2.020	2.430	1.908	3.210	1,055	1,216	774	590	3,635	2,271	2.22	0.02			214.99	234
6/9/2014 23:24	23	2.020	2.429	1.909	3.204	1,056	1,214	771	588	3,629	2,270	2.22	0.02			214.90	234
6/10/2014 1:00	1	2.019	2.428	1.911	3.198	1,056	1,212	768	586	3,623	2,268	2.22	0.02			214.80	234
6/10/2014 2:36	2	2.019	2.427	1.913	3.192	1,056	1,211	766	585	3,617	2,266	2.22	0.02			214.71	234
6/10/2014 4:12	4	2.019	2.426	1.915	3.186	1,056	1,209	763	583	3,611	2,265	2.22	0.02			214.62	233
6/10/2014 5:48	5	2.019	2.425	1.917	3.180	1,056	1,207	761	582	3,606	2,263	2.22	0.02			214.53	233
6/10/2014 7:24	7	2.019	2.424	1.919	3.173	1,056	1,205	758	580	3,600	2,262	2.22	0.02			214.44	233
6/10/2014 9:00	9	2.018	2.423	1.921	3.167	1,057	1,204	756	578	3,594	2,260	2.22	0.02			214.34	233
6/10/2014 10:36	10	2.018	2.422	1.923	3.161	1,057	1,202	753	577	3,588	2,259	2.22	0.02			214.25	233
6/10/2014 12:12	12	2.018	2.421	1.925	3.155	1,057	1,200	750	575	3,582	2,257	2.22	0.02			214.16	233
6/10/2014 13:48	13	2.018	2.420	1.927	3.149	1,057	1,199	748	573	3,577	2,256	2.22	0.02			214.07	233
6/10/2014 15:24	15	2.018	2.419	1.929	3.143	1,057	1,197	745	572	3,571	2,254	2.22	0.02			213.97	233
6/10/2014 17:00	17	2.017	2.418	1.931	3.137	1,057	1,195	743	570	3,565	2,253	2.22	0.02			213.88	233
6/10/2014 18:36	18	2.017	2.417	1.933	3.131	1,058	1,193	740	568	3,559	2,251	2.22	0.02			213.79	233
6/10/2014 20:12	20	2.017	2.416	1.935	3.124	1,058	1,192	737	567	3,553	2,249	2.22	0.02			213.70	232
6/10/2014 21:48	21	2.017	2.415	1.937	3.118	1,058	1,190	735	565	3,548	2,248	2.22	0.02			213.61	232
6/10/2014 23:24	23	2.017	2.414	1.939	3.112	1,058	1,188	732	563	3,542	2,246	2.22	0.02			213.51	232
6/11/2014 1:00	1	2.016	2.413	1.941	3.106	1,058	1,186	730	562	3,536	2,245	2.21	0.01			213.42	232
6/11/2014 2:36	2	2.016	2.412	1.943	3.100	1,058	1,185	727	560	3,530	2,243	2.21	0.01			213.33	232
6/11/2014 4:12	4	2.016	2.411	1.945	3.094	1,059	1,183	724	558	3,524	2,242	2.21	0.01			213.24	232
6/11/2014 5:48	5	2.016	2.410	1.947	3.088	1,059	1,181	722	557	3,519	2,240	2.21	0.01			213.15	232
6/11/2014 7:24	7	2.016	2.409	1.949	3.081	1,059	1,180	719	555	3,513	2,239	2.21	0.01			213.05	232
6/11/2014 9:00	9	2.016	2.408	1.951	3.075	1,059	1,178	717	553	3,507	2,237	2.21	0.01			212.96	232
6/11/2014 10:36	10	2.015	2.407	1.953	3.069	1,059	1,176	714	552	3,501	2,235	2.21	0.01			212.87	231
6/11/2014 12:12	12	2.015	2.406	1.955	3.063	1,059	1,174	711	550	3,495	2,234	2.21	0.01			212.78	231
6/11/2014 13:48	13	2.015	2.405	1.957	3.057	1,060	1,173	709	548	3,490	2,232	2.21	0.01			212.68	231
6/11/2014 15:24	15	2.015	2.404	1.959	3.051	1,060	1,171	706	547	3,484	2,231	2.21	0.01			212.59	231
6/11/2014 17:00	17	2.015	2.403	1.961	3.045	1,060	1,169	704	545	3,478	2,229	2.21	0.01			212.50	231
6/11/2014 18:36	18	2.014	2.403	1.963	3.038	1,060	1,168	701	544	3,472	2,228	2.21	0.01			212.41	231
6/11/2014 20:12	20	2.014	2.402	1.965	3.032	1,060	1,166	698	542	3,466	2,226	2.21	0.01			212.32	231
6/11/2014 21:48	21	2.014	2.401	1.966	3.026	1,061	1,164	696	540	3,461	2,225	2.21	0.01			212.22	231
6/11/2014 23:24	23	2.014	2.400	1.968	3.020	1,061	1,162	693	539	3,455	2,223	2.21	0.01			212.13	231
6/12/2014 1:00	1	2.014	2.399	1.970	3.014	1,061	1,161	691	537	3,449	2,222	2.21	0.01			212.04	231
6/12/2014 2:36	2	2.013	2.398	1.972	3.008	1,061	1,159	688	535	3,443	2,220	2.21	0.01			211.95	230
6/12/2014 4:12	4	2.013	2.397	1.974	3.002	1,061	1,157	685	534	3,437	2,218	2.20	0.00			211.86	230
6/12/2014 5:48	5	2.013	2.396	1.976	2.995	1,061	1,155	683	532	3,432	2,217	2.20	0.00			211.76	230
6/12/2014 7:24	7	2.013	2.395	1.978	2.989	1,062	1,154	680	530	3,426	2,215	2.20	0.00			211.67	230

6/12/2014 9:00	9	2.013	2.394	1.980	2.983	1,062	1,152	678	529	3,420	2,214	2.20	0.00			211.58	230
6/12/2014 10:36	10	2.012	2.393	1.982	2.977	1,062	1,150	675	527	3,414	2,212	2.20	0.00			211.49	230
6/12/2014 12:12	12	2.012	2.392	1.984	2.971	1,062	1,149	673	525	3,409	2,211	2.20	0.00			211.39	230
6/12/2014 13:48	13	2.012	2.391	1.986	2.965	1,062	1,147	670	524	3,403	2,209	2.20	0.00			211.30	230
6/12/2014 15:24	15	2.012	2.390	1.988	2.959	1,062	1,145	667	522	3,397	2,208	2.20	0.00			211.21	230
6/12/2014 17:00	17	2.012	2.389	1.990	2.953	1,063	1,143	665	520	3,391	2,206	2.20	0.00			211.12	230
6/12/2014 18:36	18	2.011	2.388	1.992	2.946	1,063	1,142	662	519	3,385	2,204	2.20	0.00			211.03	229
6/12/2014 20:12	20	2.011	2.387	1.994	2.940	1,063	1,140	660	517	3,380	2,203	2.20	0.00			210.93	229
6/12/2014 21:48	21	2.011	2.386	1.996	2.934	1,063	1,138	657	515	3,374	2,201	2.20	0.00			210.84	229
6/12/2014 23:24	23	2.011	2.385	1.998	2.928	1,063	1,137	654	514	3,368	2,200	2.20	0.00			210.75	229
6/13/2014 1:00	1	2.011	2.384	2.000	2.922	1,063	1,135	652	512	3,362	2,198	2.20	0.00			210.66	229
6/13/2014 2:36	2	2.011	2.383	2.002	2.916	1,064	1,133	649	510	3,356	2,197	2.20	0.00			210.56	229
6/13/2014 4:12	4	2.010	2.382	2.004	2.910	1,064	1,131	647	509	3,351	2,195	2.20	0.00			210.47	229
6/13/2014 5:48	5	2.010	2.381	2.006	2.903	1,064	1,130	644	507	3,345	2,194	2.20	0.00			210.38	229
6/13/2014 7:24	7	2.010	2.380	2.008	2.897	1,064	1,128	641	506	3,339	2,192	2.20	0.00			210.29	229
6/13/2014 9:00	9	2.010	2.379	2.010	2.891	1,064	1,126	639	504	3,333	2,190	2.19	-0.01			210.20	229
6/13/2014 10:36	10	2.010	2.378	2.012	2.885	1,064	1,125	636	502	3,327	2,189	2.19	-0.01			210.10	228
6/13/2014 12:12	12	2.009	2.377	2.014	2.879	1,065	1,123	634	501	3,322	2,187	2.19	-0.01			210.01	228
6/13/2014 13:48	13	2.009	2.376	2.016	2.873	1,065	1,121	631	499	3,316	2,186	2.19	-0.01			209.92	228
6/13/2014 15:24	15	2.009	2.375	2.018	2.867	1,065	1,119	628	497	3,310	2,184	2.19	-0.01			209.83	228
6/13/2014 17:00	17	2.009	2.374	2.020	2.860	1,065	1,118	626	496	3,304	2,183	2.19	-0.01			209.74	228
6/13/2014 18:36	18	2.009	2.373	2.022	2.854	1,065	1,116	623	494	3,298	2,181	2.19	-0.01			209.64	228
6/13/2014 20:12	20	2.008	2.372	2.023	2.848	1,065	1,114	621	492	3,293	2,180	2.19	-0.01			209.55	228
6/13/2014 21:48	21	2.008	2.371	2.025	2.842	1,066	1,112	618	491	3,287	2,178	2.19	-0.01			209.46	228
6/13/2014 23:24	23	2.008	2.370	2.027	2.836	1,066	1,111	615	489	3,281	2,177	2.19	-0.01			209.37	228
6/14/2014 1:00	1	2.008	2.370	2.029	2.830	1,066	1,109	613	487	3,275	2,175	2.19	-0.01			209.27	228
6/14/2014 2:36	2	2.008	2.369	2.031	2.824	1,066	1,107	610	486	3,269	2,173	2.19	-0.01			209.18	227
6/14/2014 4:12	4	2.007	2.368	2.033	2.817	1,066	1,106	608	484	3,264	2,172	2.19	-0.01			209.09	227
6/14/2014 5:48	5	2.007	2.367	2.035	2.811	1,066	1,104	605	482	3,258	2,170	2.19	-0.01			209.00	227
6/14/2014 7:24	7	2.007	2.366	2.037	2.805	1,067	1,102	603	481	3,252	2,169	2.19	-0.01			208.91	227
6/14/2014 9:00	9	2.007	2.365	2.039	2.799	1,067	1,100	600	479	3,246	2,167	2.19	-0.01			208.81	227
6/14/2014 10:36	10	2.007	2.364	2.041	2.793	1,067	1,099	597	477	3,240	2,166	2.19	-0.01			208.72	227
6/14/2014 12:12	12	2.006	2.363	2.043	2.787	1,067	1,097	595	476	3,235	2,164	2.18	-0.02			208.63	227
6/14/2014 13:48	13	2.006	2.362	2.045	2.781	1,067	1,095	592	474	3,229	2,163	2.18	-0.02			208.54	227
6/14/2014 15:24	15	2.006	2.361	2.047	2.775	1,067	1,094	590	472	3,223	2,161	2.18	-0.02			208.45	227
6/14/2014 17:00	17	2.006	2.360	2.049	2.768	1,068	1,092	587	471	3,217	2,159	2.18	-0.02			208.35	227
6/14/2014 18:36	18	2.006	2.359	2.051	2.762	1,068	1,090	584	469	3,211	2,158	2.18	-0.02			208.26	226
6/14/2014 20:12	20	2.005	2.358	2.053	2.756	1,068	1,088	582	468	3,206	2,156	2.18	-0.02			208.17	226
6/14/2014 21:48	21	2.005	2.357	2.055	2.750	1,068	1,087	579	466	3,200	2,155	2.18	-0.02			208.08	226
6/14/2014 23:24	23	2.005	2.356	2.057	2.744	1,068	1,085	577	464	3,194	2,153	2.18	-0.02			207.98	226
6/15/2014 1:00	1	2.005	2.355	2.059	2.738	1,068	1,083	574	463	3,188	2,152	2.18	-0.02			207.89	226
6/15/2014 2:36	2	2.005	2.354	2.061	2.732	1,069	1,081	571	461	3,182	2,150	2.18	-0.02			207.80	226
6/15/2014 4:12	4	2.005	2.353	2.063	2.725	1,069	1,080	569	459	3,177	2,149	2.18	-0.02			207.71	226
6/15/2014 5:48	5	2.004	2.352	2.065	2.719	1,069	1,078	566	458	3,171	2,147	2.18	-0.02			207.62	226
6/15/2014 7:24	7	2.004	2.351	2.067	2.713	1,069	1,076	564	456	3,165	2,145	2.18	-0.02			207.52	226
6/15/2014 9:00	9	2.004	2.350	2.069	2.707	1,069	1,075	561	454	3,159	2,144	2.18	-0.02			207.43	226
6/15/2014 10:36	10	2.004	2.349	2.071	2.701	1,070	1,073	558	453	3,153	2,142	2.18	-0.02			207.34	225
6/15/2014 12:12	12	2.004	2.348	2.073	2.695	1,070	1,071	556	451	3,148	2,141	2.18	-0.02			207.25	225
6/15/2014 13:48	13	2.003	2.347	2.075	2.689	1,070	1,069	553	449	3,142	2,139	2.18	-0.02			207.16	225
6/15/2014 15:24	15	2.003	2.346	2.077	2.682	1,070	1,068	551	448	3,136	2,138	2.17	-0.03			207.06	225
6/15/2014 17:00	17	2.003	2.345	2.079	2.676	1,070	1,066	548	446	3,130	2,136	2.17	-0.03			206.97	225
6/15/2014 18:36	18	2.003	2.344	2.080	2.670	1,070	1,064	545	444	3,124	2,135	2.17	-0.03			206.88	225
6/15/2014 20:12	20	2.003	2.343	2.082	2.664	1,071	1,063	543	443	3,119	2,133	2.17	-0.03			206.79	225
6/15/2014 21:48	21	2.002	2.342	2.084	2.658	1,071	1,061	540	441	3,113	2,132	2.17	-0.03			206.69	225
6/15/2014 23:24	23	2.002	2.341	2.086	2.652	1,071	1,059	538	439	3,107	2,130	2.17	-0.03			206.60	225
6/16/2014 1:00	1	2.002	2.340	2.088	2.646	1,071	1,057	535	438	3,101	2,128	2.17	-0.03			206.51	225
6/16/2014 2:36	2	2.002	2.339	2.090	2.639	1,071	1,056	532	436	3,095	2,127	2.17	-0.03			206.42	224
6/16/2014 4:12	4	2.002	2.338	2.092	2.633	1,071	1,054	530	434	3,090	2,125	2.17	-0.03			206.33	224
6/16/2014 5:48	5	2.001	2.337	2.094	2.627	1,072	1,052	527	433	3,084	2,124	2.17	-0.03			206.23	224
6/16/2014 7:24	7	2.001	2.337	2.096	2.621	1,072	1,050	525	431	3,078	2,122	2.17	-0.03			206.14	224
6/16/2014 9:00	9	2.001	2.336	2.098	2.615	1,072	1,049	522	430	3,072	2,121	2.17	-0.03			206.05	224
6/16/2014 10:36	10	2.001	2.335	2.100	2.609	1,072	1,047	520	428	3,067	2,119	2.17	-0.03			205.96	224
6/16/2014 12:12	12	2.001	2.334	2.102	2.603	1,072	1,045	517	426	3,061	2,118	2.17	-0.03			205.86	224
6/16/2014 13:48	13	2.000	2.333	2.104	2.596	1,072	1,044	514	425	3,055	2,116	2.17	-0.03			205.77	224
6/16/2014 15:24	15	2.000	2.332	2.106	2.590	1,073	1,042	512	423	3,049	2,114	2.17	-0.03			205.68	224
6/16/2014 17:00	17	2.000	2.331	2.108	2.584	1,073	1,040	509	421	3,043	2,113	2.17	-0.03			205.59	224
6/16/2014 18:36	18	2.000	2.330	2.110	2.578	1,073	1,038	507	420	3,038	2,111	2.16	-0.04			205.50	223
6/16/2014 20:12	20	2.000	2.329	2.112	2.572	1,073	1,037	504	418	3,032	2,110	2.16	-0.04			205.40	223
6/16/2014 21:48	21	2.000	2.328	2.114	2.566	1,073	1,035	501	416	3,026	2,108	2.16	-0.04			205.31	223
6/16/2014 23:24	23	1.999	2.327	2.116	2.560	1,073	1,033	499	415	3,020	2,107	2.16	-0.04			205.22	223
6/17/2014 1:00	1	1.999	2.326	2.118	2.554	1,074	1,032	496	413	3,014	2,105	2.16	-0.04			205.13	223
6/17/2014 2:36	2	1.999	2.325	2.120	2.547	1,074	1,030	494	411	3,009	2,104	2.16	-0.04			205.04	223
6/17/2014 4:12	4	1.999	2.324	2.122	2.541	1,074	1,028	491	410	3,003	2,102	2.16	-0.04			204.94	223
6/17/2014 5:48	5	1.999	2.323	2.124	2.535	1,074	1,026	488	408	2,997	2,100	2.16	-0.04			204.85	223
6/17/2014 7:24	7	1.998	2.322	2.126	2.529	1,074	1,025	486	406	2,991	2,099	2.16	-0.04			204.76	223
6/17/2014 9:00	9	1.998	2.321	2.128	2.523	1,074	1,023	483	405	2,985	2,097	2.16	-0.04			204.67	223
6/17/2014 10:36	10	1.998	2.320	2.130	2.517	1,075	1,021	481	403	2,980	2,096	2.16	-0.04			204.57	222
6/17/2014 12:12	12	1.998	2.319	2.132	2.511	1,075	1,020	478	401	2,974	2,094	2.16	-0.04			204.48	222
6/17/2014 13:48	13	1.998	2.318	2.134	2.504	1,075	1,018	475	400	2,968	2,093	2.16	-0.04			204.39	222
6/17/2014 15:24	15	1.997	2.317	2.136	2.498	1,075	1,016	473	398	2,962	2,091	2.16	-0.04			204.30	222
6/17/2014 17:00	17	1.997	2.316	2.137	2.492	1,075	1,014	470	397	2,956	2,090	2.16	-0.04			204.21	222
6/17/2014 18:36	18	1.997	2.315	2.139	2.486	1,075	1,013	468	395	2,951	2,088	2.16	-0.04			204.11	222
6/17/2014 20:12	20	1.997	2.314	2.141	2.480	1,076	1,011	465	393	2,945	2,087	2.16	-0.04			204.02	222
6/17/2014 21:48	21	1.997	2.313	2.143	2.474	1,076	1,009	462	392	2,939	2,085	2.15	-0.05			203.93	222
6/17/2014 23:24	23	1.996	2.312	2.145	2.468	1,076	1,007	460	390	2,933	2,083	2.15	-0.05			203.84	222
6/18/2014 1:00	1	1.996	2.311	2.147	2.461	1,076	1,006	457	388	2,927	2,082	2.15	-0.05			203.75	222
6/18/2014 2:36	2	1.996	2.310	2.149	2.455	1,076	1,004	455	387	2,922	2,080	2.15	-0.05			203.65	221
6/18/2014 4:12	4	1.996	2.309	2.151	2.449	1,076	1,002	452	385	2,916	2,079	2.15	-0.05			203.56	221
6/18/2014 5:48	5	1.996	2.308	2.153	2.443	1,077	1,001	449	383	2,910	2,077	2.15	-0.05			203.47	221
6/18/2014 7:24	7	1.995	2.307	2.155	2.437	1,077	999	447	382	2,904	2,076	2.15	-0.05			203.38	221
6/18/2014 9:00	9	1.995	2.306	2.157	2.431	1,077	997	444	380	2,898	2,074	2.15	-0.05			203.28	221
6/18/2014 10:36	10	1.995	2.305	2.159	2.425	1,077	995	442	378	2,893	2,073	2.15	-0.05			203.19	221
6/18/2014 12:12	12	1.995	2.304	2.161	2.418	1,077	994	439	377	2,887	2,071	2.15	-0.05			203.10	221
6/18/2014 13:48	13	1.995	2.304	2.163	2.412	1,077	992	437	375	2,881	2,069	2.15	-0.05			203.01	221
6/18/2014 15:24	15	1.994	2.303	2.165	2.406	1,078	990	434	373	2,875	2,068	2.15	-0.05			202.92	221
6/18/2014 17:00	17	1.994	2.302	2.167	2.400	1,078	989	431	372	2,869	2,066	2.15	-0.05			202.82	221
6/18/2014 18:36	18	1.994	2.301	2.169	2.394	1,078	987	429	370	2,864	2,065	2.15	-0.05			202.73	220
6/18/2014 20:12	20	1.994	2.300	2.171	2.388	1,078	985	426	368	2,858	2,063	2.15	-0.05			202.64	220
6/18/2014 21:48	21	1.994	2.299	2.173	2.382	1,078	983	424	367	2,852	2,062	2.15	-0.05			202.55	220
6/18/2014 23:24	23	1.994	2.298	2.175	2.376	1,079	982	421	365	2,846	2,060	2.15	-0.05			202.46	220
6/19/2014 1:00	1	1.993	2.297	2.177	2.369	1,079	980	418	363	2,840	2,059	2.15	-0.05			202.36	220
6/19/2014 2:36	2	1.993	2.296	2.179	2.363	1,079	978	416	362	2,835	2,057	2.14	-0.06			202.27	220
6/19/2014 4:12	4	1.993	2.295	2.181	2.357	1,079	976	413	360	2,829	2,055	2.14	-0.06			202.18	220
6/19/2014 5:48	5	1.993	2.294	2.183	2.351	1,079	975	411	359	2,823	2,054	2.14	-0.06			202.09	220
6/19/2014 7:24	7	1.993	2.293	2.185	2.345	1,079	973	408	357	2,817	2,052	2.14	-0.06			201.99	220
6/19/2014 9:00	9	1.992	2.292	2.187	2.339	1,080	971	405	355	2,811	2,051	2.14	-0.06			201.90	220
6/19/2014 10:36	10	1.992	2.291	2.189	2.333	1,080	970	403	354	2,806	2,049	2.14	-0.06			201.81	219
6/19/2014 12:12	12	1.992	2.290	2.191	2.326	1,080	968	400	352	2,800	2,048	2.14	-0.06			201.72	219
6/19/2014 13:48	13	1.992	2.289	2.193	2.320	1,080	966	398	350	2,794	2,046	2.14	-0.06			201.63	219
6/19/2014 15:24	15	1.992	2.288	2.194	2.314	1,080	964	395	349	2,788	2,045	2.14	-0.06			201.53	219
6/19/2014 17:00	17	1.991	2.287	2.196	2.308	1,080	963	392	347	2,782	2,043	2.14	-0.06			201.44	219
6/19/2014 18:36	18	1.991	2.286	2.198	2.302	1,081	961	390	345	2,777	2,042	2.14	-0.06			201.35	219
6/19/2014 20:12	20	1.991	2.285	2.200	2.296	1,081	959	387	344	2,771	2,040	2.14	-0.06			201.26	219
6/19/2014 21:48	21	1.991	2.284	2.202	2.290	1,081	958	385	342	2,765	2,038	2.14	-0.06			201.16	219
6/19/2014 23:24	23	1.991	2.283	2.204	2.283	1,081	956	382	340	2,759	2,037	2.14	-0.06			201.07	219
6/20/2014 1:00	1	1.990	2.282	2.206	2.277	1,081	954	379	339	2,753	2,035	2.14	-0.06			200.98	219
6/20/2014 2:36	2	1.990	2.281	2.208	2.271	1,081	952	377	337	2,748	2,034	2.14	-0.06			200.89	218
6/20/2014 4:12	4	1.990	2.280	2.210	2.265	1,082	951	374	335	2,742	2,032	2.14	-0.06			200.80	218
6/20/2014 5:48	5	1.990	2.279	2.212	2.259	1,082	949	372	334	2,736	2,031	2.13	-0.07			200.70	218
6/20/2014 7:24	7	1.990	2.278	2.214	2.253	1,082	947	369	332	2,730	2,029	2.13	-0.07			200.61	218
6/20/2014 9:00	9	1.989	2.277	2.216	2.247	1,082	945	366	330	2,724	2,028	2.13	-0.07			200.52	218
6/20/2014 10:36	10	1.989	2.276	2.218	2.240	1,082	944	364	329	2,719	2,026	2.13	-0.07			200.43	218
6/20/2014 12:12	12	1.989	2.275	2.220	2.234	1,082	942	361	327	2,713	2,024	2.13	-0.07			200.34	218
6/20/2014 13:48	13	1.989	2.274	2.222	2.228	1,083	940	359	325	2,707	2,023	2.13	-0.07			200.24	218
6/20/2014 15:24	15	1.989	2.273	2.224	2.222	1,083	939	356	324	2,701	2,021	2.13	-0.07			200.15	218
6/20/2014 17:00	17	1.989	2.272	2.226	2.216	1,083	937	354	322	2,696	2,020	2.13	-0.07			200.06	218
6/20/2014 18:36	18	1.988	2.271	2.228	2.210	1,083	935	351	321	2,690	2,018	2.13	-0.07			199.97	217
6/20/2014 20:12	20	1.988	2.270	2.230	2.204	1,083	933	348	319	2,684	2,017	2.13	-0.07			199.87	217
6/20/2014 21:48	21	1.988	2.270	2.232	2.198	1,083	932	346	317	2,678	2,015	2.13	-0.07			199.78	217

6/20/2014 23:24	23	1.988	2.269	2.234	2.191	1,084	930	343	316	2,672	2,014	2.13	-0.07			199.69	217
6/21/2014 1:00	1	1.988	2.268	2.236	2.185	1,084	928	341	314	2,667	2,012	2.13	-0.07			199.60	217
6/21/2014 2:36	2	1.987	2.267	2.238	2.179	1,084	927	338	312	2,661	2,011	2.13	-0.07			199.51	217
6/21/2014 4:12	4	1.987	2.266	2.240	2.173	1,084	925	335	311	2,655	2,009	2.13	-0.07			199.41	217
6/21/2014 5:48	5	1.987	2.265	2.242	2.167	1,084	923	333	309	2,649	2,007	2.13	-0.07			199.32	217
6/21/2014 7:24	7	1.987	2.264	2.244	2.161	1,084	921	330	307	2,643	2,006	2.13	-0.07			199.23	217
6/21/2014 9:00	9	1.987	2.263	2.246	2.155	1,085	920	328	306	2,638	2,004	2.12	-0.08			199.14	217
6/21/2014 10:36	10	1.986	2.262	2.248	2.148	1,085	918	325	304	2,632	2,003	2.12	-0.08			199.05	216
6/21/2014 12:12	12	1.986	2.261	2.250	2.142	1,085	916	322	302	2,626	2,001	2.12	-0.08			198.95	216
6/21/2014 13:48	13	1.986	2.260	2.251	2.136	1,085	915	320	301	2,620	2,000	2.12	-0.08			198.86	216
6/21/2014 15:24	15	1.986	2.259	2.253	2.130	1,085	913	317	299	2,614	1,998	2.12	-0.08			198.77	216
6/21/2014 17:00	17	1.986	2.258	2.255	2.124	1,085	911	315	297	2,609	1,997	2.12	-0.08			198.68	216
6/21/2014 18:36	18	1.985	2.257	2.257	2.118	1,086	909	312	296	2,603	1,995	2.12	-0.08			198.58	216
6/21/2014 20:12	20	1.985	2.256	2.259	2.112	1,086	908	309	294	2,597	1,993	2.12	-0.08			198.49	216
6/21/2014 21:48	21	1.985	2.255	2.261	2.105	1,086	906	307	292	2,591	1,992	2.12	-0.08			198.40	216
6/21/2014 23:24	23	1.985	2.254	2.263	2.099	1,086	904	304	291	2,585	1,990	2.12	-0.08			198.31	216
6/22/2014 1:00	1	1.985	2.253	2.265	2.093	1,086	902	302	289	2,580	1,989	2.12	-0.08			198.22	216
6/22/2014 2:36	2	1.984	2.252	2.267	2.087	1,086	901	299	287	2,574	1,987	2.12	-0.08			198.12	215
6/22/2014 4:12	4	1.984	2.251	2.269	2.081	1,087	899	296	286	2,568	1,986	2.12	-0.08			198.03	215
6/22/2014 5:48	5	1.984	2.250	2.271	2.075	1,087	897	294	284	2,562	1,984	2.12	-0.08			197.94	215
6/22/2014 7:24	7	1.984	2.249	2.273	2.069	1,087	896	291	283	2,556	1,983	2.12	-0.08			197.85	215
6/22/2014 9:00	9	1.984	2.248	2.275	2.062	1,087	894	289	281	2,551	1,981	2.12	-0.08			197.76	215
6/22/2014 10:36	10	1.983	2.247	2.277	2.056	1,087	892	286	279	2,545	1,979	2.12	-0.08			197.66	215
6/22/2014 12:12	12	1.983	2.246	2.279	2.050	1,088	890	284	278	2,539	1,978	2.11	-0.09			197.57	215
6/22/2014 13:48	13	1.983	2.245	2.281	2.044	1,088	889	281	276	2,533	1,976	2.11	-0.09			197.48	215
6/22/2014 15:24	15	1.983	2.244	2.283	2.038	1,088	887	278	274	2,527	1,975	2.11	-0.09			197.39	215
6/22/2014 17:00	17	1.983	2.243	2.285	2.032	1,088	885	276	273	2,522	1,973	2.11	-0.09			197.29	215
6/22/2014 18:36	18	1.983	2.242	2.287	2.026	1,088	884	273	271	2,516	1,972	2.11	-0.09			197.20	214
6/22/2014 20:12	20	1.982	2.241	2.289	2.019	1,088	882	271	269	2,510	1,970	2.11	-0.09			197.11	214
6/22/2014 21:48	21	1.982	2.240	2.291	2.013	1,089	880	268	268	2,504	1,969	2.11	-0.09			197.02	214
6/22/2014 23:24	23	1.982	2.239	2.293	2.007	1,089	878	265	266	2,498	1,967	2.11	-0.09			196.93	214
6/23/2014 1:00	1	2.035	2.269	2.390	2.122	1,096	876	260	262	2,495	1,972	2.15	-0.05			197.22	214
6/23/2014 2:36	2	2.501	2.417	2.376	1.846	1,108	767	169	198	2,243	1,876	2.46	0.26			191.50	208
6/23/2014 4:12	4	3.123	2.721	2.444	2.235	1,080	745	170	216	2,211	1,825	2.92	0.72		12.83	188.51	205
6/23/2014 5:48	5	3.537	3.409	3.239	3.012	1,091	756	173	219	2,239	1,847	3.47	1.27		54.28	189.82	206
6/23/2014 7:24	7	3.751	3.784	3.703	3.569	1,055	729	168	214	2,166	1,784	3.77	1.57		74.86	186.07	202
6/23/2014 9:00	9	2.627	3.631	3.223	3.246	962	844	190	193	2,189	1,806	3.13	0.93		28.11	187.35	204
6/23/2014 10:36	10	2.114	2.164	1.782	1.794	939	794	238	230	2,202	1,734	2.14	-0.06			183.06	199
6/23/2014 12:12	12	1.911	1.983	1.894	1.870	1,044	855	474	531	2,904	1,899	1.95	-0.25			192.90	210
6/23/2014 13:48	13	2.012	1.985	1.924	1.965	1,146	952	542	596	3,237	2,099	2.00	-0.20			204.75	223
6/23/2014 15:24	15	1.917	2.161	2.251	2.056	1,167	1,034	594	637	3,432	2,201	2.04	-0.16			210.80	229
6/23/2014 17:00	17	1.969	2.233	2.916	3.100	1,170	1,038	527	642	3,377	2,208	2.10	-0.10			211.24	230
6/23/2014 18:36	18	1.939	2.309	4.450	4.769	1,087	962	488	596	3,133	2,050	2.12	-0.08			201.83	219
6/23/2014 20:12	20	1.878	2.374	4.571	4.986	1,036	917	465	569	2,987	1,953	2.13	-0.07			196.10	213
6/23/2014 21:48	21	1.779	2.277	4.428	4.984	1,009	893	453	555	2,911	1,902	2.03	-0.17			193.08	210
6/23/2014 23:24	23	1.804	2.343	4.346	4.797	1,051	911	387	460	2,808	1,962	2.07	-0.13			196.60	214
6/24/2014 1:00	1	2.277	2.273	2.220	1.483	1,129	844	190	188	2,351	1,974	2.27	0.07			197.31	215
6/24/2014 2:36	2	2.603	2.446	1.853	1.870	1,069	823	166	208	2,266	1,892	2.52	0.32			192.49	209
6/24/2014 4:12	4	2.593	3.241	2.192	1.985	928	814	174	180	2,096	1,742	2.92	0.72		12.12	183.55	200
6/24/2014 5:48	5	3.130	3.799	2.842	2.518	934	807	175	190	2,107	1,741	3.46	1.26		51.87	183.52	200
6/24/2014 7:24	7	3.722	3.981	3.462	3.525	917	756	169	208	2,050	1,673	3.85	1.65		78.16	179.45	195
6/24/2014 9:00	9	3.187	3.267	2.967	3.209	897	707	139	195	1,939	1,605	3.23	1.03		33.07	175.40	191
6/24/2014 10:36	10	2.222	2.222	2.061	1.990	902	747	207	219	2,075	1,649	2.22	0.02			178.04	194
6/24/2014 12:12	12	1.892	2.097	1.845	1.911	1,025	898	455	466	2,844	1,923	1.99	-0.21			194.29	211
6/24/2014 13:48	13	1.784	2.135	1.934	2.046	1,076	976	587	594	3,233	2,052	1.96	-0.24			201.96	220
6/24/2014 15:24	15	2.057	2.040	2.184	2.173	1,146	968	514	595	3,223	2,114	2.05	-0.15			205.66	224
6/24/2014 17:00	17	2.111	1.902	2.927	3.129	1,089	895	410	526	2,919	1,983	2.01	-0.19			197.89	215
6/24/2014 18:36	18	2.121	1.960	4.135	4.378	989	809	371	476	2,644	1,797	2.04	-0.16			186.85	203
6/24/2014 20:12	20	1.934	1.903	4.092	4.434	977	800	366	470	2,614	1,777	1.92	-0.28			185.66	202
6/24/2014 21:48	21	1.924	1.863	4.061	4.456	1,001	822	374	482	2,680	1,823	1.89	-0.31			188.38	205
6/24/2014 23:24	23	2.101	2.121	4.382	4.798	1,059	870	395	511	2,835	1,929	2.11	-0.09			194.64	212
6/25/2014 1:00	1	2.117	2.011	4.370	4.725	985	807	368	473	2,633	1,792	2.06	-0.14			186.52	203
6/25/2014 2:36	2	2.533	2.491	4.726	4.954	962	787	359	461	2,569	1,749	2.51	0.31			183.99	200
6/25/2014 4:12	4	3.658	3.652	4.999	4.994	965	790	359	462	2,576	1,755	3.66	1.46		65.98	184.32	200
6/25/2014 5:48	5	4.331	4.373	4.673	4.980	963	787	358	461	2,570	1,750	4.35	2.15		116.60	184.05	200
6/25/2014 7:24	7	4.647	4.522	4.331	4.965	945	774	352	453	2,524	1,719	4.58	2.38		132.17	182.17	198
6/25/2014 9:00	9	4.567	4.563	3.990	4.950	1,274	1,067	486	618	3,445	2,341	4.57	2.37		157.31	219.17	238
6/25/2014 10:36	10	4.397	4.201	3.649	4.935	1,171	992	419	560	3,142	2,162	4.30	2.10		127.75	208.52	227
6/25/2014 12:12	12	2.348	1.858	2.432	3.098	782	776	328	281	2,167	1,558	2.10	-0.10			172.63	188
6/25/2014 13:48	13	2.200	1.770	1.973	2.296	859	832	410	341	2,442	1,691	1.99	-0.21			180.50	196
6/25/2014 15:24	15	2.113	1.770	1.656	1.802	858	883	427	362	2,529	1,741	1.94	-0.26			183.47	200
6/25/2014 17:00	17	1.946	2.154	2.065	2.126	861	938	380	269	2,448	1,799	2.05	-0.15			186.96	203
6/25/2014 18:36	18	2.089	2.112	2.111	2.132	844	859	289	205	2,198	1,704	2.10	-0.10			181.29	197
6/25/2014 20:12	20	2.106	1.985	1.904	1.972	907	893	301	225	2,326	1,800	2.05	-0.15			187.01	203
6/25/2014 21:48	21	2.108	2.016	2.053	2.285	906	886	284	231	2,308	1,792	2.06	-0.14			186.54	203
6/25/2014 23:24	23	2.076	1.986	1.990	1.705	918	900	313	237	2,368	1,818	2.03	-0.17			188.06	205
6/26/2014 1:00	1	2.023	2.103	2.218	2.202	912	885	294	225	2,317	1,797	2.06	-0.14			186.85	203
6/26/2014 2:36	2	2.688	2.328	2.181	2.570	891	844	257	223	2,215	1,735	2.51	0.31			183.14	199
6/26/2014 4:12	4	2.847	3.801	2.742	2.857	745	873	256	202	2,076	1,619	3.32	1.12		40.01	176.23	192
6/26/2014 5:48	5	3.342	4.275	3.172	3.736	737	810	262	207	2,016	1,547	3.81	1.61		71.98	171.98	187
6/26/2014 7:24	7	3.800	4.392	3.674	4.181	733	800	261	205	1,999	1,533	4.10	1.90		91.10	171.15	186
6/26/2014 9:00	9	2.786	2.704	3.249	3.765	729	729	257	250	1,966	1,458	2.75	0.55			166.69	181
6/26/2014 10:36	10	2.025	2.057	1.980	3.411	818	787	377	340	2,322	1,605	2.04	-0.16			175.43	191
6/26/2014 12:12	12	1.905	1.990	1.955	2.092	877	854	523	457	2,711	1,731	1.95	-0.25			182.91	199
6/26/2014 13:48	13	1.939	2.103	2.063	2.018	950	933	587	541	3,012	1,883	2.02	-0.18			191.92	209
6/26/2014 15:24	15	1.882	2.105	2.246	2.210	951	931	488	460	2,829	1,882	1.99	-0.21			191.86	209
6/26/2014 17:00	17	1.972	2.115	2.088	2.189	938	916	361	329	2,545	1,855	2.04	-0.16			190.25	207
6/26/2014 18:36	18	1.959	2.087	2.205	2.200	906	878	325	277	2,387	1,784	2.02	-0.18			186.05	202
6/26/2014 20:12	20	1.868	2.062	2.196	2.056	930	876	305	282	2,392	1,805	1.97	-0.23			187.31	204
6/26/2014 21:48	21	2.158	1.918	2.104	1.820	930	866	275	265	2,335	1,795	2.04	-0.16			186.73	203
6/26/2014 23:24	23	1.916	2.187	1.922	2.218	938	908	314	264	2,424	1,846	2.05	-0.15			189.75	206
6/27/2014 1:00	1	2.002	2.257	2.436	1.962	919	871	305	237	2,332	1,790	2.13	-0.07			186.40	203
6/27/2014 2:36	2	3.100	3.251	3.330	2.749	943	894	312	242	2,391	1,838	3.18	0.98		31.83	189.23	206
6/27/2014 4:12	4	4.518	4.187	3.889	3.468	982	894	249	228	2,354	1,876	4.35	2.15		121.38	191.54	208
6/27/2014 5:48	5	4.755	4.710	3.822	3.985	998	883	224	230	2,334	1,881	4.73	2.53		150.40	191.82	209
6/27/2014 7:24	7	4.899	4.498	3.983	4.349	918	816	229	236	2,199	1,734	4.70	2.50		141.05	183.08	199
6/27/2014 9:00	9	3.565	3.649	3.329	3.986	847	770	224	231	2,071	1,616	3.61	1.41		59.69	176.09	192
6/27/2014 10:36	10	2.148	2.105	1.514	2.209	845	766	291	271	2,174	1,611	2.13	-0.07			175.77	191
6/27/2014 12:12	12	2.009	2.132	2.030	2.030	927	874	468	439	2,708	1,801	2.07	-0.13			187.07	203
6/27/2014 13:48	13	1.975	1.968	1.976	2.056	990	950	535	550	3,025	1,940	1.97	-0.23			195.34	212
6/27/2014 15:24	15	1.967	1.942	2.075	2.457	980	948	438	456	2,821	1,928	1.95	-0.25			194.60	212
6/27/2014 17:00	17	2.001	2.075	2.195	2.086	998	993	363	354	2,709	1,991	2.04	-0.16			198.38	216
6/27/2014 18:36	18	2.031	2.170	2.413	2.049	957	927	336	275	2,495	1,884	2.10	-0.10			192.01	209
6/27/2014 20:12	20	1.949	1.999	1.895	1.886	941	912	315	289	2,457	1,853	1.97	-0.23			190.15	207
6/27/2014 21:48	21	2.097	2.091	2.266	2.312	975	915	276	281	2,447	1,890	2.09	-0.11			192.37	209
6/27/2014 23:24	23	2.297	2.149	2.202	2.010	991	916	272	271	2,451	1,907	2.22	0.02			193.38	210
6/28/2014 1:00	1	2.875	2.586	2.133	2.672	1,003	934	259	299	2,494	1,937	2.73	0.53			195.15	212
6/28/2014 2:36	2	3.252	3.106	2.472	3.352	986	905	235	291	2,417	1,891	3.18	0.98		32.63	192.38	209
6/28/2014 4:12	4	3.753	3.880	2.923	3.618	937	885	239	265	2,327	1,823	3.82	1.62		79.42	188.35	205
6/28/2014 5:48	5	4.495	4.618	3.543	4.164	905	881	246	261	2,293	1,786	4.56	2.36		132.99	186.14	202
6/28/2014 7:24	7	4.533	4.951	4.024	4.698	845	845	246	261	2,198	1,690	4.74	2.54		142.17	180.49	196
6/28/2014 9:00	9	4.111	4.532	3.850	4.567	802	807	235	246	2,090	1,609	4.32	2.12		109.15	175.66	191
6/28/2014 10:36	10	2.821	3.147	2.616	3.626	766	772	222	231	1,992	1,539	2.98	0.78		15.87	171.49	186
6/28/2014 12:12	12	1.814	2.122	0.991	1.736	858	823	299	262	2,242	1,681	1.97	-0.23			179.95	196
6/28/2014 13:48	13	1.830	2.130	0.755	1.055	927	935	378	354	2,594	1,861	1.98	-0.22			190.65	207
6/28/2014 15:24	15	1.964	1.943	1.065	1.721	1,015	973	428	439	2,855	1,988	1.95	-0.25			198.16	216
6/28/2014 17:00	17	2.032	1.974	1.975	2.182	1,040	1,006	380	382	2,809	2,047	2.00	-0.20			201.67	219
6/28/2014 18:36	18	2.018	1.986	2.029	1.807	982	967	333	320	2,602	1,949	2.00	-0.20			195.84	213
6/28/2014 20:12	20	2.013	1.964	2.236	2.219	944	948	312	298	2,501	1,891	1.99	-0.21			192.43	209
6/28/2014 21:48	21	2.143	2.195	1.884	2.126	948	938	301	273	2,460	1,887	2.17	-0.03			192.14	209
6/28/2014 23:24	23	2.384	2.378	2.081	2.454	926	966	286	277	2,455	1,892	2.38	0.18			192.48	209
6/29/2014 1:00	1	1.614	2.943	2.181	2.861	802	949	314	271	2,336	1,751	2.28	0.08			184.08	200
6/29/2014 2:36	2	2.302	3.303	2.850	3.118	833	911	299	245	2,288	1,744	2.80	0.60		3.81	183.65	200
6/29/2014 4:12	4	3.240	3.981	3.384	3.452	829	873	271	245	2,219	1,702	3.61	1.41		61.66	181.21	197
6/29/2014 5:48	5	3.887	3.967	3.680	3.898	837	823	262	252	2,174	1,660	3.93	1.73		83.19	178.68	194
6/29/2014 7:24	7	4.447	4.110	4.044	4.157	834	768	259	248	2,109	1,602	4.28	2.08		105.92	175.24	191
6/29/2014 9:00	9	3.873	3.466	3.938	3.941	790	725	245	231	1,991	1,515	3.67	1.47		61.84	170.04	185
6/29/2014 10:36	10	2.957	2.950	3.208	3.432	740	744	222	232	1,939	1,484	2.95	0.75		13.52	168.26	183
6/29/2014 12:12	12	1.961	2.888	1.483	3.247	728	809	214	243	1,993	1,536	2.42	0.22			171.34	186

6/29/2014 13:48	13	2.009	1.945	0.599	1.220	932	879	280	358	2,450	1,812	1.98	-0.22			187.69	204
6/29/2014 15:24	15	2.038	2.142	0.528	2.081	1,042	1,003	411	506	2,963	2,045	2.09	-0.11			201.57	219
6/29/2014 17:00	17	2.091	2.148	2.051	1.930	1,083	1,044	448	406	2,981	2,127	2.12	-0.08			206.42	224
6/29/2014 18:36	18	1.979	1.892	2.552	2.387	1,059	1,049	419	381	2,908	2,108	1.94	-0.26			205.32	223
6/29/2014 20:12	20	1.987	2.022	2.088	2.297	1,018	1,003	317	316	2,654	2,021	2.00	-0.20			200.14	218
6/29/2014 21:48	21	2.211	2.090	2.203	2.153	973	1,001	308	291	2,573	1,974	2.15	-0.05			197.35	215
6/29/2014 23:24	23	1.965	2.017	2.078	2.127	1,037	1,036	294	273	2,639	2,072	1.99	-0.21			203.18	221
6/30/2014 1:00	1	2.269	2.414	1.357	1.274	946	985	243	217	2,390	1,931	2.34	0.14			194.78	212
6/30/2014 2:36	2	2.709	2.254	1.831	1.350	947	857	244	207	2,255	1,804	2.48	0.28			187.23	204
6/30/2014 4:12	4	2.830	2.912	1.713	2.050	787	832	190	222	2,031	1,620	2.87	0.67	8.42		176.28	192
6/30/2014 5:48	5	2.784	3.419	1.792	2.633	779	826	209	223	2,037	1,605	3.10	0.90	24.37		175.42	191
6/30/2014 7:24	7	3.129	3.425	2.248	2.769	786	772	215	205	1,979	1,559	3.28	1.08	35.99		172.67	188
6/30/2014 9:00	9	2.526	2.540	2.594	2.609	833	776	258	253	2,120	1,609	2.53	0.33			175.65	191
6/30/2014 10:36	10	2.016	2.022	2.120	2.463	927	896	327	311	2,461	1,822	2.02	-0.18			188.34	205
6/30/2014 12:12	12	1.911	2.130	1.855	1.940	984	999	529	470	2,983	1,983	2.02	-0.18			197.88	215
6/30/2014 13:48	13	1.858	1.981	2.255	1.691	1,043	1,054	598	567	3,262	2,097	1.92	-0.28			204.64	223
6/30/2014 15:24	15	2.159	2.373	2.744	3.110	1,158	1,167	652	684	3,662	2,325	2.27	0.07			218.20	237
6/30/2014 17:00	17	1.935	2.106	3.865	4.015	1,073	1,058	531	550	3,211	2,130	2.02	-0.18			206.63	225
6/30/2014 18:36	18	2.017	2.128	4.092	4.745	997	984	479	507	2,966	1,980	2.07	-0.13			197.71	215
6/30/2014 20:12	20	1.864	2.173	3.994	4.781	994	987	477	505	2,962	1,981	2.02	-0.18			197.75	215
6/30/2014 21:48	21	1.810	2.130	3.989	4.849	1,015	1,011	487	516	3,028	2,025	1.97	-0.23			200.38	218
6/30/2014 23:24	23	1.806	2.219	3.778	4.819	1,033	1,031	421	451	2,935	2,063	2.01	-0.19			202.64	220
7/1/2014 1:00	1	1.819	2.185	1.480	1.745	969	930	252	195	2,346	1,899	2.00	-0.20			192.90	210
7/1/2014 2:36	2	2.092	2.120	1.616	1.541	992	850	219	201	2,262	1,842	2.11	-0.09			189.50	206
7/1/2014 4:12	4	2.807	2.799	1.788	1.874	937	835	220	193	2,185	1,772	2.80	0.60	3.90		185.36	202
7/1/2014 5:48	5	2.812	3.241	2.473	2.377	941	833	222	193	2,190	1,774	3.03	0.83	20.29		185.49	202
7/1/2014 7:24	7	3.243	3.234	2.878	2.649	944	766	222	193	2,124	1,710	3.24	1.04	35.10		181.64	198
7/1/2014 9:00	9	2.666	2.789	2.486	2.404	852	842	203	200	2,098	1,694	2.73	0.53			180.71	197
7/1/2014 10:36	10	2.047	2.061	2.011	2.768	922	868	319	314	2,424	1,790	2.05	-0.15			186.44	203
7/1/2014 12:12	12	1.851	1.912	2.205	2.181	1,006	975	476	509	2,966	1,981	1.88	-0.32			197.73	215
7/1/2014 13:48	13	1.929	2.024	1.876	2.706	1,039	1,046	555	564	3,205	2,085	1.98	-0.22			203.93	222
7/1/2014 15:24	15	1.930	1.989	2.287	2.497	1,024	1,038	489	464	3,015	2,062	1.96	-0.24			202.59	220
7/1/2014 17:00	17	1.898	2.140	2.099	2.533	1,040	1,057	405	399	2,900	2,096	2.02	-0.18			204.60	223
7/1/2014 18:36	18	1.925	2.124	2.520	3.032	998	1,015	388	382	2,784	2,013	2.02	-0.18			199.67	217
7/1/2014 20:12	20	1.841	1.983	2.855	3.236	924	934	358	352	2,568	1,858	1.91	-0.29			190.45	207
7/1/2014 21:48	21	1.867	2.064	2.882	3.142	986	1,002	381	375	2,744	1,988	1.97	-0.23			198.16	216
7/1/2014 23:24	23	1.802	2.093	3.111	3.297	998	1,016	362	353	2,729	2,014	1.95	-0.25			199.72	217
7/2/2014 1:00	1	1.951	2.153	1.640	1.660	952	950	241	212	2,355	1,902	2.05	-0.15			193.08	210
7/2/2014 2:36	2	2.407	2.398	1.525	1.515	927	884	226	203	2,240	1,811	2.40	0.20			187.65	204
7/2/2014 4:12	4	3.528	3.225	2.133	1.898	929	879	204	197	2,209	1,808	3.38	1.18	46.47		187.50	204
7/2/2014 5:48	5	4.049	3.915	2.590	2.707	934	889	204	205	2,232	1,822	3.98	1.78	91.77		188.34	205
7/2/2014 7:24	7	4.432	4.157	2.818	3.015	931	887	202	188	2,208	1,818	4.29	2.09	114.87		188.08	205
7/2/2014 9:00	9	4.144	4.299	3.580	3.561	1,298	1,290	328	321	3,236	2,587	4.22	2.02	136.05		233.78	254
7/2/2014 10:36	10	3.175	3.243	3.469	3.584	949	951	295	266	2,461	1,900	3.21	1.01	35.05		192.97	210
7/2/2014 12:12	12	1.865	2.173	2.145	2.245	927	936	395	327	2,585	1,862	2.02	-0.18			190.69	207
7/2/2014 13:48	13	1.811	2.033	2.014	2.043	962	973	421	350	2,707	1,936	1.92	-0.28			195.07	212
7/2/2014 15:24	15	1.896	2.159	2.035	2.220	1,028	1,016	387	335	2,765	2,044	2.03	-0.17			201.50	219
7/2/2014 17:00	17	2.168	1.976	2.083	1.929	1,030	990	329	277	2,626	2,020	2.07	-0.13			200.06	218
7/2/2014 18:36	18	2.075	2.110	2.289	2.105	1,007	994	323	272	2,596	2,002	2.09	-0.11			198.98	216
7/2/2014 20:12	20	1.870	1.989	1.856	1.730	1,065	1,051	351	304	2,771	2,116	1.93	-0.27			205.75	224
7/2/2014 21:48	21	1.911	2.043	1.985	2.088	1,045	1,047	409	337	2,838	2,092	1.98	-0.22			204.34	222
7/2/2014 23:24	23	2.046	2.144	2.031	2.301	970	965	280	257	2,472	1,935	2.09	-0.11			195.03	212
7/3/2014 1:00	1	1.953	2.443	1.633	1.755	863	950	245	212	2,270	1,813	2.20	0.00			187.79	204
7/3/2014 2:36	2	2.259	2.625	1.660	2.022	927	867	232	200	2,226	1,794	2.44	0.24			186.65	203
7/3/2014 4:12	4	3.438	3.408	2.082	1.915	899	870	215	182	2,166	1,768	3.42	1.22	49.27		185.12	201
7/3/2014 5:48	5	3.645	3.815	2.578	2.480	880	862	217	183	2,142	1,742	3.73	1.53	71.14		183.54	200
7/3/2014 7:24	7	4.101	4.235	2.790	2.818	866	874	215	183	2,137	1,740	4.17	1.97	102.87		183.42	199
7/3/2014 9:00	9	2.740	3.316	2.572	2.659	823	836	282	196	2,137	1,659	3.03	0.83	19.60		178.60	194
7/3/2014 10:36	10	1.967	2.243	3.191	2.016	834	812	381	224	2,250	1,645	2.11	-0.09			177.81	193
7/3/2014 12:12	12	1.995	2.122	2.342	2.128	945	912	431	417	2,705	1,857	2.06	-0.14			190.39	207
7/3/2014 13:48	13	1.936	2.048	2.047	2.325	975	960	485	484	2,904	1,934	1.99	-0.21			194.99	212
7/3/2014 15:24	15	1.975	1.974	2.448	3.370	1,003	983	432	443	2,861	1,986	1.97	-0.23			198.06	215
7/3/2014 17:00	17	2.031	2.019	2.405	2.400	978	985	380	346	2,689	1,963	2.03	-0.17			196.67	214
7/3/2014 18:36	18	1.909	2.099	1.880	1.943	984	981	312	264	2,541	1,965	2.00	-0.20			196.79	214
7/3/2014 20:12	20	2.027	2.115	2.198	2.101	1,003	965	311	274	2,552	1,968	2.07	-0.13			196.96	214
7/3/2014 21:48	21	2.104	2.242	2.472	2.350	964	931	321	268	2,485	1,895	2.17	-0.03			192.64	209
7/3/2014 23:24	23	2.241	1.680	2.033	1.741	1,117	1,037	395	370	2,919	2,154	1.96	-0.24			208.04	226
7/4/2014 1:00	1	2.432	1.885	0.959	0.780	949	997	224	218	2,387	1,946	2.16	-0.04			195.67	213
7/4/2014 2:36	2	2.484	2.864	1.616	1.593	933	929	243	203	2,309	1,862	2.67	0.47			190.69	207
7/4/2014 4:12	4	3.359	3.362	2.169	2.094	869	866	211	198	2,143	1,735	3.36	1.16	44.23		183.12	199
7/4/2014 5:48	5	3.612	4.132	2.423	2.735	855	874	216	196	2,142	1,729	3.87	1.67	81.11		182.79	199
7/4/2014 7:24	7	4.069	4.699	2.982	3.147	861	872	216	185	2,135	1,733	4.38	2.18	118.28		183.05	199
7/4/2014 9:00	9	4.146	4.481	3.091	3.008	862	862	213	173	2,110	1,724	4.31	2.11	112.81		182.49	198
7/4/2014 10:36	10	3.708	4.170	3.056	2.967	846	836	209	169	2,059	1,681	3.94	1.74	84.60		179.95	196
7/4/2014 12:12	12	2.358	2.915	1.920	2.003	836	819	234	183	2,072	1,655	2.64	0.44			178.39	194
7/4/2014 13:48	13	1.800	2.121	1.049	0.863	932	916	370	299	2,517	1,847	1.96	-0.24			189.81	206
7/4/2014 15:24	15	1.914	2.034	1.164	1.197	1,043	1,031	487	436	2,996	2,074	1.97	-0.23			203.26	221
7/4/2014 17:00	17	2.089	1.904	2.094	2.256	1,080	1,039	465	469	3,053	2,119	2.00	-0.20			205.97	224
7/4/2014 18:36	18	2.028	2.059	2.734	2.335	1,088	1,115	404	409	3,017	2,204	2.04	-0.16			210.99	229
7/4/2014 20:12	20	2.068	1.903	2.290	2.729	1,001	1,026	318	330	2,675	2,027	1.99	-0.21			200.49	218
7/4/2014 21:48	21	2.183	1.920	2.167	2.114	973	975	332	297	2,577	1,948	2.05	-0.15			195.82	213
7/4/2014 23:24	23	2.036	2.134	2.370	2.304	961	1,017	302	270	2,551	1,978	2.08	-0.12			197.56	215
7/5/2014 1:00	1	1.809	2.618	2.022	2.285	947	1,015	275	249	2,486	1,962	2.21	0.01			196.62	214
7/5/2014 2:36	2	2.714	2.851	2.569	2.557	980	977	273	248	2,478	1,957	2.78	0.58	2.52		196.34	214
7/5/2014 4:12	4	3.390	3.466	3.352	3.246	935	937	277	260	2,409	1,872	3.43	1.23	51.31		191.26	208
7/5/2014 5:48	5	3.841	4.105	3.557	3.988	906	913	262	271	2,352	1,819	3.97	1.77	91.00		188.12	205
7/5/2014 7:24	7	4.082	4.699	4.044	4.538	901	909	257	268	2,335	1,810	4.39	2.19	121.72		187.62	204
7/5/2014 9:00	9	3.939	4.642	4.086	4.630	868	878	247	254	2,248	1,746	4.29	2.09	112.00		183.82	200
7/5/2014 10:36	10	3.159	4.163	3.713	4.421	849	856	239	249	2,192	1,705	3.66	1.46	65.34		181.33	197
7/5/2014 12:12	12	2.132	2.848	1.964	2.988	838	841	247	249	2,174	1,679	2.49	0.29			179.81	196
7/5/2014 13:48	13	1.705	2.322	1.077	1.032	952	986	405	323	2,665	1,937	2.01	-0.19			195.16	212
7/5/2014 15:24	15	1.669	2.220	1.744	1.249	1,098	1,072	474	443	3,088	2,170	1.94	-0.26			208.99	227
7/5/2014 17:00	17	1.999	1.849	2.030	1.924	1,202	1,067	381	401	3,051	2,269	1.92	-0.28			214.83	234
7/5/2014 18:36	18	2.010	1.998	2.372	2.419	1,156	1,053	329	367	2,905	2,209	2.00	-0.20			211.30	230
7/5/2014 20:12	20	2.017	1.981	2.063	2.101	1,101	1,001	280	292	2,674	2,102	2.00	-0.20			204.94	223
7/5/2014 21:48	21	2.026	1.998	2.231	2.294	1,078	945	282	282	2,587	2,022	2.01	-0.19			200.21	218
7/5/2014 23:24	23	2.145	2.029	2.260	2.173	1,077	918	251	257	2,503	1,995	2.09	-0.11			198.58	216
7/6/2014 1:00	1	2.381	2.367	1.842	1.494	1,079	915	218	218	2,430	1,993	2.37	0.17			198.48	216
7/6/2014 2:36	2	2.373	2.436	1.633	1.674	1,000	861	195	209	2,264	1,861	2.40	0.20			190.63	207
7/6/2014 4:12	4	2.668	2.782	1.835	1.851	951	819	195	204	2,170	1,770	2.73	0.53			185.25	201
7/6/2014 5:48	5	3.784	3.501	2.536	2.454	960	820	197	205	2,182	1,780	3.64	1.44	65.57		185.81	202
7/6/2014 7:24	7	3.910	3.791	2.886	2.957	943	783	189	199	2,113	1,726	3.85	1.65	79.48		182.60	199
7/6/2014 9:00	9	3.423	3.470	2.832	2.847	885	748	193	194	2,019	1,633	3.45	1.25	48.76		177.07	193
7/6/2014 10:36	10	3.405	3.454	3.208	3.038	874	755	213	202	2,044	1,629	3.43	1.23	47.51		176.83	192
7/6/2014 12:12	12	2.491	2.625	2.500	2.680	890	759	225	232	2,106	1,649	2.56	0.36			178.04	194
7/6/2014 13:48	13	1.897	1.962	1.734	1.866	971	866	402	374	2,613	1,837	1.93	-0.27			189.19	206
7/6/2014 15:24	15	1.948	2.057	2.014	1.675	1,094	993	484	460	3,032	2,088	2.00	-0.20			204.10	222
7/6/2014 17:00	17	1.896	2.071	3.060	2.834	1,148	1,074	528	544	3,295	2,223	1.98	-0.22			212.11	231
7/6/2014 18:36	18	1.961	2.052	3.992	3.969	1,188	1,114	549	567	3,419	2,302	2.01	-0.19			216.82	236
7/6/2014 20:12	20	1.911	1.963	4.278	4.293	1,106	1,033	512	529	3,179	2,139	1.94	-0.26			207.11	225
7/6/2014 21:48	21	1.961	2.048	4.587	4.502	1,130	1,058	525	543	3,256	2,188	2.00	-0.20			210.07	228
7/6/2014 23:24	23	1.989	2.037	4.604	4.463	1,133	1,078	468	479	3,158	2,211	2.01	-0.19			211.44	230
7/7/2014 1:00	1	1.872	2.199	2.090	1.463	1,100	1,059	239	209	2,607	2,160	2.04	-0.16			208.37	227
7/7/2014 2:36	2	2.228	2.005	1.408	0.840	1,017	939	210	211	2,378	1,957	2.12	-0.08			196.31	213
7/7/2014 4:12	4	2.675	2.780	1.499	1.560	953	895	201	213	2,261	1,848	2.73	0.53			189.83	206
7/7/2014 5:48	5	3.072	3.162	2.156	1.619	937	869	214	188	2,208	1,806	3.12	0.92	27.21		187.36	204
7/7/2014 7:24	7	3.369	3.502	2.324	1.941	945	876	193	189	2,203	1,821	3.44	1.24	51.02		188.25	205
7/7/2014 9:00	9	2.738	2.948	1.597	1.705	905	837	182	181	2,105	1,742	2.84	0.64	6.75		183.56	200
7/7/2014 10:36	10	1.918	2.045	2.002	1.799	973	893	371	362	2,600	1,867	1.98	-0.22			190.96	208
7/7/2014 12:12	12	1.847	2.168	1.590	1.855	1,026	1,005	517	512	3,060	2,031	2.01	-0.19			200.75	218
7/7/2014 13:48	13	1.945	2.165	2.178	2.037	1,149	1,128	656	605	3,539	2,277	2.06	-0.14			215.36	234
7/7/2014 15:24	15	1.806	1.965	2.050	1.862	1,143	1,122	645	629	3,540	2,265	1.89	-0.31			214.62	233
7/7/2014 17:00	17	1.849	2.030	3.546	3.192	1,148	1,128	632	630	3,538	2,276	1.94	-0.26			215.27	234
7/7/2014 18:36	18	2.051	2.112	4.116	4.365	1,094	1,073	459	520	3,146	2,167	2.08	-0.12			208.80	227
7/7/2014 20:12	20	1.902	2.096	3.396	3.554	1,095	1,075	416	419	3,005	2,170	2.00	-0.20			208.97	227
7/7/2014 21:48	21	1.914	2.164	3.448	3.565	1,128	1,099	428	430	3,085	2,228	2.04	-0.16			212.40	231
7/7/2014 23:24	23	1.908	2.025	2.847	2.888	1,151	1,134	326	332	2,943	2,285	1.97	-0.23			215.83	235
7/8/2014 1:00	1	2.018	2.014	1.255	1.165	1,032	1,009	245	223	2,509	2,041	2.02	-0.18			201.31	219
7/8/2014 2:36	2	2.163	2.131	1.302	0.948	954	912	234	211	2,310	1,866	2.15	-0.05			190.91	208

7/8/2014 4:12	4	2.528	2.187	1.271	1.300	909	834	218	211	2,172	1,743	2.36	0.16			183.61	200
7/8/2014 5:48	5	3.157	2.789	1.789	1.280	921	845	220	196	2,182	1,765	2.97	0.77		16.33	184.95	201
7/8/2014 7:24	7	3.509	3.306	2.126	2.141	900	850	213	213	2,176	1,750	3.41	1.21		47.86	184.03	200
7/8/2014 9:00	9	2.404	2.674	1.788	2.217	858	832	236	220	2,146	1,690	2.54	0.34			180.48	196
7/8/2014 10:36	10	1.900	2.087	2.476	1.138	943	888	423	261	2,515	1,831	1.99	-0.21			188.87	205
7/8/2014 12:12	12	1.823	2.110	1.829	2.311	1,073	1,044	566	608	3,291	2,117	1.97	-0.23			205.83	224
7/8/2014 13:48	13	1.800	1.913	1.841	1.973	1,137	1,096	665	633	3,531	2,232	1.86	-0.34			212.68	231
7/8/2014 15:24	15	1.959	2.056	2.210	2.137	1,209	1,166	714	665	3,753	2,375	2.01	-0.19			221.15	241
7/8/2014 17:00	17	2.120	2.097	4.105	2.813	1,159	1,115	573	515	3,362	2,274	2.11	-0.09			215.18	234
7/8/2014 18:36	18	2.048	1.939	2.771	3.052	1,088	1,046	345	391	2,871	2,135	1.99	-0.21			206.88	225
7/8/2014 20:12	20	2.025	2.056	2.462	2.855	1,138	1,097	341	357	2,933	2,235	2.04	-0.16			212.85	231
7/8/2014 21:48	21	1.965	2.039	2.095	2.315	1,198	1,158	329	342	3,027	2,355	2.00	-0.20			219.99	239
7/8/2014 23:24	23	2.008	2.062	2.040	2.321	1,232	1,191	316	331	3,071	2,423	2.03	-0.17			224.03	244
7/9/2014 1:00	1	2.129	1.959	1.444	1.205	1,124	1,113	278	249	2,763	2,237	2.04	-0.16			212.95	232
7/9/2014 2:36	2	2.042	1.970	1.436	1.226	964	964	258	238	2,423	1,927	2.01	-0.19			194.56	212
7/9/2014 4:12	4	2.727	2.510	1.439	1.227	934	905	243	221	2,302	1,839	2.62	0.42			189.30	206
7/9/2014 5:48	5	3.315	3.277	2.102	1.908	927	889	237	229	2,282	1,816	3.30	1.10		40.61	187.98	204
7/9/2014 7:24	7	3.824	3.679	1.985	2.478	910	892	206	219	2,227	1,802	3.75	1.55		74.11	187.12	203
7/9/2014 9:00	9	2.721	3.886	1.374	3.109	836	1,161	238	402	2,638	1,997	3.30	1.10		43.51	198.70	216
7/9/2014 10:36	10	1.404	3.947	2.047	4.941	785	1,100	496	774	3,155	1,885	2.68	0.48			192.02	209
7/9/2014 12:12	12	1.607	3.182	1.653	4.599	834	1,082	548	686	3,150	1,916	2.39	0.19			193.92	211
7/9/2014 13:48	13	1.610	2.644	1.952	3.810	907	995	693	512	3,107	1,902	2.13	-0.07			193.08	210
7/9/2014 15:24	15	1.736	2.316	2.385	2.681	982	983	584	410	2,959	1,965	2.03	-0.17			196.81	214
7/9/2014 17:00	17	1.752	2.198	1.027	2.875	1,008	981	434	402	2,824	1,989	1.97	-0.23			198.20	216
7/9/2014 18:36	18	1.789	2.301	1.763	3.198	1,033	987	436	403	2,859	2,021	2.04	-0.16			200.11	218
7/9/2014 20:12	20	1.871	2.082	1.893	2.991	1,016	956	424	390	2,787	1,972	1.98	-0.22			197.21	214
7/9/2014 21:48	21	2.115	2.051	1.702	2.856	1,059	986	437	401	2,882	2,045	2.08	-0.12			201.55	219
7/9/2014 23:24	23	1.949	1.929	1.538	2.530	1,052	1,040	431	389	2,912	2,092	1.94	-0.26			204.37	222
7/10/2014 1:00	1	1.867	2.283	1.725	2.420	997	1,008	408	330	2,742	2,005	2.08	-0.12			199.15	217
7/10/2014 2:36	2	1.714	2.318	1.598	2.200	847	852	353	255	2,307	1,698	2.02	-0.18			180.96	197
7/10/2014 4:12	4	1.988	2.543	1.849	1.726	799	802	354	232	2,186	1,601	2.27	0.07			175.17	190
7/10/2014 5:48	5	2.715	3.349	2.579	2.453	806	805	356	232	2,198	1,611	3.03	0.83		19.63	175.78	191
7/10/2014 7:24	7	3.329	3.759	3.306	3.045	832	780	352	238	2,202	1,612	3.54	1.34		55.22	175.84	191
7/10/2014 9:00	9	2.848	2.789	3.113	2.808	817	727	327	236	2,108	1,545	2.82	0.62		4.66	171.83	187
7/10/2014 10:36	10	1.881	1.999	1.323	1.947	818	814	428	412	2,472	1,632	1.94	-0.26			177.04	193
7/10/2014 12:12	12	1.981	2.074	1.672	2.091	904	897	681	536	3,017	1,801	2.03	-0.17			187.04	203
7/10/2014 13:48	13	1.754	2.021	1.468	2.069	932	997	727	575	3,232	1,929	1.89	-0.31			194.68	212
7/10/2014 15:24	15	1.766	2.136	1.436	1.681	966	1,080	767	552	3,365	2,046	1.95	-0.25			201.59	219
7/10/2014 17:00	17	1.827	2.106	2.443	2.377	977	1,086	783	555	3,402	2,063	1.97	-0.23			202.65	220
7/10/2014 18:36	18	1.850	2.259	4.024	3.623	966	1,100	780	546	3,393	2,066	2.05	-0.15			202.81	221
7/10/2014 20:12	20	1.808	2.296	4.450	4.019	925	1,050	750	522	3,247	1,975	2.05	-0.15			197.41	215
7/10/2014 21:48	21	1.733	2.197	4.323	3.851	959	1,088	779	540	3,365	2,047	1.97	-0.23			201.66	219
7/10/2014 23:24	23	1.901	2.235	4.406	3.876	978	1,102	748	525	3,353	2,080	2.07	-0.13			203.63	221
7/11/2014 1:00	1	1.962	2.119	2.496	2.535	903	990	449	328	2,669	1,893	2.04	-0.16			192.51	209
7/11/2014 2:36	2	2.071	2.322	1.871	1.824	868	936	377	276	2,455	1,803	2.20	0.00			187.18	204
7/11/2014 4:12	4	3.492	3.290	2.221	2.380	860	906	346	264	2,377	1,766	3.39	1.19		46.92	185.01	201
7/11/2014 5:48	5	3.393	3.703	2.729	3.234	828	835	305	262	2,230	1,663	3.55	1.35		56.46	178.86	195
7/11/2014 7:24	7	3.836	3.877	3.241	3.380	838	807	325	259	2,229	1,645	3.86	1.66		77.82	177.81	193
7/11/2014 9:00	9	3.131	3.249	3.184	3.536	802	766	311	274	2,153	1,568	3.19	0.99		30.15	173.24	188
7/11/2014 10:36	10	1.962	2.160	1.788	1.863	832	843	452	372	2,499	1,675	2.06	-0.14			179.56	195
7/11/2014 12:12	12	1.954	2.043	2.222	2.699	936	946	740	617	3,239	1,881	2.00	-0.20			191.83	209
7/11/2014 13:48	13	1.862	2.147	2.204	2.089	940	985	735	560	3,221	1,925	2.00	-0.20			194.44	211
7/11/2014 15:24	15	1.927	2.127	2.432	2.169	970	1,012	583	468	3,033	1,982	2.03	-0.17			197.79	215
7/11/2014 17:00	17	1.942	2.156	2.389	2.244	994	1,034	495	401	2,925	2,028	2.05	-0.15			200.56	218
7/11/2014 18:36	18	1.950	2.234	3.014	2.900	962	993	475	384	2,815	1,955	2.09	-0.11			196.23	213
7/11/2014 20:12	20	1.968	2.100	2.899	2.843	938	963	461	372	2,734	1,902	2.03	-0.17			193.04	210
7/11/2014 21:48	21	1.904	2.014	2.867	2.710	963	991	471	382	2,807	1,954	1.96	-0.24			196.14	213
7/11/2014 23:24	23	1.960	2.141	3.186	2.876	986	1,016	472	382	2,855	2,002	2.05	-0.15			198.98	216
7/12/2014 1:00	1	1.883	2.116	2.360	2.203	932	959	371	292	2,554	1,892	2.00	-0.20			192.44	209
7/12/2014 2:36	2	1.871	2.165	2.200	1.948	916	938	358	282	2,494	1,854	2.02	-0.18			190.20	207
7/12/2014 4:12	4	2.840	2.756	2.794	2.434	929	926	363	287	2,506	1,855	2.80	0.60		3.61	190.30	207
7/12/2014 5:48	5	3.730	3.590	3.539	3.080	908	918	343	272	2,440	1,825	3.66	1.46		67.84	188.50	205
7/12/2014 7:24	7	3.965	4.134	3.221	3.435	853	883	288	256	2,279	1,736	4.05	1.85		94.16	183.18	199
7/12/2014 9:00	9	3.436	3.847	3.069	3.442	821	790	275	241	2,128	1,611	3.64	1.44		61.98	175.79	191
7/12/2014 10:36	10	2.418	2.351	2.248	2.237	828	800	320	272	2,219	1,627	2.38	0.18			176.75	192
7/12/2014 12:12	12	1.960	2.059	1.856	1.916	934	917	547	474	2,872	1,851	2.01	-0.19			190.03	207
7/12/2014 13:48	13	1.966	2.045	1.908	1.874	1,052	1,063	701	547	3,363	2,115	2.01	-0.19			205.69	224
7/12/2014 15:24	15	2.031	1.993	2.025	2.105	1,093	1,117	666	625	3,500	2,210	2.01	-0.19			211.35	230
7/12/2014 17:00	17	2.071	2.009	2.811	2.910	1,108	1,130	660	626	3,524	2,238	2.04	-0.16			213.04	232
7/12/2014 18:36	18	2.111	1.891	3.702	3.676	1,053	1,072	627	596	3,348	2,125	2.00	-0.20			206.32	224
7/12/2014 20:12	20	2.065	2.091	4.320	4.225	1,005	1,021	587	567	3,179	2,025	2.08	-0.12			200.39	218
7/12/2014 21:48	21	2.011	1.868	3.773	4.023	989	1,002	552	556	3,098	1,990	1.94	-0.26			198.29	216
7/12/2014 23:24	23	2.099	2.132	4.035	4.362	978	990	494	490	2,952	1,968	2.12	-0.08			196.99	214
7/13/2014 1:00	1	1.902	2.008	1.065	1.450	919	931	257	225	2,333	1,850	1.96	-0.24			189.99	207
7/13/2014 2:36	2	1.990	2.193	1.140	1.331	891	907	293	243	2,335	1,798	2.09	-0.11			186.91	203
7/13/2014 4:12	4	2.229	2.510	1.829	1.812	814	873	307	240	2,234	1,687	2.37	0.17			180.26	196
7/13/2014 5:48	5	2.875	3.136	2.362	2.407	813	873	307	240	2,233	1,686	3.01	0.81		18.21	180.24	196
7/13/2014 7:24	7	3.351	3.630	2.801	2.921	772	875	308	240	2,195	1,647	3.49	1.29		52.09	177.92	193
7/13/2014 9:00	9	3.030	3.770	2.534	3.160	741	843	306	230	2,120	1,584	3.40	1.20		44.76	174.17	189
7/13/2014 10:36	10	3.177	3.251	2.710	2.785	745	780	307	225	2,057	1,525	3.21	1.01		31.32	170.67	186
7/13/2014 12:12	12	2.076	2.169	2.089	2.346	787	782	358	283	2,209	1,568	2.12	-0.08			173.25	188
7/13/2014 13:48	13	1.960	2.062	1.331	1.626	918	925	537	495	2,875	1,843	2.01	-0.19			189.56	206
7/13/2014 15:24	15	1.976	1.890	1.341	1.860	972	1,002	611	570	3,155	1,973	1.93	-0.27			197.31	215
7/13/2014 17:00	17	1.994	1.962	2.053	2.378	1,063	1,121	703	654	3,541	2,184	1.98	-0.22			209.82	228
7/13/2014 18:36	18	2.100	1.906	3.223	3.271	1,013	1,067	672	624	3,375	2,079	2.00	-0.20			203.59	221
7/13/2014 20:12	20	2.173	1.806	3.904	3.950	1,006	1,059	668	622	3,355	2,065	1.99	-0.21			202.75	220
7/13/2014 21:48	21	2.211	1.814	3.743	3.911	1,008	1,061	671	625	3,364	2,069	2.01	-0.19			203.00	221
7/13/2014 23:24	23	2.123	1.818	3.877	3.984	1,057	1,112	626	583	3,378	2,169	1.97	-0.23			208.90	227
7/14/2014 1:00	1	2.310	1.795	0.727	1.163	963	1,021	310	295	2,589	1,983	2.05	-0.15			197.90	215
7/14/2014 2:36	2	2.249	1.959	1.214	1.968	854	946	367	315	2,483	1,800	2.10	-0.10			187.02	203
7/14/2014 4:12	4	2.859	2.615	1.866	2.007	810	900	359	265	2,334	1,710	2.74	0.54			181.67	198
7/14/2014 5:48	5	3.342	3.357	2.500	2.598	812	913	355	262	2,343	1,725	3.35	1.15		43.26	182.55	199
7/14/2014 7:24	7	3.965	3.973	2.373	2.814	807	950	313	224	2,293	1,757	3.97	1.77		88.94	184.43	201
7/14/2014 9:00	9	3.282	3.619	2.131	2.465	776	917	326	224	2,244	1,693	3.45	1.25		50.05	180.65	196
7/14/2014 10:36	10	1.775	2.335	1.508	1.535	836	908	463	338	2,545	1,745	2.05	-0.15			183.71	200
7/14/2014 12:12	12	1.971	2.077	1.538	1.673	951	964	591	510	3,016	1,915	2.02	-0.18			193.81	211
7/14/2014 13:48	13	2.060	2.658	1.698	1.833	1,045	1,081	702	599	3,427	2,126	2.36	0.16			206.36	224
7/14/2014 15:24	15	1.953	1.993	1.726	1.774	1,041	1,087	706	599	3,433	2,128	1.97	-0.23			206.47	225
7/14/2014 17:00	17	1.950	1.919	2.772	1.974	1,056	1,105	720	610	3,491	2,161	1.93	-0.27			208.44	227
7/14/2014 18:36	18	2.063	1.929	3.920	3.031	1,026	1,072	701	593	3,393	2,098	2.00	-0.20			204.70	223
7/14/2014 20:12	20	2.244	1.722	4.065	3.374	964	1,006	661	558	3,189	1,970	1.98	-0.22			197.10	214
7/14/2014 21:48	21	2.144	1.805	4.335	3.707	1,015	1,058	696	585	3,355	2,073	1.97	-0.23			203.23	221
7/14/2014 23:24	23	2.199	1.811	4.277	3.537	1,008	1,052	653	540	3,253	2,060	2.01	-0.19			202.44	220
7/15/2014 1:00	1	2.307	1.766	1.910	1.376	911	964	361	292	2,527	1,875	2.04	-0.16			191.43	208
7/15/2014 2:36	2	2.418	1.752	1.597	1.715	814	885	348	296	2,343	1,699	2.09	-0.11			181.00	197
7/15/2014 4:12	4	3.175	3.192	2.326	2.603	805	891	349	283	2,329	1,697	3.18	0.98		31.00	180.87	197
7/15/2014 5:48	5	4.180	4.007	2.971	3.514	807	894	336	281	2,319	1,702	4.09	1.89		96.25	181.18	197
7/15/2014 7:24	7	4.192	4.081	2.934	3.879	810	897	315	279	2,300	1,707	4.14	1.94		99.48	181.46	197
7/15/2014 9:00	9	3.469	3.472	2.575	3.539	786	874	340	271	2,271	1,660	3.47	1.27		50.91	178.70	194
7/15/2014 10:36	10	1.907	2.244	1.512	1.515	828	897	479	350	2,554	1,725	2.08	-0.12			182.54	199
7/15/2014 12:12	12	2.055	2.097	1.871	1.853	964	971	632	533	3,100	1,935	2.08	-0.12			195.01	212
7/15/2014 13:48	13	1.962	1.913	1.714	1.661	999	1,021	658	556	3,235	2,021	1.94	-0.26			200.12	218
7/15/2014 15:24	15	2.043	2.086	2.180	1.805	1,007	1,034	655	562	3,258	2,041	2.06	-0.14			201.30	219
7/15/2014 17:00	17	2.070	2.052	3.219	2.521	1,013	1,039	645	567	3,265	2,052	2.06	-0.14			202.00	220
7/15/2014 18:36	18	2.146	2.070	3.820	3.310	971	995	618	544	3,128	1,966	2.11	-0.09			196.87	214
7/15/2014 20:12	20	2.143	1.828	3.869	3.580	928	949	590	520	2,987	1,877	1.99	-0.21			191.56	208
7/15/2014 21:48	21	2.175	1.832	3.856	3.566	922	941	587	516	2,967	1,863	2.00	-0.20			190.76	207
7/15/2014 23:24	23	2.185	1.812	3.920	3.536	964	995	573	513	3,045	1,960	2.00	-0.20			196.48	214
7/16/2014 1:00	1	1.952	1.967	1.645	2.000	878	966	334	285	2,462	1,844	1.96	-0.24			189.60	206
7/16/2014 2:36	2	2.344	2.397	1.481	1.319	827	905	313	248	2,293	1,732	2.37	0.17			182.97	199
7/16/2014 4:12	4	3.203	3.087	1.433	2.304	799	916	289	245	2,248	1,715	3.15	0.95		28.44	181.94	198
7/16/2014 5:48	5	3.908	3.836	2.501	2.576	785	910	318	217	2,229	1,695	3.87	1.67		80.20	180.76	197
7/16/2014 7:24	7	3.899	4.149	2.908	2.924	765	900	319	217	2,202	1,666	4.02	1.82		90.18	179.02	195
7/16/2014 9:00	9	4.569	4.660	4.230	4.271	1,013	1,202	488	692	3,395	2,215	4.61	2.41		156.06	211.63	230
7/16/2014 10:36	10	3.426	3.631	3.744	4.366	805	940	384	425	2,555	1,746	3.53	1.33		56.58	183.77	200
7/16/2014 12:12	12	2.029	2.711	1.525	1.300	837	842	361	266	2,308	1,680	2.37	0.17			179.86	196
7/16/2014 13:48	13	1.768	2.171	1.631	1.829	845	844	484	423	2,596	1,689	1.97	-0.23			180.38	196
7/16/2014 15:24	15	1.800	2.032	1.861	2.106	860	859	483	409	2,611	1,719	1.92	-0.28			182.20	198
7/16/2014 17:00	17	1.956	1.931	2.137	1.904	905	919	447	306	2,577	1,823	1.94	-0.26			188.40	205

7/16/2014 18:36	18	2.023	2.006	1.800	2.155	956	944	421	344	2,665	1,900	2.01	-0.19			192.93	210
7/16/2014 20:12	20	1.927	2.036	2.115	2.083	965	917	383	302	2,566	1,882	1.98	-0.22			191.85	209
7/16/2014 21:48	21	1.908	2.088	1.735	2.012	1,000	951	365	272	2,589	1,951	2.00	-0.20			195.98	213
7/16/2014 23:24	23	1.977	1.956	2.227	2.090	1,040	937	386	293	2,656	1,977	1.97	-0.23			197.54	215
7/17/2014 1:00	1	1.977	2.152	2.193	1.745	1,029	971	340	242	2,582	2,000	2.06	-0.14			198.91	216
7/17/2014 2:36	2	2.008	2.231	1.570	1.655	922	867	287	208	2,284	1,789	2.12	-0.08			186.34	203
7/17/2014 4:12	4	2.758	3.117	2.201	1.889	900	876	281	182	2,239	1,777	2.94	0.74		13.77	185.62	202
7/17/2014 5:48	5	3.419	3.497	3.027	2.798	922	899	280	185	2,285	1,821	3.46	1.26		52.69	188.25	205
7/17/2014 7:24	7	4.206	4.177	3.343	3.486	929	908	259	185	2,281	1,837	4.19	1.99		107.89	189.22	206
7/17/2014 9:00	9	3.670	3.996	2.995	3.152	910	890	251	178	2,229	1,800	3.83	1.63		80.07	187.01	203
7/17/2014 10:36	10	2.685	3.213	1.757	2.068	875	854	275	190	2,195	1,730	2.95	0.75		14.39	182.82	199
7/17/2014 12:12	12	1.755	2.211	0.842	1.329	873	844	418	360	2,495	1,717	1.98	-0.22			182.05	198
7/17/2014 13:48	13	1.804	2.246	1.278	1.730	946	908	538	458	2,850	1,854	2.03	-0.17			190.20	207
7/17/2014 15:24	15	1.806	2.184	1.647	1.723	979	925	594	477	2,974	1,903	1.99	-0.21			193.14	210
7/17/2014 17:00	17	1.968	2.007	2.094	2.072	1,039	916	515	487	2,958	1,955	1.99	-0.21			196.24	213
7/17/2014 18:36	18	2.132	2.096	2.260	2.177	1,057	932	364	375	2,728	1,990	2.11	-0.09			198.26	216
7/17/2014 20:12	20	1.993	1.974	1.936	1.963	1,022	898	350	345	2,614	1,920	1.98	-0.22			194.13	211
7/17/2014 21:48	21	2.042	2.071	2.057	1.699	992	910	374	310	2,586	1,903	2.06	-0.14			193.09	210
7/17/2014 23:24	23	1.861	2.121	1.872	2.216	1,058	968	358	371	2,756	2,027	1.99	-0.21			200.47	218
7/18/2014 1:00	1	2.025	2.059	1.470	1.715	1,002	911	302	280	2,495	1,913	2.04	-0.16			193.71	211
7/18/2014 2:36	2	2.552	2.531	2.121	2.140	986	903	285	274	2,448	1,889	2.54	0.34			192.30	209
7/18/2014 4:12	4	3.757	3.696	2.856	3.206	1,017	919	268	268	2,472	1,936	3.73	1.53		75.36	195.07	212
7/18/2014 5:48	5	4.744	4.549	3.840	4.081	1,032	933	271	271	2,507	1,965	4.65	2.45		147.63	196.82	214
7/18/2014 7:24	7	4.780	4.861	4.113	4.480	991	900	245	251	2,387	1,891	4.82	2.62		157.55	192.42	209
7/18/2014 9:00	9	3.761	4.057	3.306	3.812	931	863	230	234	2,257	1,794	3.91	1.71		85.54	186.64	203
7/18/2014 10:36	10	2.539	2.948	1.375	1.917	879	812	292	247	2,230	1,692	2.74	0.54			180.57	196
7/18/2014 12:12	12	1.895	2.183	1.202	1.125	862	792	444	330	2,428	1,654	2.04	-0.16			178.31	194
7/18/2014 13:48	13	1.853	2.012	1.778	1.432	903	842	529	399	2,674	1,746	1.93	-0.27			183.77	200
7/18/2014 15:24	15	1.828	2.072	1.965	1.392	1,019	964	573	460	3,016	1,983	1.95	-0.25			197.85	215
7/18/2014 17:00	17	2.132	2.045	2.272	2.327	1,032	924	431	477	2,864	1,956	2.09	-0.11			196.26	213
7/18/2014 18:36	18	2.054	1.998	2.307	2.233	1,015	911	335	357	2,618	1,926	2.03	-0.17			194.48	212
7/18/2014 20:12	20	1.984	2.097	1.699	2.131	1,010	935	301	330	2,575	1,944	2.04	-0.16			195.58	213
7/18/2014 21:48	21	1.790	2.003	2.075	1.946	968	899	371	315	2,554	1,867	1.90	-0.30			190.98	208
7/18/2014 23:24	23	1.962	2.260	2.391	2.009	1,033	950	307	303	2,593	1,983	2.11	-0.09			197.89	215
7/19/2014 1:00	1	2.251	2.345	1.382	1.610	1,052	921	248	267	2,488	1,973	2.30	0.10			197.27	215
7/19/2014 2:36	2	2.758	2.460	1.919	2.208	1,028	890	255	275	2,449	1,919	2.61	0.41			194.06	211
7/19/2014 4:12	4	3.346	3.264	2.761	2.996	1,039	899	256	278	2,472	1,938	3.31	1.11		42.85	195.21	212
7/19/2014 5:48	5	4.341	4.097	3.542	3.905	1,025	908	250	274	2,457	1,933	4.22	2.02		113.22	194.89	212
7/19/2014 7:24	7	4.368	4.564	3.487	4.149	927	902	233	244	2,307	1,829	4.47	2.27		128.08	188.73	205
7/19/2014 9:00	9	4.066	4.584	3.365	3.842	868	868	233	218	2,187	1,736	4.32	2.12		114.10	183.19	199
7/19/2014 10:36	10	2.856	3.843	2.545	2.956	851	853	228	214	2,145	1,703	3.35	1.15		43.00	181.26	197
7/19/2014 12:12	12	1.806	2.644	0.976	1.250	806	807	332	284	2,230	1,613	2.22	0.02			175.90	191
7/19/2014 13:48	13	1.679	2.292	0.995	1.410	902	906	406	377	2,590	1,807	1.99	-0.21			187.45	204
7/19/2014 15:24	15	1.688	2.204	1.061	1.410	1,006	942	469	451	2,868	1,948	1.95	-0.25			195.80	213
7/19/2014 17:00	17	2.039	2.010	2.228	2.191	1,110	977	515	484	3,087	2,088	2.02	-0.18			204.09	222
7/19/2014 18:36	18	2.071	1.973	2.068	2.089	1,077	948	373	382	2,781	2,025	2.02	-0.18			200.38	218
7/19/2014 20:12	20	1.926	2.023	1.820	1.959	1,019	952	332	373	2,676	1,972	1.97	-0.23			197.20	214
7/19/2014 21:48	21	2.052	2.121	2.187	1.985	1,050	920	307	285	2,562	1,970	2.09	-0.11			197.11	214
7/19/2014 23:24	23	2.013	1.909	1.934	1.789	1,038	897	295	321	2,550	1,934	1.96	-0.24			194.97	212
7/20/2014 1:00	1	2.361	2.105	2.258	2.514	1,053	909	298	339	2,600	1,963	2.23	0.03			196.67	214
7/20/2014 2:36	2	2.987	2.621	3.020	3.327	1,053	908	297	338	2,597	1,961	2.80	0.60		4.19	196.56	214
7/20/2014 4:12	4	3.579	3.364	3.819	4.112	1,058	912	298	339	2,606	1,969	3.47	1.27		56.21	197.06	214
7/20/2014 5:48	5	4.493	4.091	4.494	4.699	1,058	912	297	339	2,607	1,970	4.29	2.09		120.20	197.11	214
7/20/2014 7:24	7	4.757	4.474	4.883	4.985	1,024	897	279	319	2,518	1,921	4.62	2.42		143.24	194.16	211
7/20/2014 9:00	9	4.060	4.319	3.466	3.892	835	837	192	201	2,065	1,671	4.19	1.99		102.11	179.36	195
7/20/2014 10:36	10	3.295	3.939	3.655	3.239	782	787	315	185	2,069	1,569	3.62	1.42		59.42	173.28	188
7/20/2014 12:12	12	2.380	2.732	3.131	2.249	851	749	295	286	2,181	1,600	2.56	0.36			175.12	190
7/20/2014 13:48	13	1.828	2.048	1.892	1.544	976	850	484	353	2,663	1,826	1.94	-0.26			188.57	205
7/20/2014 15:24	15	1.967	1.982	1.974	2.030	1,100	949	559	540	3,148	2,049	1.97	-0.23			201.78	219
7/20/2014 17:00	17	1.936	1.990	1.969	1.822	1,207	1,043	500	528	3,277	2,250	1.96	-0.24			213.71	232
7/20/2014 18:36	18	2.077	1.993	2.016	2.064	1,184	1,019	389	454	3,046	2,203	2.04	-0.16			210.97	229
7/20/2014 20:12	20	2.097	2.082	2.011	2.104	1,241	1,068	314	367	2,990	2,309	2.09	-0.11			217.23	236
7/20/2014 21:48	21	2.059	2.028	2.056	1.866	1,214	1,045	306	369	2,934	2,259	2.04	-0.16			214.28	233
7/20/2014 23:24	23	1.980	1.884	1.897	2.048	1,227	1,058	309	378	2,972	2,285	1.93	-0.27			215.81	235
7/21/2014 1:00	1	3.675	1.733	2.668	2.035	1,069	917	268	327	2,581	1,985	2.70	0.50			198.02	215
7/21/2014 2:36	2	2.597	2.810	2.849	3.282	1,070	919	269	329	2,587	1,989	2.70	0.50			198.24	216
7/21/2014 4:12	4	1.721	4.056	2.447	4.414	1,078	927	271	332	2,608	2,005	2.89	0.69		10.90	199.18	217
7/21/2014 5:48	5	1.790	4.807	2.501	4.996	1,088	937	273	335	2,633	2,024	3.30	1.10		43.46	200.33	218
7/21/2014 7:24	7	2.029	4.969	2.672	4.954	1,077	932	270	324	2,603	2,009	3.50	1.30		59.07	199.40	217
7/21/2014 9:00	9	1.831	4.614	2.236	4.616	1,024	907	268	254	2,454	1,932	3.22	1.02		36.42	194.83	212
7/21/2014 10:36	10	3.298	2.355	3.112	1.773	994	851	259	298	2,402	1,845	2.83	0.63		5.73	189.66	206
7/21/2014 12:12	12	2.237	1.726	2.693	1.680	985	939	216	549	2,689	1,924	1.98	-0.22			194.36	211
7/21/2014 13:48	13	2.597	2.102	1.947	2.234	1,286	1,270	243	707	3,506	2,556	2.35	0.15			231.91	252
7/21/2014 15:24	15	1.275	2.726	1.162	1.603	1,248	1,223	562	490	3,523	2,471	2.00	-0.20			226.86	247
7/21/2014 17:00	17	1.845	2.122	1.717	1.922	1,241	1,063	710	601	3,615	2,303	1.98	-0.22			216.90	236
7/21/2014 18:36	18	2.073	1.978	2.183	2.101	1,215	1,039	583	591	3,428	2,254	2.03	-0.17			213.98	233
7/21/2014 20:12	20	2.000	2.032	2.180	2.547	1,142	1,041	366	434	2,982	2,183	2.02	-0.18			209.73	228
7/21/2014 21:48	21	1.885	2.054	2.093	1.977	1,161	1,018	325	342	2,847	2,180	1.97	-0.23			209.55	228
7/21/2014 23:24	23	1.969	1.965	2.115	2.051	1,186	1,019	308	340	2,853	2,205	1.97	-0.23			211.07	230
7/22/2014 1:00	1	2.161	1.997	1.798	2.073	1,123	960	272	314	2,670	2,084	2.08	-0.12			203.85	222
7/22/2014 2:36	2	2.265	2.185	2.275	2.461	1,047	891	255	292	2,484	1,938	2.23	0.03			195.19	212
7/22/2014 4:12	4	3.529	3.113	2.956	3.410	1,048	891	255	292	2,485	1,939	3.32	1.12		44.11	195.25	212
7/22/2014 5:48	5	3.993	3.819	3.639	4.050	1,055	897	255	294	2,501	1,951	3.91	1.71		89.62	196.00	213
7/22/2014 7:24	7	4.074	4.122	3.965	4.395	1,040	885	251	288	2,464	1,925	4.10	1.90		103.64	194.40	211
7/22/2014 9:00	9	2.662	3.069	3.562	3.934	890	794	274	286	2,244	1,684	2.87	0.67		8.22	180.13	196
7/22/2014 10:36	10	1.962	2.175	2.289	2.301	913	809	331	307	2,359	1,721	2.07	-0.13			182.32	198
7/22/2014 12:12	12	1.978	1.933	1.918	1.979	938	884	567	517	2,905	1,822	1.96	-0.24			188.33	205
7/22/2014 13:48	13	1.954	1.988	2.043	2.214	1,016	979	645	591	3,231	1,995	1.97	-0.23			198.57	216
7/22/2014 15:24	15	1.963	2.024	2.134	2.131	1,033	1,024	615	577	3,249	2,057	1.99	-0.21			202.28	220
7/22/2014 17:00	17	2.108	2.082	2.166	1.935	1,034	1,037	429	440	2,941	2,072	2.10	-0.10			203.14	221
7/22/2014 18:36	18	1.990	2.036	2.131	2.206	997	997	331	354	2,680	1,995	2.01	-0.19			198.58	216
7/22/2014 20:12	20	1.886	2.083	1.964	1.927	1,008	1,011	379	352	2,749	2,019	1.98	-0.22			199.98	217
7/22/2014 21:48	21	1.969	2.109	2.101	2.068	996	982	361	355	2,694	1,978	2.04	-0.16			197.59	215
7/22/2014 23:24	23	1.952	1.980	2.084	2.254	1,070	1,049	364	392	2,875	2,118	1.97	-0.23			205.90	224
7/23/2014 1:00	1	2.050	2.060	2.100	2.580	1,004	980	323	363	2,670	1,984	2.06	-0.14			197.93	215
7/23/2014 2:36	2	2.192	2.316	2.453	2.910	922	894	297	333	2,446	1,816	2.25	0.05			187.96	204
7/23/2014 4:12	4	3.192	3.290	3.273	3.830	914	885	293	329	2,421	1,798	3.24	1.04		36.33	186.90	203
7/23/2014 5:48	5	3.809	3.992	3.872	4.504	913	883	293	328	2,418	1,796	3.90	1.70		84.98	186.78	203
7/23/2014 7:24	7	4.150	4.299	4.245	4.833	916	888	293	330	2,427	1,804	4.22	2.02		109.20	187.25	204
7/23/2014 9:00	9	3.409	3.669	3.774	4.582	896	853	262	309	2,320	1,750	3.54	1.34		57.41	184.00	200
7/23/2014 10:36	10	3.359	2.734	2.855	2.733	851	780	294	261	2,187	1,631	3.05	0.85		20.77	176.98	192
7/23/2014 12:12	12	2.785	2.556	2.886	2.138	714	755	285	376	2,130	1,469	2.67	0.47			167.33	182
7/23/2014 13:48	13	1.763	2.081	2.304	2.278	801	750	386	417	2,354	1,551	1.92	-0.28			172.22	187
7/23/2014 15:24	15	1.696	2.315	1.818	2.501	1,063	957	604	429	3,053	2,020	2.01	-0.19			200.10	218
7/23/2014 17:00	17	2.156	2.000	1.819	2.144	1,173	884	768	331	3,156	2,058	2.08	-0.12			202.30	220
7/23/2014 18:36	18	1.925	1.977	1.931	1.834	989	959	652	316	2,917	1,949	1.95	-0.25			195.82	213
7/23/2014 20:12	20	1.904	1.991	2.126	2.052	1,017	991	399	315	2,722	2,008	1.95	-0.25			199.37	217
7/23/2014 21:48	21	2.030	1.988	1.904	1.974	1,026	1,000	361	336	2,724	2,027	2.01	-0.19			200.46	218
7/23/2014 23:24	23	2.095	2.013	2.212	2.070	1,081	1,073	378	355	2,886	2,154	2.05	-0.15			208.02	226
7/24/2014 1:00	1	2.039	1.917	1.656	2.207	990	980	283	308	2,561	1,970	1.98	-0.22			197.11	214
7/24/2014 2:36	2	2.306	2.318	1.789	1.756	938	905	236	235	2,314	1,843	2.31	0.11			189.56	206
7/24/2014 4:12	4	3.345	3.118	2.086	2.334	922	864	212	221	2,219	1,786	3.23	1.03		35.43	186.17	202
7/24/2014 5:48	5	4.049	3.882	2.803	2.961	927	868	212	221	2,228	1,795	3.97	1.77		89.73	186.68	203
7/24/2014 7:24	7	4.626	4.589	3.535	3.652	932	873	213	222	2,240	1,806	4.61	2.41		137.60	187.33	204
7/24/2014 9:00	9	4.166	4.132	3.433	3.607	916	854	209	218	2,199	1,771	4.15	1.95		102.51	185.27	201
7/24/2014 10:36	10	2.698	2.836	2.062	2.337	869	812	229	224	2,135	1,681	2.77	0.57		1.21	179.93	196
7/24/2014 12:12	12	1.932	2.008	1.647	1.480	902	863	548	464	2,776	1,764	1.97	-0.23			184.89	201
7/24/2014 13:48	13	1.981	1.930	2.089	1.716	961	920	618	523	3,022	1,881	1.96	-0.24			191.83	209
7/24/2014 15:24	15	1.998	1.948	2.246	1.962	966	945	530	545	2,986	1,910	1.97	-0.23			193.55	210
7/24/2014 17:00	17	1.915	2.049	2.242	2.302	978	971	405	450	2,803	1,948	1.98	-0.22			195.82	213
7/24/2014 18:36	18	1.977	2.002	1.992	2.055	959	951	313	330	2,553	1,910	1.99	-0.21			193.51	210
7/24/2014 20:12	20	2.002	2.075	2.112	2.176	970	961	336	311	2,578	1,931	2.04	-0.16			194.76	212
7/24/2014 21:48	21	1.957	2.045	2.129	2.153	997	972	335	318	2,622	1,969	2.00	-0.20			197.02	214
7/24/2014 23:24	23	2.022	1.985	2.186	2.198	1,019	982	312	319	2,632	2,000	2.00	-0.20			198.91	216
7/25/2014 1:00	1	2.001	2.059	2.107	2.208	1,015	978	296	301	2,590	1,993	2.03	-0.17			198.45	216
7/25/2014 2:36	2	2.675	2.756	2.494	2.400	1,011	974	265	268	2,518	1,984	2.72	0.52			197.96	215
7/25/2014 4:12	4	3.714	4.025	3.574	3.402	1,033	981	253	264	2,530	2,014	3.87	1.67		88.41	199.70	217
7/25/2014 5:48	5	4.406	4.819	3.913	3.932	1,073	984	221	253	2,530	2,057	4.61	2.41		148.98	202.24	220
7/25/2014 7:24	7	4.480	4.599	4.028	4.209	1,067	884	194	246	2,391	1,951	4.54	2.34		138.69	195.96	213

7/25/2014 9:00	9	3.610	3.594	3.303	3.425	1,022	832	185	232	2,270	1,854	3.60	1.40		64.07	190.19	207
7/25/2014 10:36	10	2.316	2.328	2.153	2.026	924	800	347	321	2,392	1,724	2.32	0.12			182.51	198
7/25/2014 12:12	12	2.067	2.002	2.172	2.194	979	850	465	478	2,772	1,829	2.03	-0.17			188.73	205
7/25/2014 13:48	13	1.900	2.169	2.011	2.331	1,025	980	525	606	3,137	2,006	2.03	-0.17			199.22	217
7/25/2014 15:24	15	1.932	2.203	2.248	2.297	1,026	974	491	503	2,995	2,001	2.07	-0.13			198.92	216
7/25/2014 17:00	17	2.046	1.900	2.608	2.474	1,120	968	419	474	2,981	2,088	1.97	-0.23			204.10	222
7/25/2014 18:36	18	1.948	1.943	2.103	2.136	1,060	958	280	341	2,639	2,018	1.95	-0.25			199.96	217
7/25/2014 20:12	20	2.055	2.099	2.200	2.129	1,089	987	294	306	2,676	2,076	2.08	-0.12			203.37	221
7/25/2014 21:48	21	1.953	2.023	1.953	2.037	1,056	955	296	320	2,627	2,010	1.99	-0.21			199.50	217
7/25/2014 23:24	23	2.007	2.102	2.154	2.103	1,100	998	301	320	2,719	2,098	2.05	-0.15			204.72	223
7/26/2014 1:00	1	2.032	2.156	1.616	2.015	1,031	934	244	286	2,495	1,965	2.09	-0.11			196.80	214
7/26/2014 2:36	2	2.373	2.636	2.096	2.583	1,039	938	243	286	2,506	1,977	2.50	0.30			197.51	215
7/26/2014 4:12	4	3.362	3.802	2.797	3.205	1,070	937	217	260	2,484	2,007	3.58	1.38		65.53	199.28	217
7/26/2014 5:48	5	3.917	4.624	3.572	3.907	1,076	941	218	261	2,496	2,017	4.27	2.07		120.23	199.91	217
7/26/2014 7:24	7	4.263	4.905	4.033	4.420	1,067	909	219	264	2,460	1,976	4.58	2.38		143.22	197.47	215
7/26/2014 9:00	9	3.957	4.388	4.093	4.298	1,004	823	209	252	2,288	1,827	4.17	1.97		106.12	188.63	205
7/26/2014 10:36	10	3.329	3.302	3.386	3.667	967	788	200	236	2,190	1,755	3.32	1.12		41.20	184.32	200
7/26/2014 12:12	12	2.133	2.045	1.993	1.887	948	810	365	350	2,473	1,758	2.09	-0.11			184.54	201
7/26/2014 13:48	13	2.052	1.997	1.807	1.764	1,112	951	471	488	3,023	2,064	2.02	-0.18			202.67	220
7/26/2014 15:24	15	1.943	1.902	2.080	2.084	1,146	1,019	480	554	3,199	2,165	1.92	-0.28			208.69	227
7/26/2014 17:00	17	2.083	1.918	2.131	2.282	1,176	1,031	355	450	3,012	2,207	2.00	-0.20			211.17	230
7/26/2014 18:36	18	2.106	2.024	2.212	2.172	1,162	1,045	302	355	2,865	2,207	2.07	-0.13			211.20	230
7/26/2014 20:12	20	2.072	2.057	1.888	2.021	1,079	982	255	310	2,625	2,061	2.06	-0.14			202.49	220
7/26/2014 21:48	21	2.004	2.082	1.872	2.221	1,112	1,014	284	314	2,724	2,126	2.04	-0.16			206.35	224
7/26/2014 23:24	23	2.071	2.059	2.124	2.129	1,102	1,004	274	288	2,668	2,106	2.06	-0.14			205.19	223
7/27/2014 1:00	1	2.026	1.909	1.601	1.405	1,020	893	209	240	2,362	1,913	1.97	-0.23			193.69	211
7/27/2014 2:36	2	2.400	2.401	1.685	1.784	994	898	199	233	2,324	1,892	2.40	0.20			192.46	209
7/27/2014 4:12	4	2.653	2.754	2.108	1.948	959	817	196	219	2,191	1,776	2.70	0.50			185.59	202
7/27/2014 5:48	5	3.124	3.157	2.356	2.310	952	809	178	217	2,157	1,761	3.14	0.94		28.53	184.71	201
7/27/2014 7:24	7	3.373	3.372	2.476	2.646	938	797	185	219	2,139	1,735	3.37	1.17		45.07	183.12	199
7/27/2014 9:00	9	3.376	3.237	3.164	3.143	898	761	229	239	2,127	1,659	3.31	1.11		39.31	178.62	194
7/27/2014 10:36	10	3.088	2.871	3.262	3.116	883	773	227	237	2,121	1,656	2.98	0.78		16.19	178.45	194
7/27/2014 12:12	12	2.208	2.371	2.349	2.214	868	781	255	248	2,152	1,649	2.29	0.09			178.02	194
7/27/2014 13:48	13	1.990	1.929	1.597	1.698	1,002	923	473	463	2,861	1,925	1.96	-0.24			194.43	211
7/27/2014 15:24	15	1.911	1.922	1.647	1.683	1,120	1,093	569	532	3,315	2,214	1.92	-0.28			211.57	230
7/27/2014 17:00	17	2.044	2.088	2.184	2.025	1,193	1,168	509	555	3,425	2,361	2.07	-0.13			220.32	240
7/27/2014 18:36	18	1.979	1.935	2.077	2.105	1,130	1,106	334	368	2,938	2,236	1.96	-0.24			212.91	232
7/27/2014 20:12	20	2.044	1.928	1.992	2.139	1,086	1,061	293	309	2,749	2,148	1.99	-0.21			207.66	226
7/27/2014 21:48	21	2.124	1.971	2.077	2.030	1,144	1,120	333	324	2,921	2,265	2.05	-0.15			214.60	233
7/27/2014 23:24	23	2.147	1.946	2.111	2.188	1,146	1,134	295	315	2,889	2,279	2.05	-0.15			215.47	234
7/28/2014 1:00	1	2.129	1.882	1.378	1.508	1,032	1,031	250	258	2,571	2,063	2.01	-0.19			202.63	220
7/28/2014 2:36	2	2.148	1.919	1.376	1.363	922	919	243	247	2,332	1,841	2.03	-0.17			189.46	206
7/28/2014 4:12	4	2.927	3.506	2.848	2.721	1,047	1,086	414	305	2,851	2,133	3.22	1.02		38.17	206.77	225
7/28/2014 5:48	5	4.501	4.965	4.996	4.749	1,156	1,201	493	349	3,199	2,357	4.73	2.53		172.58	220.09	239
7/28/2014 7:24	7	4.490	4.490	4.983	4.951	1,053	1,087	458	322	2,920	2,140	4.49	2.29		142.56	207.20	225
7/28/2014 9:00	9	2.512	3.032	4.240	3.347	797	809	353	248	2,207	1,606	2.77	0.57		1.53	175.47	191
7/28/2014 10:36	10	1.763	2.180	2.877	1.881	915	942	403	293	2,554	1,857	1.97	-0.23			190.42	207
7/28/2014 12:12	12	1.823	2.233	1.950	1.874	980	1,016	530	532	3,057	1,996	2.03	-0.17			198.62	216
7/28/2014 13:48	13	1.833	2.278	2.070	2.315	1,037	1,076	611	578	3,301	2,112	2.06	-0.14			205.56	224
7/28/2014 15:24	15	1.720	2.152	1.671	1.634	872	897	555	473	2,796	1,769	1.94	-0.26			185.13	201
7/28/2014 17:00	17	1.862	2.133	1.795	1.763	894	922	573	489	2,878	1,816	2.00	-0.20			187.93	204
7/28/2014 18:36	18	1.869	2.165	2.602	1.939	888	916	573	489	2,865	1,804	2.02	-0.18			187.22	204
7/28/2014 20:12	20	1.924	2.144	3.110	2.328	891	921	577	493	2,882	1,812	2.03	-0.17			187.70	204
7/28/2014 21:48	21	1.926	2.197	3.371	2.685	905	937	588	502	2,933	1,842	2.06	-0.14			189.52	206
7/28/2014 23:24	23	1.921	2.088	3.363	2.729	924	958	538	485	2,905	1,883	2.00	-0.20			191.90	209
7/29/2014 1:00	1	1.992	2.144	0.953	1.677	900	933	303	339	2,475	1,833	2.07	-0.13			188.97	206
7/29/2014 2:36	2	2.187	2.250	1.595	1.483	919	881	291	269	2,360	1,801	2.22	0.02			187.03	203
7/29/2014 4:12	4	3.626	3.080	2.415	2.381	938	874	251	257	2,321	1,812	3.35	1.15		44.76	187.73	204
7/29/2014 5:48	5	4.224	3.923	3.183	3.377	941	905	247	254	2,348	1,846	4.07	1.87		99.31	189.73	206
7/29/2014 7:24	7	4.458	4.442	3.357	3.627	951	939	223	233	2,346	1,890	4.45	2.25		129.31	192.33	209
7/29/2014 9:00	9	3.618	4.055	2.890	3.087	922	911	214	222	2,269	1,834	3.84	1.64		81.20	189.00	206
7/29/2014 10:36	10	2.442	2.820	2.195	1.839	850	838	405	354	2,448	1,688	2.63	0.43			180.37	196
7/29/2014 12:12	12	1.942	2.152	1.940	2.411	859	857	553	551	2,819	1,716	2.05	-0.15			182.01	198
7/29/2014 13:48	13	1.977	2.016	2.030	2.284	861	861	597	546	2,865	1,722	2.00	-0.20			182.34	198
7/29/2014 15:24	15	1.905	1.967	2.304	1.980	857	868	597	506	2,828	1,725	1.94	-0.26			182.54	199
7/29/2014 17:00	17	1.895	1.986	3.174	2.037	865	877	608	509	2,859	1,743	1.94	-0.26			183.59	200
7/29/2014 18:36	18	2.018	1.983	4.336	2.690	870	881	616	510	2,877	1,751	2.00	-0.20			184.09	200
7/29/2014 20:12	20	2.045	2.142	4.978	3.490	882	894	629	519	2,924	1,776	2.09	-0.11			185.59	202
7/29/2014 21:48	21	2.013	2.105	4.978	3.696	895	908	641	528	2,972	1,803	2.06	-0.14			187.20	204
7/29/2014 23:24	23	2.015	1.983	4.629	3.528	923	940	550	483	2,896	1,863	2.00	-0.20			190.73	207
7/30/2014 1:00	1	2.312	2.406	2.453	2.291	977	989	294	314	2,575	1,967	2.36	0.16			196.89	214
7/30/2014 2:36	2	3.172	3.001	2.012	1.995	968	977	212	246	2,404	1,945	3.09	0.89		26.03	195.61	213
7/30/2014 4:12	4	3.216	3.815	2.191	2.402	835	956	204	212	2,207	1,791	3.52	1.32		56.43	186.45	203
7/30/2014 5:48	5	3.689	4.362	2.674	3.038	847	961	214	213	2,234	1,807	4.03	1.83		94.54	187.44	204
7/30/2014 7:24	7	4.178	4.616	3.529	3.310	873	963	239	212	2,287	1,836	4.40	2.20		123.18	189.13	206
7/30/2014 9:00	9	4.200	4.756	4.222	3.906	1,200	1,316	315	282	3,113	2,516	4.48	2.28		156.85	229.54	250
7/30/2014 10:36	10	3.826	3.953	3.979	3.681	1,041	1,113	294	263	2,712	2,155	3.89	1.69		93.75	208.08	226
7/30/2014 12:12	12	1.916	2.120	1.708	1.934	860	831	488	479	2,658	1,691	2.02	-0.18			180.51	196
7/30/2014 13:48	13	1.902	2.163	2.187	2.133	940	913	586	538	2,977	1,853	2.03	-0.17			190.17	207
7/30/2014 15:24	15	1.907	2.079	2.019	2.133	959	916	485	517	2,877	1,876	1.99	-0.21			191.50	208
7/30/2014 17:00	17	2.080	2.106	2.158	2.155	985	939	379	441	2,744	1,924	2.09	-0.11			194.35	211
7/30/2014 18:36	18	1.965	1.913	1.991	2.072	964	918	329	357	2,567	1,882	1.94	-0.26			191.86	209
7/30/2014 20:12	20	2.002	2.008	2.061	2.068	990	960	323	357	2,630	1,950	2.01	-0.19			195.92	213
7/30/2014 21:48	21	2.027	2.135	2.074	1.985	1,019	969	324	348	2,659	1,987	2.08	-0.12			198.14	215
7/30/2014 23:24	23	2.005	1.996	2.122	1.887	1,018	971	323	348	2,659	1,989	2.00	-0.20			198.21	216
7/31/2014 1:00	1	2.198	2.076	2.195	2.353	1,002	958	298	337	2,594	1,960	2.14	-0.06			196.50	214
7/31/2014 2:36	2	2.713	2.620	2.722	2.840	979	962	253	275	2,468	1,941	2.67	0.47			195.37	212
7/31/2014 4:12	4	3.475	3.750	3.304	3.591	924	978	232	257	2,390	1,902	3.61	1.41		65.81	193.04	210
7/31/2014 5:48	5	3.532	4.283	3.042	3.856	874	961	213	242	2,290	1,836	3.91	1.71		86.55	189.11	206
7/31/2014 7:24	7	3.714	3.968	3.349	3.862	888	892	215	225	2,220	1,780	3.84	1.64		80.18	185.82	202
7/31/2014 9:00	9	2.856	3.250	2.833	3.343	843	847	201	235	2,126	1,690	3.05	0.85		21.61	180.45	196
7/31/2014 10:36	10	2.028	2.265	1.908	2.187	843	772	295	266	2,177	1,616	2.15	-0.05			176.05	191
7/31/2014 12:12	12	1.870	1.979	2.004	2.389	874	831	437	501	2,643	1,705	1.92	-0.28			181.36	197
7/31/2014 13:48	13	1.941	2.145	2.210	2.291	927	870	474	473	2,743	1,796	2.04	-0.16			186.78	203
7/31/2014 15:24	15	1.907	1.943	2.116	2.134	1,006	936	450	499	2,892	1,942	1.93	-0.27			195.47	213
7/31/2014 17:00	17	1.978	2.038	2.143	1.955	1,016	963	362	403	2,744	1,979	2.01	-0.19			197.65	215
7/31/2014 18:36	18	2.029	2.045	2.342	2.202	1,029	975	289	338	2,632	2,004	2.04	-0.16			199.12	217
7/31/2014 20:12	20	1.980	1.925	1.909	1.967	1,015	964	258	301	2,537	1,979	1.95	-0.25			197.63	215
7/31/2014 21:48	21	1.994	1.969	2.007	1.981	1,036	991	273	306	2,605	2,027	1.98	-0.22			200.49	218
7/31/2014 23:24	23	1.941	1.946	1.968	1.865	1,047	1,031	266	308	2,653	2,078	1.94	-0.26			203.52	221
8/1/2014 1:00	1	2.149	2.113	1.706	2.004	1,036	983	227	270	2,517	2,020	2.13	-0.07			200.05	218
8/1/2014 2:36	2	2.523	2.567	1.982	2.236	969	965	209	260	2,403	1,934	2.55	0.35			194.95	212
8/1/2014 4:12	4	3.258	3.547	2.688	3.318	963	962	208	260	2,393	1,926	3.40	1.20		50.17	194.48	211
8/1/2014 5:48	5	3.800	4.103	3.223	3.883	940	937	207	259	2,343	1,877	3.95	1.75		91.02	191.59	208
8/1/2014 7:24	7	3.701	3.934	3.499	4.157	887	885	223	261	2,256	1,771	3.82	1.62		78.21	185.31	202
8/1/2014 9:00	9	2.844	3.057	3.369	3.612	875	860	229	244	2,208	1,735	2.95	0.75		14.55	183.16	199
8/1/2014 10:36	10	2.240	2.202	1.977	2.090	906	818	267	292	2,283	1,724	2.22	0.02			182.50	198
8/1/2014 12:12	12	1.872	2.136	2.308	2.416	959	947	512	512	2,929	1,905	2.00	-0.20			193.26	210
8/1/2014 13:48	13	1.945	2.279	2.468	2.312	976	963	494	507	2,940	1,939	2.11	-0.09			195.27	212
8/1/2014 15:24	15	1.888	2.069	2.053	2.137	999	925	419	457	2,801	1,924	1.98	-0.22			194.38	211
8/1/2014 17:00	17	2.004	1.973	2.327	2.129	1,147	1,046	340	420	2,952	2,193	1.99	-0.21			210.32	229
8/1/2014 18:36	18	2.033	1.937	2.066	2.205	1,128	1,028	290	372	2,817	2,156	1.98	-0.22			208.13	226
8/1/2014 20:12	20	2.050	1.988	2.047	2.017	1,144	1,043	246	329	2,762	2,188	2.02	-0.18			210.02	228
8/1/2014 21:48	21	2.055	1.973	2.076	2.002	1,165	1,062	300	353	2,880	2,227	2.01	-0.19			212.35	231
8/1/2014 23:24	23	2.097	1.979	2.076	2.185	1,151	1,050	264	330	2,795	2,201	2.04	-0.16			210.82	229
8/2/2014 1:00	1	2.092	1.990	1.974	1.605	1,113	1,011	258	292	2,673	2,124	2.04	-0.16			206.24	224
8/2/2014 2:36	2	2.331	2.183	2.172	1.882	1,036	936	242	271	2,485	1,972	2.26	0.06			197.22	214
8/2/2014 4:12	4	3.045	2.965	2.751	2.529	1,034	934	242	270	2,480	1,968	3.00	0.80		19.86	196.96	214
8/2/2014 5:48	5	3.643	3.644	3.410	3.249	1,034	934	242	270	2,480	1,968	3.64	1.44		69.57	196.98	214
8/2/2014 7:24	7	4.039	4.194	3.868	3.730	1,035	935	243	270	2,483	1,970	4.12	1.92		106.50	197.08	214
8/2/2014 9:00	9	4.076	4.125	4.004	3.833	1,043	941	245	273	2,502	1,984	4.10	1.90		105.70	197.92	215
8/2/2014 10:36	10	3.588	4.049	3.985	3.796	1,051	949	247	275	2,521	2,000	3.82	1.62		84.01	198.87	216
8/2/2014 12:12	12	2.884	3.155	2.894	2.786	1,036	937	243	270	2,486	1,973	3.02	0.82		21.06	197.30	215
8/2/2014 13:48	13	2.004	2.094	1.462	1.492	1,070	967	430	472	2,939	2,037	2.05	-0.15			201.07	219
8/2/2014 15:24	15	1.938	1.997	1.753	1.778	1,165	1,072	516	547	3,300	2,237	1.97	-0.23			212.98	232
8/2/2014 17:00	17	1.971	2.190	2.623	2.343	1,232	1,168	483	572	3,454	2,400	2.08	-0.12			222.61	242
8/2/2014 18:36	18	2.017	2.093	2.619	2.154	1,169	1,108	348	414	3,040	2,277	2.05	-0.15			215.34	234
8/2/2014 20:12	20	1.984	2.042	2.401	2.354	1,142	1,082	280	350	2,854	2,224	2.01	-0.19			212.21	231
8/2/2014 21:48	21	1.955	2.043	1.980	1.820	1,150	1,088	273	319	2,831	2,238	2.00	-0.20			213.02	232

8/2/2014 23:24	23	1.965	2.060	2.247	1.598	1,130	1,055	250	277	2,711	2,185	2.01	-0.19			209.87	228
8/3/2014 1:00	1	2.103	2.305	1.367	1.611	1,092	1,007	186	254	2,539	2,099	2.20	0.00			204.74	223
8/3/2014 2:36	2	2.258	2.341	1.646	1.370	1,021	941	186	236	2,385	1,962	2.30	0.10			196.61	214
8/3/2014 4:12	4	2.665	3.292	1.806	2.482	956	937	183	249	2,325	1,893	2.98	0.78		17.38	192.54	209
8/3/2014 5:48	5	3.497	3.547	2.481	2.205	1,008	861	178	196	2,243	1,869	3.52	1.32		58.34	191.09	208
8/3/2014 7:24	7	3.791	3.780	2.485	2.248	1,014	864	118	201	2,197	1,878	3.79	1.59		78.47	191.62	208
8/3/2014 9:00	9	3.694	3.456	3.204	2.843	983	837	219	227	2,266	1,820	3.57	1.37		61.40	188.19	205
8/3/2014 10:36	10	3.309	3.111	3.395	2.765	960	825	220	227	2,232	1,785	3.21	1.01		33.85	186.09	202
8/3/2014 12:12	12	2.509	2.549	2.915	2.853	971	839	239	283	2,332	1,810	2.53	0.33			187.57	204
8/3/2014 13:48	13	1.971	1.985	1.490	1.527	1,048	946	420	443	2,857	1,994	1.98	-0.22			198.53	216
8/3/2014 15:24	15	1.995	2.068	1.741	1.612	1,130	1,028	496	509	3,163	2,158	2.03	-0.17			208.26	226
8/3/2014 17:00	17	2.021	2.023	2.488	2.529	1,226	1,134	477	620	3,458	2,360	2.02	-0.18			220.29	240
8/3/2014 18:36	18	2.036	2.005	2.420	2.227	1,207	1,124	338	436	3,106	2,332	2.02	-0.18			218.58	238
8/3/2014 20:12	20	1.994	2.052	1.936	2.324	1,182	1,114	276	373	2,946	2,296	2.02	-0.18			216.47	235
8/3/2014 21:48	21	1.995	1.920	1.948	1.778	1,197	1,104	272	346	2,919	2,301	1.96	-0.24			216.76	236
8/3/2014 23:24	23	1.881	1.903	1.975	1.919	1,220	1,141	317	359	3,037	2,361	1.89	-0.31			220.33	240
8/4/2014 1:00	1	1.987	2.063	1.696	1.519	1,155	1,090	207	275	2,726	2,245	2.03	-0.17			213.43	232
8/4/2014 2:36	2	2.201	2.280	1.587	1.585	1,013	986	209	247	2,455	1,999	2.24	0.04			198.82	216
8/4/2014 4:12	4	2.858	2.872	1.920	2.019	992	902	195	246	2,336	1,895	2.87	0.67		8.78	192.62	209
8/4/2014 5:48	5	3.424	3.446	2.416	2.527	989	897	194	235	2,315	1,886	3.44	1.24		52.05	192.10	209
8/4/2014 7:24	7	3.500	3.557	2.602	2.254	991	857	158	204	2,210	1,848	3.53	1.33		58.42	189.84	206
8/4/2014 9:00	9	2.456	2.478	2.107	2.562	934	832	204	274	2,244	1,765	2.47	0.27			184.95	201
8/4/2014 10:36	10	2.006	1.886	1.474	1.463	1,071	921	276	317	2,585	1,992	1.95	-0.25			198.42	216
8/4/2014 12:12	12	1.911	2.091	1.762	2.083	1,070	1,028	432	537	3,067	2,098	2.00	-0.20			204.70	223
8/4/2014 13:48	13	1.699	1.995	2.059	2.196	1,237	1,233	671	689	3,831	2,470	1.85	-0.35			226.80	247
8/4/2014 15:24	15	1.791	2.029	2.132	1.981	1,223	1,225	607	706	3,761	2,448	1.91	-0.29			225.47	245
8/4/2014 17:00	17	1.943	2.057	3.331	4.039	1,178	1,176	518	777	3,649	2,354	2.00	-0.20			219.94	239
8/4/2014 18:36	18	1.838	2.042	4.231	4.973	1,102	1,096	483	731	3,413	2,199	1.94	-0.26			210.69	229
8/4/2014 20:12	20	1.867	2.118	4.301	4.695	1,091	1,084	478	726	3,379	2,175	1.99	-0.21			209.30	228
8/4/2014 21:48	21	1.763	2.137	4.295	4.168	1,147	1,143	502	768	3,560	2,290	1.95	-0.25			216.09	235
8/4/2014 23:24	23	1.875	2.268	4.387	3.623	1,155	1,149	442	650	3,396	2,304	2.07	-0.13			216.93	236
8/5/2014 1:00	1	1.823	2.037	1.860	1.974	1,060	1,049	219	254	2,582	2,109	1.93	-0.27			205.36	223
8/5/2014 2:36	2	2.170	2.375	1.438	1.507	1,002	976	237	252	2,466	1,977	2.27	0.07			197.54	215
8/5/2014 4:12	4	2.855	2.902	1.673	2.126	911	883	174	246	2,215	1,795	2.88	0.68		9.47	186.68	203
8/5/2014 5:48	5	2.958	3.543	1.784	2.676	910	893	178	249	2,229	1,802	3.25	1.05		37.04	187.14	204
8/5/2014 7:24	7	3.135	3.318	2.405	2.693	938	799	219	226	2,182	1,737	3.23	1.03		34.53	183.25	199
8/5/2014 9:00	9	2.446	2.231	2.248	2.136	866	810	212	267	2,154	1,676	2.34	0.14			179.63	195
8/5/2014 10:36	10	1.780	2.230	2.152	2.426	933	885	365	363	2,546	1,818	2.01	-0.19			188.08	205
8/5/2014 12:12	12	1.814	1.996	1.992	2.216	998	932	515	565	3,010	1,930	1.90	-0.30			194.73	212
8/5/2014 13:48	13	1.885	2.124	2.277	2.345	1,051	983	559	576	3,168	2,034	2.00	-0.20			200.88	218
8/5/2014 15:24	15	1.839	1.944	2.003	1.720	1,255	1,184	589	586	3,615	2,439	1.89	-0.31			224.98	245
8/5/2014 17:00	17	1.968	2.109	3.479	2.024	1,315	1,243	616	612	3,786	2,558	2.04	-0.16			232.04	252
8/5/2014 18:36	18	2.083	2.157	4.752	3.633	1,243	1,173	582	578	3,576	2,416	2.12	-0.08			223.59	243
8/5/2014 20:12	20	1.921	2.065	4.741	4.028	1,146	1,078	536	533	3,293	2,224	1.99	-0.21			212.16	231
8/5/2014 21:48	21	1.859	2.059	4.637	4.187	1,174	1,107	549	547	3,376	2,280	1.96	-0.24			215.54	234
8/5/2014 23:24	23	1.956	2.114	4.727	4.308	1,198	1,124	527	524	3,373	2,322	2.04	-0.16			218.03	237
8/6/2014 1:00	1	2.014	2.038	2.292	1.965	1,154	1,043	206	270	2,674	2,197	2.03	-0.17			210.58	229
8/6/2014 2:36	2	1.965	2.098	1.480	1.556	1,056	995	236	257	2,544	2,051	2.03	-0.17			201.89	220
8/6/2014 4:12	4	2.656	2.728	1.778	1.882	1,006	864	173	239	2,282	1,870	2.69	0.49			191.14	208
8/6/2014 5:48	5	3.294	3.153	1.899	2.368	982	835	183	232	2,232	1,817	3.22	1.02		35.22	188.00	204
8/6/2014 7:24	7	3.905	3.927	2.754	2.381	1,003	826	168	205	2,202	1,829	3.92	1.72		87.01	188.73	205
8/6/2014 9:00	9	4.240	4.661	2.686	4.067	1,208	1,056	187	253	2,703	2,263	4.45	2.25		144.27	214.52	233
8/6/2014 10:36	10	0.843	2.791	1.993	3.689	709	896	371	612	2,588	1,605	1.82	-0.38			175.42	191
8/6/2014 12:12	12	1.719	4.385	4.534	5.000	1,039	1,212	523	702	3,475	2,251	3.05	0.85		25.53	213.77	232
8/6/2014 13:48	13	0.000	0.000	0.000	0.000	1,112	1,083	463	491	3,150	2,196	0.00	-2.20			210.51	229
8/6/2014 15:24	15	0.000	0.000	0.000	0.000	1,190	1,115	458	388	3,152	2,306	0.00	-2.20			217.04	236
8/6/2014 17:00	17	0.000	0.000	0.000	0.000	1,263	1,150	379	350	3,143	2,414	0.00	-2.20			223.46	243
8/6/2014 18:36	18	0.000	0.000	0.000	0.000	1,234	1,148	310	308	3,000	2,382	0.00	-2.20			221.58	241
8/6/2014 20:12	20	0.000	0.000	0.000	0.000	1,258	1,179	327	332	3,096	2,437	0.00	-2.20			224.83	245
8/6/2014 21:48	21	0.000	0.000	0.000	0.000	1,310	1,171	337	311	3,129	2,481	0.00	-2.20			227.46	247
8/6/2014 23:24	23	0.000	0.000	0.000	0.000	1,357	1,212	329	321	3,219	2,569	0.00	-2.20			232.69	253
8/7/2014 1:00	1	1.878	2.132	1.423	1.571	1,123	1,105	268	239	2,735	2,227	2.00	-0.20			212.39	231
8/7/2014 2:36	2	2.151	2.005	1.262	1.343	936	944	257	201	2,337	1,879	2.08	-0.12			191.71	208
8/7/2014 4:12	4	3.151	2.671	2.188	1.760	940	917	278	192	2,328	1,857	2.91	0.71		12.13	190.39	207
8/7/2014 5:48	5	3.918	3.287	2.778	2.605	921	928	248	198	2,294	1,848	3.60	1.40		64.03	189.86	206
8/7/2014 7:24	7	3.650	3.343	2.001	2.992	856	918	225	201	2,200	1,775	3.50	1.30		54.78	185.49	202
8/7/2014 9:00	9	2.691	2.463	1.967	2.485	808	872	272	202	2,154	1,680	2.58	0.38			179.88	196
8/7/2014 10:36	10	1.886	2.094	2.306	2.023	875	947	374	288	2,484	1,822	1.99	-0.21			188.32	205
8/7/2014 12:12	12	1.715	2.007	1.473	1.877	996	1,048	561	454	3,059	2,044	1.86	-0.34			201.52	219
8/7/2014 13:48	13	1.799	2.202	2.019	1.843	1,139	1,189	692	593	3,613	2,327	2.00	-0.20			218.32	237
8/7/2014 15:24	15	1.939	2.188	2.258	2.304	1,269	1,234	554	588	3,645	2,503	2.06	-0.14			228.78	249
8/7/2014 17:00	17	2.335	1.933	2.310	2.403	1,179	1,156	397	410	3,142	2,335	2.13	-0.07			218.78	238
8/7/2014 18:36	18	2.170	1.865	2.283	1.906	1,034	1,067	348	284	2,733	2,101	2.02	-0.18			204.89	223
8/7/2014 20:12	20	2.203	1.911	1.861	1.976	1,026	1,065	330	291	2,712	2,091	2.06	-0.14			204.28	222
8/7/2014 21:48	21	2.216	1.931	2.472	1.988	1,076	1,117	366	302	2,861	2,194	2.07	-0.13			210.38	229
8/7/2014 23:24	23	2.100	1.932	2.144	2.107	1,110	1,158	328	299	2,895	2,268	2.02	-0.18			214.78	234
8/8/2014 1:00	1	1.988	1.805	2.144	1.662	1,012	1,058	308	254	2,631	2,070	1.90	-0.30			203.01	221
8/8/2014 2:36	2	3.268	2.781	1.966	2.347	979	1,056	263	253	2,551	2,035	3.02	0.82		21.79	200.96	219
8/8/2014 4:12	4	3.845	3.529	2.403	3.136	930	979	245	243	2,398	1,909	3.69	1.49		71.72	193.49	210
8/8/2014 5:48	5	4.228	3.766	2.840	3.639	876	939	259	249	2,323	1,815	4.00	1.80		92.67	187.91	204
8/8/2014 7:24	7	3.178	3.248	3.499	3.925	729	871	304	260	2,164	1,600	3.21	1.01		32.05	175.12	190
8/8/2014 9:00	9	2.192	2.486	2.993	3.419	741	862	298	256	2,156	1,603	2.34	0.14			175.27	191
8/8/2014 10:36	10	1.996	2.073	2.157	2.221	941	947	302	253	2,444	1,888	2.03	-0.17			192.25	209
8/8/2014 12:12	12	1.906	2.233	2.174	1.987	1,030	1,049	470	437	2,986	2,079	2.07	-0.13			203.57	221
8/8/2014 13:48	13	1.824	2.045	2.129	2.125	1,084	1,104	481	501	3,170	2,188	1.93	-0.27			210.03	228
8/8/2014 15:24	15	1.893	2.105	2.043	1.962	1,143	1,143	398	406	3,090	2,286	2.00	-0.20			215.86	235
8/8/2014 17:00	17	1.998	1.923	2.280	1.945	1,101	1,071	317	318	2,807	2,172	1.96	-0.24			209.09	227
8/8/2014 18:36	18	1.982	1.920	2.160	2.326	1,034	1,058	292	317	2,700	2,092	1.95	-0.25			204.35	222
8/8/2014 20:12	20	2.075	2.062	2.114	2.100	1,021	1,036	286	285	2,629	2,057	2.07	-0.13			202.25	220
8/8/2014 21:48	21	2.018	2.082	2.020	2.005	1,068	1,088	299	298	2,753	2,156	2.05	-0.15			208.14	226
8/8/2014 23:24	23	1.906	1.975	2.216	2.121	1,143	1,085	303	316	2,848	2,228	1.94	-0.26			212.42	231
8/9/2014 1:00	1	2.398	1.796	1.926	1.937	1,034	961	234	268	2,496	1,995	2.10	-0.10			198.57	216
8/9/2014 2:36	2	2.158	2.110	1.654	2.080	938	940	234	270	2,381	1,877	2.13	-0.07			191.60	208
8/9/2014 4:12	4	2.992	2.804	2.226	2.588	894	890	245	249	2,277	1,783	2.90	0.70		10.88	186.02	202
8/9/2014 5:48	5	3.492	3.583	2.854	3.265	836	894	262	254	2,246	1,730	3.54	1.34		56.95	182.84	199
8/9/2014 7:24	7	3.703	4.148	3.919	3.885	794	858	292	255	2,200	1,652	3.93	1.73		82.86	178.23	194
8/9/2014 9:00	9	3.354	3.767	3.935	3.835	755	815	281	240	2,091	1,570	3.56	1.36		55.58	173.34	189
8/9/2014 10:36	10	2.020	2.444	3.023	2.705	766	846	325	252	2,189	1,612	2.23	0.03			175.83	191
8/9/2014 12:12	12	1.590	2.507	2.606	1.738	907	1,031	425	312	2,675	1,938	2.05	-0.15			195.20	212
8/9/2014 13:48	13	1.500	2.371	1.844	1.046	1,040	1,178	485	355	3,058	2,218	1.94	-0.26			211.82	230
8/9/2014 15:24	15	1.491	2.301	2.222	1.238	1,282	1,279	526	475	3,562	2,561	1.90	-0.30			232.22	253
8/9/2014 17:00	17	2.030	2.057	2.126	2.213	1,593	1,263	308	449	3,613	2,856	2.04	-0.16			249.70	272
8/9/2014 18:36	18	2.033	1.971	2.082	2.143	1,544	1,176	249	378	3,346	2,720	2.00	-0.20			241.65	263
8/9/2014 20:12	20	1.922	1.950	2.175	2.168	1,470	1,114	237	326	3,147	2,584	1.94	-0.26			233.57	254
8/9/2014 21:48	21	1.998	2.090	1.848	2.196	1,486	1,129	229	325	3,169	2,616	2.04	-0.16			235.45	256
8/9/2014 23:24	23	1.998	2.026	2.352	1.971	1,494	1,133	249	321	3,196	2,626	2.01	-0.19			236.09	257
8/10/2014 1:00	1	1.994	2.134	1.979	2.032	1,373	1,037	211	286	2,907	2,410	2.06	-0.14			223.25	243
8/10/2014 2:36	2	1.953	2.095	1.628	1.402	1,199	900	187	225	2,511	2,099	2.02	-0.18			204.74	223
8/10/2014 4:12	4	2.279	2.329	1.815	1.652	1,170	863	179	226	2,438	2,033	2.30	0.10			200.85	218
8/10/2014 5:48	5	2.965	2.682	2.052	1.699	1,177	839	169	207	2,392	2,016	2.82	0.62		5.84	199.82	217
8/10/2014 7:24	7	3.287	3.235	2.387	2.050	1,177	837	177	213	2,404	2,014	3.26	1.06		40.35	199.70	217
8/10/2014 9:00	9	2.777	2.884	3.219	2.521	1,096	797	225	231	2,349	1,893	2.83	0.63		6.10	192.50	209
8/10/2014 10:36	10	2.230	2.156	3.162	2.274	1,028	763	230	242	2,263	1,791	2.19	-0.01			186.45	203
8/10/2014 12:12	12	1.895	1.985	2.635	2.001	1,166	862	259	286	2,573	2,028	1.94	-0.26			200.53	218
8/10/2014 13:48	13	1.700	2.086	2.003	1.768	1,434	1,110	440	537	3,520	2,544	1.89	-0.31			231.17	251
8/10/2014 15:24	15	1.823	2.072	1.672	1.853	1,597	1,229	415	580	3,821	2,826	1.95	-0.25			247.97	270
8/10/2014 17:00	17	1.769	1.907	1.990	2.070	1,591	1,254	348	529	3,722	2,845	1.84	-0.36			249.09	271
8/10/2014 18:36	18	2.052	2.040	1.926	1.999	1,565	1,234	232	401	3,432	2,799	2.05	-0.15			246.32	268
8/10/2014 20:12	20	1.923	2.036	2.345	2.206	1,597	1,273	266	411	3,547	2,870	1.98	-0.22			250.55	272
8/10/2014 21:48	21	2.126	2.052	1.953	1.978	1,582	1,230	231	383	3,425	2,812	2.09	-0.11			247.13	269
8/10/2014 23:24	23	2.120	1.866	1.864	1.814	1,550	1,285	254	391	3,479	2,835	1.99	-0.21			248.47	270
8/11/2014 1:00	1	1.780	2.180	2.138	2.024	1,504	1,160	233	347	3,245	2,665	1.98	-0.22			238.36	259
8/11/2014 2:36	2	1.821	2.062	1.740	1.534	1,351	963	165	281	2,760	2,314	1.94	-0.26			217.53	237
8/11/2014 4:12	4	2.325	1.884	1.658	1.511	1,235	803	51	258	2,347	2,037	2.10	-0.10			201.11	219
8/11/2014 5:48	5	2.182	2.465	1.691	1.752	1,093	831	97	264	2,285	1,925	2.32	0.12			194.41	211
8/11/2014 7:24	7	2.138	2.271	2.208	1.916	1,122	782	188	271	2,363	1,904	2.20	0.00			193.20	210
8/11/2014 9:00	9	1.905	2.054	2.769	1.834	1,243	869	227	301	2,640	2,112	1.98	-0.22			205.54	224
8/11/2014 10:36	10	1.826	1.951	1.922	2.007	1,236	912	261	349	2,759	2,148	1.89	-0.31			207.70	226
8/11/2014 12:12	12	1.880	2.001	1.880	2.035	1,307	995	380	496	3,177	2,302	1.94	-0.26			216.79	236

8/11/2014 13:48	13	1.798	1.911	1.838	2.014	1,464	1,119	582	655	3,820	2,583	1.85	-0.35			233.49	254
8/11/2014 15:24	15	1.806	2.017	1.818	1.608	1,511	1,233	557	583	3,884	2,744	1.91	-0.29			243.06	264
8/11/2014 17:00	17	1.874	1.980	3.321	2.068	1,515	1,236	557	581	3,889	2,751	1.93	-0.27			243.48	265
8/11/2014 18:36	18	1.964	2.101	4.415	3.206	1,524	1,245	561	585	3,915	2,769	2.03	-0.17			244.55	266
8/11/2014 20:12	20	2.007	2.258	4.868	4.021	1,475	1,205	544	567	3,791	2,680	2.13	-0.07			239.26	260
8/11/2014 21:48	21	1.867	2.193	4.916	4.067	1,427	1,163	526	549	3,665	2,590	2.03	-0.17			233.93	254
8/11/2014 23:24	23	1.858	2.099	4.812	3.985	1,442	1,177	449	485	3,552	2,619	1.98	-0.22			235.66	256
8/12/2014 1:00	1	1.848	2.195	2.314	1.843	1,356	1,105	216	283	2,960	2,461	2.02	-0.18			226.29	246
8/12/2014 2:36	2	1.828	2.247	1.269	1.523	1,183	949	162	245	2,539	2,132	2.04	-0.16			206.72	225
8/12/2014 4:12	4	2.320	2.190	1.639	1.453	1,125	819	166	232	2,342	1,944	2.26	0.06			195.55	213
8/12/2014 5:48	5	2.141	2.814	1.660	2.242	1,049	843	168	249	2,309	1,892	2.48	0.28			192.49	209
8/12/2014 7:24	7	2.224	2.637	1.924	2.117	1,055	777	169	230	2,230	1,832	2.43	0.23			188.90	205
8/12/2014 9:00	9	1.765	2.240	2.264	2.484	1,085	862	223	308	2,477	1,947	2.00	-0.20			195.73	213
8/12/2014 10:36	10	1.760	2.022	1.925	1.968	1,164	947	316	409	2,837	2,112	1.89	-0.31			205.51	223
8/12/2014 12:12	12	1.577	2.258	2.086	2.288	1,234	1,067	447	531	3,280	2,301	1.92	-0.28			216.78	236
8/12/2014 13:48	13	1.848	2.000	2.017	2.049	1,362	1,037	517	583	3,499	2,399	1.92	-0.28			222.59	242
8/12/2014 15:24	15	1.834	1.964	2.061	1.978	1,461	1,110	455	610	3,637	2,572	1.90	-0.30			232.84	253
8/12/2014 17:00	17	1.908	1.969	2.287	2.415	1,483	1,127	426	620	3,657	2,611	1.94	-0.26			235.16	256
8/12/2014 18:36	18	2.018	1.981	3.030	3.112	1,347	1,023	390	564	3,325	2,371	2.00	-0.20			220.90	240
8/12/2014 20:12	20	1.954	1.900	3.365	3.420	1,332	1,013	386	561	3,292	2,345	1.93	-0.27			219.38	239
8/12/2014 21:48	21	1.943	1.844	3.409	3.511	1,395	1,064	404	590	3,453	2,459	1.89	-0.31			226.14	246
8/12/2014 23:24	23	1.937	2.001	3.656	3.741	1,438	1,098	373	537	3,445	2,535	1.97	-0.23			230.67	251
8/13/2014 1:00	1	2.014	1.976	1.946	1.476	1,331	1,014	227	299	2,871	2,345	2.00	-0.20			219.37	239
8/13/2014 2:36	2	2.076	2.023	1.706	1.631	1,154	874	200	281	2,509	2,028	2.05	-0.15			200.55	218
8/13/2014 4:12	4	2.082	2.016	1.509	1.415	1,072	810	174	234	2,291	1,883	2.05	-0.15			191.91	209
8/13/2014 5:48	5	2.576	2.408	1.684	1.711	1,069	767	142	249	2,228	1,837	2.49	0.29			189.18	206
8/13/2014 7:24	7	2.087	2.454	2.097	1.983	1,039	818	225	273	2,354	1,857	2.27	0.07			190.36	207
8/13/2014 9:00	9	3.057	3.214	2.882	3.709	1,478	1,056	244	462	3,240	2,534	3.14	0.94		35.16	230.59	251
8/13/2014 10:36	10	2.832	2.708	2.770	3.337	1,201	825	246	332	2,604	2,026	2.77	0.57		1.57	200.43	218
8/13/2014 12:12	12	1.981	2.007	1.941	1.484	1,193	925	383	439	2,940	2,118	1.99	-0.21			205.90	224
8/13/2014 13:48	13	1.546	2.483	1.385	2.123	1,046	994	434	545	3,019	2,040	2.01	-0.19			201.26	219
8/13/2014 15:24	15	1.606	2.148	2.051	2.114	1,343	1,103	525	614	3,584	2,446	1.88	-0.32			225.35	245
8/13/2014 17:00	17	1.699	1.719	1.528	1.646	1,522	1,164	503	623	3,813	2,686	1.71	-0.49			239.64	261
8/13/2014 18:36	18	1.794	2.022	3.035	2.623	1,452	1,131	398	561	3,542	2,583	1.91	-0.29			233.53	254
8/13/2014 20:12	20	2.036	2.148	2.267	2.251	1,463	1,063	284	391	3,202	2,527	2.09	-0.11			230.18	250
8/13/2014 21:48	21	1.962	2.002	1.882	2.027	1,507	1,069	259	386	3,221	2,576	1.98	-0.22			233.09	253
8/13/2014 23:24	23	1.956	1.882	1.818	1.697	1,512	1,085	259	367	3,223	2,597	1.92	-0.28			234.37	255
8/14/2014 1:00	1	1.824	2.179	1.419	1.555	1,291	1,046	225	313	2,874	2,337	2.00	-0.20			218.87	238
8/14/2014 2:36	2	1.797	2.257	1.335	1.531	1,179	927	205	285	2,596	2,106	2.03	-0.17			205.21	223
8/14/2014 4:12	4	2.232	2.102	1.438	1.359	1,106	802	156	239	2,303	1,908	2.17	-0.03			193.39	210
8/14/2014 5:48	5	2.613	2.550	1.742	1.817	1,115	803	168	271	2,358	1,918	2.58	0.38			194.02	211
8/14/2014 7:24	7	2.824	2.890	2.168	2.224	1,118	772	183	275	2,348	1,890	2.86	0.66		8.14	192.34	209
8/14/2014 9:00	9	1.986	1.891	2.859	2.286	1,156	753	201	366	2,475	1,909	1.94	-0.26			193.46	210
8/14/2014 10:36	10	1.823	2.054	2.148	2.270	1,241	916	298	377	2,832	2,157	1.94	-0.26			208.18	226
8/14/2014 12:12	12	1.699	2.251	2.303	2.343	1,419	1,007	436	750	3,612	2,426	1.97	-0.23			224.20	244
8/14/2014 13:48	13	1.806	2.051	1.585	1.893	1,572	1,080	396	614	3,662	2,652	1.93	-0.27			237.60	258
8/14/2014 15:24	15	1.686	2.192	1.214	1.120	1,593	1,169	348	532	3,642	2,762	1.94	-0.26			244.16	266
8/14/2014 17:00	17	2.018	2.204	2.183	2.033	1,598	1,154	289	557	3,599	2,752	2.11	-0.09			243.57	265
8/14/2014 18:36	18	1.973	1.901	1.849	1.840	1,587	1,080	252	465	3,384	2,667	1.94	-0.26			238.51	259
8/14/2014 20:12	20	1.878	2.065	2.215	2.002	1,550	1,114	247	450	3,361	2,664	1.97	-0.23			238.34	259
8/14/2014 21:48	21	1.891	1.992	1.988	1.891	1,565	1,103	247	456	3,371	2,668	1.94	-0.26			238.57	259
8/14/2014 23:24	23	1.968	2.019	1.849	1.954	1,578	1,110	253	477	3,418	2,688	1.99	-0.21			239.74	261
8/15/2014 1:00	1	2.009	2.057	2.610	1.886	1,567	1,058	263	431	3,319	2,625	2.03	-0.17			236.01	257
8/15/2014 2:36	2	1.978	2.134	2.209	1.622	1,394	930	199	319	2,842	2,324	2.06	-0.14			218.12	237
8/15/2014 4:12	4	2.099	2.089	2.476	1.623	1,236	818	219	309	2,582	2,054	2.09	-0.11			202.06	220
8/15/2014 5:48	5	2.355	2.321	2.780	1.926	1,221	785	217	306	2,528	2,005	2.34	0.14			199.20	217
8/15/2014 7:24	7	2.538	2.826	3.159	2.231	1,217	808	208	322	2,555	2,025	2.68	0.48			200.34	218
8/15/2014 9:00	9	1.946	2.353	2.849	2.220	1,212	778	166	327	2,483	1,990	2.15	-0.05			198.31	216
8/15/2014 10:36	10	1.883	2.068	1.872	1.852	1,432	842	181	374	2,829	2,274	1.98	-0.22			215.14	234
8/15/2014 12:12	12	1.881	2.052	1.819	2.268	1,587	951	368	807	3,714	2,539	1.97	-0.23			230.88	251
8/15/2014 13:48	13	1.938	2.106	1.873	2.330	1,597	987	402	764	3,750	2,583	2.02	-0.18			233.54	254
8/15/2014 15:24	15	2.057	2.065	2.070	2.158	1,592	1,020	337	683	3,633	2,613	2.06	-0.14			235.27	256
8/15/2014 17:00	17	1.964	1.853	1.900	1.876	1,588	1,002	275	573	3,438	2,590	1.91	-0.29			233.95	254
8/15/2014 18:36	18	2.118	1.890	2.032	2.067	1,584	1,100	244	606	3,534	2,684	2.00	-0.20			239.49	260
8/15/2014 20:12	20	1.987	1.918	1.838	1.759	1,579	1,163	261	495	3,499	2,742	1.95	-0.25			242.95	264
8/15/2014 21:48	21	1.958	2.021	2.223	2.038	1,575	1,190	286	549	3,600	2,765	1.99	-0.21			244.33	266
8/15/2014 23:24	23	1.974	2.154	2.103	2.140	1,570	1,226	261	525	3,582	2,796	2.06	-0.14			246.17	268
8/16/2014 1:00	1	1.878	2.025	2.173	1.923	1,525	1,102	274	463	3,364	2,627	1.95	-0.25			236.12	257
8/16/2014 2:36	2	1.937	2.101	2.083	1.864	1,407	986	210	351	2,954	2,393	2.02	-0.18			222.22	242
8/16/2014 4:12	4	2.118	2.158	2.096	1.735	1,247	867	214	310	2,638	2,114	2.14	-0.06			205.67	224
8/16/2014 5:48	5	2.587	2.675	2.571	1.918	1,232	854	213	306	2,605	2,086	2.63	0.43			203.98	222
8/16/2014 7:24	7	2.749	3.159	3.221	2.354	1,193	860	239	334	2,627	2,053	2.95	0.75		16.32	202.06	220
8/16/2014 9:00	9	2.219	3.142	3.806	2.529	1,144	833	261	337	2,574	1,977	2.68	0.48			197.51	215
8/16/2014 10:36	10	1.553	2.518	3.447	2.094	1,174	856	267	347	2,644	2,030	2.04	-0.16			200.67	218
8/16/2014 12:12	12	1.432	2.456	2.294	1.584	1,347	991	307	400	3,045	2,338	1.94	-0.26			218.96	238
8/16/2014 13:48	13	1.459	2.304	1.499	1.225	1,585	1,210	369	485	3,649	2,795	1.88	-0.32			246.09	268
8/16/2014 15:24	15	1.454	2.158	1.343	1.146	1,597	1,272	415	546	3,830	2,869	1.81	-0.39			250.51	272
8/16/2014 17:00	17	1.522	1.770	1.583	1.881	1,594	1,192	402	588	3,777	2,787	1.65	-0.55			245.63	267
8/16/2014 18:36	18	1.777	1.841	1.751	1.648	1,592	1,210	265	426	3,492	2,801	1.81	-0.39			246.49	268
8/16/2014 20:12	20	2.055	1.990	1.827	1.758	1,589	1,216	213	344	3,362	2,805	2.02	-0.18			246.69	268
8/16/2014 21:48	21	1.966	2.113	1.856	2.142	1,586	1,231	238	376	3,430	2,817	2.04	-0.16			247.39	269
8/16/2014 23:24	23	2.014	2.014	1.980	1.980	1,583	1,158	236	365	3,342	2,740	2.01	-0.19			242.86	264
8/17/2014 1:00	1	1.852	2.271	1.759	1.636	1,532	1,134	171	264	3,101	2,665	2.06	-0.14			238.41	259
8/17/2014 2:36	2	1.930	2.250	1.614	1.307	1,452	1,034	136	238	2,860	2,486	2.09	-0.11			227.75	248
8/17/2014 4:12	4	2.021	1.817	1.505	1.266	1,354	847	112	220	2,535	2,202	1.92	-0.28			210.87	229
8/17/2014 5:48	5	2.104	2.194	1.617	1.542	1,167	863	137	223	2,390	2,030	2.15	-0.05			200.66	218
8/17/2014 7:24	7	1.927	2.448	2.035	1.928	1,141	811	185	220	2,357	1,953	2.19	-0.01			196.07	213
8/17/2014 9:00	9	1.774	2.285	2.848	2.117	1,128	800	231	230	2,389	1,928	2.03	-0.17			194.59	212
8/17/2014 10:36	10	1.725	2.125	3.194	2.359	1,270	787	208	243	2,508	2,057	1.93	-0.27			202.28	220
8/17/2014 12:12	12	1.804	2.249	2.833	1.809	1,455	906	233	283	2,877	2,361	2.03	-0.17			220.33	240
8/17/2014 13:48	13	1.738	2.098	2.107	2.407	1,586	1,064	397	515	3,563	2,651	1.92	-0.28			237.53	258
8/17/2014 15:24	15	1.708	1.969	1.901	1.856	1,600	1,168	453	514	3,734	2,768	1.84	-0.36			244.49	266
8/17/2014 17:00	17	1.550	1.667	1.812	1.900	1,600	1,149	396	541	3,685	2,749	1.61	-0.59			243.38	265
8/17/2014 18:36	18	1.759	1.782	1.704	1.823	1,600	1,224	293	497	3,614	2,824	1.77	-0.43			247.81	269
8/17/2014 20:12	20	1.904	1.863	1.964	1.906	1,600	1,235	240	417	3,493	2,835	1.88	-0.32			248.50	270
8/17/2014 21:48	21	1.833	1.940	1.656	1.796	1,600	1,290	254	384	3,528	2,890	1.89	-0.31			251.75	274
8/17/2014 23:24	23	1.906	2.027	2.004	1.770	1,600	1,322	249	366	3,538	2,922	1.97	-0.23			253.68	276
8/18/2014 1:00	1	1.898	2.178	1.787	1.976	1,548	1,256	223	337	3,364	2,804	2.04	-0.16			246.64	268
8/18/2014 2:36	2	1.850	2.219	2.196	2.029	1,435	1,132	252	311	3,130	2,567	2.03	-0.17			232.55	253
8/18/2014 4:12	4	2.260	2.087	2.513	2.262	1,239	931	223	275	2,667	2,170	2.17	-0.03			208.96	227
8/18/2014 5:48	5	1.921	2.243	2.408	2.283	1,202	883	216	267	2,568	2,085	2.08	-0.12			203.92	222
8/18/2014 7:24	7	1.951	2.131	2.556	2.265	1,236	864	202	251	2,553	2,100	2.04	-0.16			204.82	223
8/18/2014 9:00	9	3.614	3.084	3.132	2.794	1,457	1,051	231	298	3,037	2,508	3.35	1.15		54.30	229.07	249
8/18/2014 10:36	10	2.116	2.471	0.943	1.470	1,051	936	218	326	2,531	1,987	2.29	0.09			198.10	215
8/18/2014 12:12	12	1.959	2.039	2.230	1.771	1,139	941	561	463	3,105	2,080	2.00	-0.20			203.66	221
8/18/2014 13:48	13	1.742	2.044	1.773	1.889	1,223	1,091	631	594	3,538	2,313	1.89	-0.31			217.48	237
8/18/2014 15:24	15	1.926	2.116	2.071	1.954	1,299	1,134	663	636	3,733	2,434	2.02	-0.18			224.64	244
8/18/2014 17:00	17	1.984	1.979	2.690	1.962	1,310	1,121	649	643	3,722	2,431	1.98	-0.22			224.47	244
8/18/2014 18:36	18	2.115	1.963	4.151	2.419	1,317	1,128	651	645	3,742	2,445	2.04	-0.16			225.32	245
8/18/2014 20:12	20	2.168	2.012	4.753	3.329	1,333	1,143	660	653	3,789	2,475	2.09	-0.11			227.12	247
8/18/2014 21:48	21	2.012	1.869	4.570	3.536	1,301	1,114	645	638	3,698	2,415	1.94	-0.26			223.53	243
8/18/2014 23:24	23	2.090	1.884	4.505	3.490	1,375	1,182	591	598	3,746	2,557	1.99	-0.21			231.95	252
8/19/2014 1:00	1	2.129	1.889	1.383	1.045	1,277	1,094	254	331	2,956	2,370	2.01	-0.19			220.89	240
8/19/2014 2:36	2	2.220	1.972	1.629	1.749	1,194	1,031	238	307	2,770	2,225	2.10	-0.10			212.24	231
8/19/2014 4:12	4	2.283	2.221	1.573	1.548	1,085	948	214	248	2,496	2,034	2.25	0.05			200.88	218
8/19/2014 5:48	5	2.389	2.355	1.901	1.644	1,053	889	231	226	2,399	1,942	2.37	0.17			195.46	213
8/19/2014 7:24	7	2.404	2.352	2.363	1.869	1,035	868	234	245	2,382	1,903	2.38	0.18			193.12	210
8/19/2014 9:00	9	2.075	2.137	2.042	1.906	1,061	927	253	286	2,527	1,988	2.11	-0.09			198.18	216
8/19/2014 10:36	10	1.797	2.034	2.112	1.744	1,034	953	390	380	2,757	1,987	1.92	-0.28			198.12	215
8/19/2014 12:12	12	1.733	2.142	2.004	2.062	1,122	1,057	543	561	3,284	2,179	1.94	-0.26			209.54	228
8/19/2014 13:48	13	1.763	2.065	1.879	1.963	1,211	1,130	592	591	3,524	2,340	1.91	-0.29			219.10	238
8/19/2014 15:24	15	1.800	2.008	2.079	1.899	1,239	1,160	627	608	3,633	2,398	1.90	-0.30			222.54	242
8/19/2014 17:00	17	1.829	2.080	2.794	1.937	1,277	1,197	648	629	3,750	2,474	1.95	-0.25			227.01	247
8/19/2014 18:36	18	1.951	2.020	4.050	2.326	1,284	1,205	653	634	3,775	2,488	1.99	-0.21			227.89	248
8/19/2014 20:12	20	2.046	2.152	4.812	3.437	1,302	1,223	663	646	3,834	2,524	2.10	-0.10			230.03	250
8/19/2014 21:48	21	1.858	2.016	4.608	3.642	1,254	1,177	639	622	3,693	2,431	1.94	-0.26			224.48	244
8/19/2014 23:24	23	1.875	2.140	4.059	3.181	1,289	1,213	498	489	3,489	2,502	2.01	-0.19			228.70	249
8/20/2014 1:00	1	1.916	2.083	1.389	0.594	1,244	1,159	297	272	2,972	2,403	2.00	-0.20			222.85	242
8/20/2014 2:36	2	2.077	2.100	2.607	0.937	1,166	1,075	310	267	2,818	2,241	2.09	-0.11			213.19	232

8/20/2014 4:12	4	2.277	2.290	1.660	1.595	1,104	947	161	265	2,476	2,051	2.28	0.08			201.91	220
8/20/2014 5:48	5	2.460	2.898	1.377	1.923	1,066	964	187	248	2,467	2,031	2.68	0.48			200.72	218
8/20/2014 7:24	7	2.539	3.043	1.996	2.223	1,050	928	229	254	2,462	1,979	2.79	0.59		3.18	197.61	215
8/20/2014 9:00	9	3.004	3.537	3.037	3.418	1,461	1,326	307	405	3,499	2,787	3.27	1.07		50.55	245.61	267
8/20/2014 10:36	10	2.559	3.182	2.827	3.507	1,060	953	269	313	2,596	2,013	2.87	0.67		9.49	199.68	217
8/20/2014 12:12	12	1.749	2.218	1.766	1.945	966	899	389	401	2,656	1,866	1.98	-0.22			190.91	208
8/20/2014 13:48	13	1.764	2.153	2.057	2.235	999	923	539	493	2,954	1,922	1.96	-0.24			194.25	211
8/20/2014 15:24	15	1.740	2.107	2.161	2.201	1,123	977	515	528	3,143	2,100	1.92	-0.28			204.81	223
8/20/2014 17:00	17	2.019	2.014	1.962	1.862	1,275	964	433	495	3,166	2,238	2.02	-0.18			213.04	232
8/20/2014 18:36	18	2.105	2.035	2.129	2.097	1,271	1,001	342	466	3,081	2,272	2.07	-0.13			215.04	234
8/20/2014 20:12	20	1.946	1.976	1.879	2.072	1,262	1,015	367	421	3,065	2,277	1.96	-0.24			215.35	234
8/20/2014 21:48	21	2.028	2.039	1.938	2.050	1,334	1,077	345	427	3,182	2,410	2.03	-0.17			223.26	243
8/20/2014 23:24	23	1.939	1.942	2.022	1.979	1,343	1,119	338	429	3,229	2,462	1.94	-0.26			226.33	246
8/21/2014 1:00	1	1.970	2.128	1.429	2.232	1,262	1,077	307	402	3,048	2,339	2.05	-0.15			219.01	238
8/21/2014 2:36	2	2.085	1.990	2.380	2.557	1,123	950	306	358	2,737	2,074	2.04	-0.16			203.26	221
8/21/2014 4:12	4	2.418	2.266	1.920	2.117	1,092	897	197	232	2,419	1,989	2.34	0.14			198.24	216
8/21/2014 5:48	5	2.529	2.994	1.635	1.740	974	888	208	233	2,304	1,862	2.76	0.56		0.88	190.69	207
8/21/2014 7:24	7	2.300	3.105	2.110	2.405	974	846	252	243	2,315	1,820	2.70	0.50			188.20	205
8/21/2014 9:00	9	2.116	2.131	2.145	2.208	1,021	843	273	296	2,434	1,864	2.12	-0.08			190.82	208
8/21/2014 10:36	10	1.751	2.100	2.261	2.225	947	848	357	364	2,516	1,795	1.93	-0.27			186.69	203
8/21/2014 12:12	12	1.764	2.186	1.735	1.739	1,084	986	466	468	3,003	2,069	1.97	-0.23			203.00	221
8/21/2014 13:48	13	1.762	2.229	2.032	2.238	1,196	1,073	584	569	3,422	2,269	2.00	-0.20			214.86	234
8/21/2014 15:24	15	1.810	2.192	2.143	2.106	1,273	1,119	593	605	3,590	2,392	2.00	-0.20			222.15	242
8/21/2014 17:00	17	2.010	2.105	2.136	1.944	1,336	1,108	441	547	3,431	2,443	2.06	-0.14			225.21	245
8/21/2014 18:36	18	2.044	2.097	2.009	2.022	1,299	1,113	336	460	3,208	2,412	2.07	-0.13			223.35	243
8/21/2014 20:12	20	1.928	2.055	2.289	2.081	1,304	1,099	373	433	3,209	2,403	1.99	-0.21			222.81	242
8/21/2014 21:48	21	1.915	2.018	1.932	2.012	1,312	1,107	364	441	3,224	2,419	1.97	-0.23			223.79	243
8/21/2014 23:24	23	1.885	1.790	1.980	1.681	1,356	1,096	396	463	3,311	2,453	1.84	-0.36			225.77	246
8/22/2014 1:00	1	2.032	2.070	2.696	2.569	1,365	1,102	372	478	3,318	2,468	2.05	-0.15			226.66	247
8/22/2014 2:36	2	2.175	1.883	2.954	3.260	1,197	958	307	417	2,878	2,155	2.03	-0.17			208.07	226
8/22/2014 4:12	4	2.397	2.132	2.448	3.203	1,058	862	256	343	2,518	1,919	2.26	0.06			194.09	211
8/22/2014 5:48	5	2.986	2.917	2.893	3.860	1,072	876	258	346	2,551	1,947	2.95	0.75		15.61	195.76	213
8/22/2014 7:24	7	2.822	2.884	3.136	3.770	1,085	888	261	300	2,534	1,973	2.85	0.65		8.02	197.28	215
8/22/2014 9:00	9	2.497	2.883	3.107	3.464	1,074	879	258	295	2,507	1,954	2.69	0.49			196.12	213
8/22/2014 10:36	10	1.960	2.217	2.282	1.964	1,105	907	380	369	2,761	2,013	2.09	-0.11			199.63	217
8/22/2014 12:12	12	1.906	2.083	1.795	2.997	1,190	981	489	614	3,274	2,171	1.99	-0.21			209.05	227
8/22/2014 13:48	13	1.844	2.040	2.583	2.375	1,228	1,015	544	560	3,347	2,243	1.94	-0.26			213.31	232
8/22/2014 15:24	15	1.930	2.070	2.249	2.140	1,284	1,031	440	525	3,280	2,315	2.00	-0.20			217.60	237
8/22/2014 17:00	17	2.003	1.988	1.932	2.106	1,355	1,047	333	465	3,199	2,402	2.00	-0.20			222.74	242
8/22/2014 18:36	18	2.045	1.905	2.218	2.237	1,364	1,054	330	446	3,193	2,417	1.97	-0.23			223.66	243
8/22/2014 20:12	20	1.989	2.072	1.990	1.919	1,307	1,045	309	379	3,041	2,352	2.03	-0.17			219.81	239
8/22/2014 21:48	21	2.000	1.988	2.064	2.004	1,398	1,087	307	413	3,204	2,485	1.99	-0.21			227.70	248
8/22/2014 23:24	23	2.005	2.027	2.001	2.211	1,361	1,056	286	377	3,080	2,417	2.02	-0.18			223.66	243
8/23/2014 1:00	1	2.071	2.084	2.766	2.211	1,299	1,005	311	351	2,966	2,304	2.08	-0.12			216.94	236
8/23/2014 2:36	2	2.138	1.892	2.708	2.311	1,187	913	278	309	2,688	2,100	2.02	-0.18			204.83	223
8/23/2014 4:12	4	2.237	2.076	2.623	2.232	1,113	851	247	268	2,478	1,963	2.16	-0.04			196.69	214
8/23/2014 5:48	5	2.983	2.493	3.001	2.743	1,122	857	248	270	2,497	1,979	2.74	0.54			197.64	215
8/23/2014 7:24	7	3.285	3.098	3.448	3.305	1,129	864	249	271	2,512	1,992	3.19	0.99		34.65	198.42	216
8/23/2014 9:00	9	3.004	2.915	3.597	3.423	1,124	860	247	270	2,500	1,983	2.96	0.76		16.40	197.88	215
8/23/2014 10:36	10	2.357	2.695	3.117	2.828	1,107	847	243	266	2,463	1,954	2.53	0.33			196.13	213
8/23/2014 12:12	12	1.893	1.934	1.296	1.234	1,134	868	263	281	2,546	2,002	1.91	-0.29			199.02	216
8/23/2014 13:48	13	1.822	2.153	1.261	1.011	1,374	1,063	344	361	3,143	2,437	1.99	-0.21			224.87	245
8/23/2014 15:24	15	1.814	2.113	1.470	1.253	1,497	1,134	451	488	3,570	2,631	1.96	-0.24			236.37	257
8/23/2014 17:00	17	1.855	1.808	1.926	2.174	1,598	1,174	493	620	3,886	2,772	1.83	-0.37			244.77	266
8/23/2014 18:36	18	2.006	1.945	2.090	2.021	1,600	1,216	367	605	3,788	2,816	1.98	-0.22			247.34	269
8/23/2014 20:12	20	2.105	2.131	1.951	2.590	1,599	1,219	240	553	3,611	2,818	2.12	-0.08			247.46	269
8/23/2014 21:48	21	2.101	2.063	1.999	2.341	1,600	1,156	269	394	3,419	2,756	2.08	-0.12			243.79	265
8/23/2014 23:24	23	2.053	2.174	1.936	2.239	1,569	1,136	248	375	3,329	2,706	2.11	-0.09			240.79	262
8/24/2014 1:00	1	1.894	2.164	1.553	1.744	1,393	1,076	221	324	3,014	2,469	2.03	-0.17			226.75	247
8/24/2014 2:36	2	1.988	2.125	1.855	2.240	1,270	969	209	284	2,731	2,239	2.06	-0.14			213.06	232
8/24/2014 4:12	4	2.253	2.175	1.955	1.711	1,228	882	191	238	2,539	2,110	2.21	0.01			205.43	223
8/24/2014 5:48	5	2.570	2.508	2.169	2.194	1,172	857	179	254	2,461	2,028	2.54	0.34			200.56	218
8/24/2014 7:24	7	2.858	2.839	2.457	2.679	1,148	841	179	237	2,405	1,989	2.85	0.65		7.73	198.24	216
8/24/2014 9:00	9	2.543	2.654	2.355	2.177	1,150	789	164	209	2,312	1,938	2.60	0.40			195.23	212
8/24/2014 10:36	10	2.079	2.004	1.849	1.343	1,110	747	142	197	2,195	1,856	2.04	-0.16			190.34	207
8/24/2014 12:12	12	1.882	2.002	0.936	0.599	1,246	843	179	223	2,491	2,089	1.94	-0.26			204.16	222
8/24/2014 13:48	13	1.744	2.089	0.936	0.884	1,384	1,031	267	368	3,049	2,414	1.92	-0.28			223.49	243
8/24/2014 15:24	15	1.712	2.057	1.274	1.534	1,525	1,141	344	503	3,514	2,666	1.88	-0.32			238.46	259
8/24/2014 17:00	17	1.857	1.941	1.438	1.468	1,600	1,186	419	523	3,728	2,786	1.90	-0.30			245.57	267
8/24/2014 18:36	18	1.871	1.864	1.465	1.466	1,600	1,187	420	524	3,731	2,787	1.87	-0.33			245.64	267
8/24/2014 20:12	20	1.901	1.976	2.055	1.707	1,600	1,227	330	529	3,687	2,827	1.94	-0.26			248.02	270
8/24/2014 21:48	21	2.025	2.120	2.133	1.952	1,600	1,279	281	491	3,651	2,879	2.07	-0.13			251.07	273
8/24/2014 23:24	23	1.897	2.061	1.863	2.259	1,600	1,287	300	488	3,675	2,887	1.98	-0.22			251.57	274
8/25/2014 1:00	1	2.087	2.163	2.574	2.343	1,599	1,221	288	416	3,524	2,820	2.12	-0.08			247.61	269
8/25/2014 2:36	2	1.964	2.090	2.312	2.043	1,400	1,039	197	294	2,929	2,438	2.03	-0.17			224.92	245
8/25/2014 4:12	4	1.979	2.087	1.758	1.552	1,217	910	190	249	2,566	2,127	2.03	-0.17			206.45	225
8/25/2014 5:48	5	2.424	2.387	1.940	1.867	1,219	860	177	250	2,505	2,079	2.41	0.21			203.55	221
8/25/2014 7:24	7	2.463	2.289	2.403	2.198	1,236	808	171	255	2,469	2,043	2.38	0.18			201.46	219
8/25/2014 9:00	9	1.905	2.151	2.136	1.972	1,296	919	199	279	2,693	2,215	2.03	-0.17			211.63	230
8/25/2014 10:36	10	1.721	2.130	2.097	2.087	1,259	931	280	355	2,826	2,190	1.93	-0.27			210.18	229
8/25/2014 12:12	12	1.612	2.205	1.937	1.937	1,458	1,100	456	545	3,559	2,558	1.91	-0.29			232.02	252
8/25/2014 13:48	13	1.597	1.935	1.499	1.468	1,582	1,206	454	513	3,755	2,788	1.77	-0.43			245.69	267
8/25/2014 15:24	15	1.661	1.863	1.632	1.485	1,590	1,200	436	566	3,793	2,791	1.76	-0.44			245.84	267
8/25/2014 17:00	17	1.613	1.803	1.548	1.412	1,600	1,189	467	571	3,828	2,789	1.71	-0.49			245.77	267
8/25/2014 18:36	18	1.665	1.836	2.281	1.462	1,600	1,191	467	572	3,829	2,791	1.75	-0.45			245.85	267
8/25/2014 20:12	20	1.747	1.927	3.751	2.159	1,600	1,215	477	584	3,876	2,815	1.84	-0.36			247.29	269
8/25/2014 21:48	21	1.712	2.023	4.132	3.141	1,600	1,227	482	592	3,901	2,827	1.87	-0.33			248.03	270
8/25/2014 23:24	23	1.698	2.093	3.965	3.281	1,600	1,270	432	536	3,838	2,870	1.90	-0.30			250.59	273
8/26/2014 1:00	1	1.817	2.326	2.524	1.520	1,595	1,193	267	329	3,383	2,788	2.07	-0.13			245.68	267
8/26/2014 2:36	2	1.941	2.184	2.516	1.731	1,385	1,011	220	282	2,898	2,396	2.06	-0.14			222.40	242
8/26/2014 4:12	4	2.115	2.055	1.822	1.696	1,219	881	166	249	2,515	2,100	2.09	-0.11			204.81	223
8/26/2014 5:48	5	2.260	2.276	1.817	1.841	1,200	866	168	246	2,481	2,067	2.27	0.07			202.84	221
8/26/2014 7:24	7	2.415	2.320	2.266	2.213	1,202	830	194	245	2,471	2,032	2.37	0.17			200.76	218
8/26/2014 9:00	9	1.847	2.157	2.356	2.134	1,369	948	219	305	2,842	2,318	2.00	-0.20			217.76	237
8/26/2014 10:36	10	1.892	2.151	1.663	1.947	1,492	998	243	390	3,123	2,490	2.02	-0.18			227.99	248
8/26/2014 12:12	12	1.602	2.315	1.697	1.792	1,525	1,106	404	524	3,558	2,631	1.96	-0.24			236.34	257
8/26/2014 13:48	13	1.800	2.153	1.452	1.299	1,600	1,114	361	473	3,549	2,714	1.98	-0.22			241.31	262
8/26/2014 15:24	15	1.828	2.064	1.239	1.004	1,600	1,091	306	478	3,475	2,691	1.95	-0.25			239.93	261
8/26/2014 17:00	17	1.814	1.897	1.351	1.498	1,600	1,058	354	565	3,578	2,658	1.86	-0.34			237.99	259
8/26/2014 18:36	18	1.817	1.810	1.837	1.606	1,600	1,068	345	561	3,574	2,668	1.81	-0.39			238.58	259
8/26/2014 20:12	20	1.871	2.030	2.293	2.114	1,600	1,087	260	507	3,454	2,687	1.95	-0.25			239.70	261
8/26/2014 21:48	21	1.875	1.944	1.813	2.147	1,600	1,096	257	439	3,393	2,696	1.91	-0.29			240.25	261
8/26/2014 23:24	23	1.808	1.931	1.926	1.743	1,600	1,128	255	467	3,449	2,728	1.87	-0.33			242.10	263
8/27/2014 1:00	1	1.982	2.117	2.301	1.729	1,594	1,094	257	359	3,305	2,688	2.05	-0.15			239.78	261
8/27/2014 2:36	2	2.172	1.843	2.486	1.762	1,451	907	198	300	2,856	2,358	2.01	-0.19			220.15	239
8/27/2014 4:12	4	2.260	1.938	1.588	1.574	1,174	839	164	251	2,427	2,013	2.10	-0.10			199.64	217
8/27/2014 5:48	5	2.222	2.391	2.034	1.889	1,128	835	194	249	2,406	1,963	2.31	0.11			196.71	214
8/27/2014 7:24	7	2.482	2.118	1.899	2.108	1,127	827	170	250	2,373	1,954	2.30	0.10			196.14	213
8/27/2014 9:00	9	2.232	3.963	2.841	3.430	1,504	1,234	223	372	3,333	2,739	3.10	0.90		33.35	242.76	264
8/27/2014 10:36	10	1.987	2.386	2.183	1.934	1,532	985	258	297	3,073	2,518	2.19	-0.01			229.64	250
8/27/2014 12:12	12	1.575	2.084	2.359	2.843	1,396	1,094	572	739	3,801	2,490	1.83	-0.37			227.97	248
8/27/2014 13:48	13	1.500	3.075	4.020	4.257	1,309	1,219	679	880	4,087	2,528	2.29	0.09			230.24	250
8/27/2014 15:24	15	1.592	2.381	2.196	2.627	1,477	1,085	383	537	3,482	2,563	1.99	-0.21			232.31	253
8/27/2014 17:00	17	1.764	1.571	1.257	2.283	1,594	962	325	624	3,505	2,556	1.67	-0.53			231.92	252
8/27/2014 18:36	18	1.975	1.880	2.050	2.823	1,580	1,008	305	536	3,429	2,588	1.93	-0.27			233.81	254
8/27/2014 20:12	20	1.953	2.137	2.059	1.828	1,566	1,023	312	405	3,307	2,589	2.05	-0.15			233.88	254
8/27/2014 21:48	21	1.882	1.884	2.174	2.059	1,593	1,047	302	471	3,412	2,640	1.88	-0.32			236.88	258
8/27/2014 23:24	23	1.920	1.791	1.551	1.764	1,583	1,128	295	461	3,467	2,711	1.86	-0.34			241.14	262
8/28/2014 1:00	1	1.787	2.225	1.879	1.573	1,354	1,055	270	344	3,023	2,408	2.01	-0.19			223.14	243
8/28/2014 2:36	2	1.410	2.066	1.792	1.287	1,135	1,050	311	328	2,824	2,186	1.74	-0.46			209.91	228
8/28/2014 4:12	4	2.597	1.723	1.325	1.668	916	842	209	244	2,210	1,758	2.16	-0.04			184.52	201
8/28/2014 5:48	5	2.528	2.386	2.298	1.801	868	885	254	250	2,257	1,753	2.46	0.26			184.22	200
8/28/2014 7:24	7	2.810	2.693	2.347	2.193	837	917	232	257	2,242	1,754	2.75	0.55		0.11	184.25	200
8/28/2014 9:00	9	1.560	2.260	2.175	1.781	944	979	265	262	2,451	1,923	1.91	-0.29			194.33	211
8/28/2014 10:36	10	1.496	2.282	1.427	1.084	1,198	1,079	398	390	3,065	2,277	1.89	-0.31			215.32	234
8/28/2014 12:12	12	1.883	2.223	1.487	1.495	1,543	1,127	409	567	3,645	2,669	2.05	-0.15			238.65	260
8/28/2014 13:48	13	1.906	1.900	1.201	1.111	1,579	1,111	401	541	3,633	2,691	1.90	-0.30			239.91	261
8/28/2014 15:24	15	1.872	1.877	1.138	1.062	1,595	1,108	399	553	3,655	2,703	1.87	-0.33			240.63	262
8/28/2014 17:00	17	1.899	1.831	1.374	1.084	1,600	1,110	397	555	3,662	2,710	1.87	-0.33			241.05	262

8/28/2014 18:36	18	2.124	1.907	2.054	1.490	1,454	1,126	238	498	3,316	2,580	2.02	-0.18			233.34	254
8/28/2014 20:12	20	1.884	2.024	2.156	1.684	1,508	1,216	298	509	3,531	2,724	1.95	-0.25			241.87	263
8/28/2014 21:48	21	1.953	1.979	1.819	1.861	1,597	1,221	250	676	3,744	2,818	1.97	-0.23			247.44	269
8/28/2014 23:24	23	1.762	1.958	1.605	1.742	1,568	1,274	282	625	3,749	2,843	1.86	-0.34			248.93	271
8/29/2014 1:00	1	2.287	1.804	1.579	1.759	1,511	1,142	233	563	3,448	2,653	2.05	-0.15			237.65	258
8/29/2014 2:36	2	2.421	1.751	1.590	1.693	1,160	966	221	419	2,766	2,126	2.09	-0.11			206.38	224
8/29/2014 4:12	4	2.958	2.369	2.384	1.794	1,055	966	238	398	2,657	2,021	2.66	0.46			200.12	218
8/29/2014 5:48	5	3.994	3.245	3.137	2.452	1,054	978	243	412	2,687	2,032	3.62	1.42		69.06	200.79	218
8/29/2014 7:24	7	4.009	3.604	3.701	2.567	956	955	251	472	2,635	1,912	3.81	1.61		80.91	193.64	211
8/29/2014 9:00	9	2.086	2.489	2.829	2.459	1,013	916	255	566	2,749	1,929	2.29	0.09			194.65	212
8/29/2014 10:36	10	1.738	2.128	1.686	2.032	1,380	1,109	225	695	3,410	2,489	1.93	-0.27			227.93	248
8/29/2014 12:12	12	1.798	2.127	1.539	1.556	1,554	1,198	405	781	3,938	2,752	1.96	-0.24			243.56	265
8/29/2014 13:48	13	1.739	2.102	1.547	1.467	1,543	1,311	417	714	3,985	2,854	1.92	-0.28			249.63	271
8/29/2014 15:24	15	1.822	2.033	1.109	1.214	1,581	1,265	344	575	3,765	2,846	1.93	-0.27			249.12	271
8/29/2014 17:00	17	2.028	1.978	1.695	1.567	1,583	1,168	291	470	3,512	2,751	2.00	-0.20			243.48	265
8/29/2014 18:36	18	2.041	1.886	1.919	1.892	1,460	1,177	231	383	3,251	2,637	1.96	-0.24			236.73	257
8/29/2014 20:12	20	1.934	2.274	2.118	2.050	1,520	1,233	255	414	3,421	2,753	2.10	-0.10			243.62	265
8/29/2014 21:48	21	2.004	2.055	1.967	2.086	1,531	1,186	232	402	3,351	2,717	2.03	-0.17			241.46	263
8/29/2014 23:24	23	1.903	1.934	1.912	1.749	1,516	1,258	230	363	3,368	2,775	1.92	-0.28			244.89	266
8/30/2014 1:00	1	1.949	1.998	3.036	2.205	1,420	1,143	310	377	3,250	2,563	1.97	-0.23			232.33	253
8/30/2014 2:36	2	2.166	2.033	3.362	2.436	1,269	1,032	251	336	2,887	2,300	2.10	-0.10			216.73	236
8/30/2014 4:12	4	2.193	2.352	3.549	2.843	1,224	930	243	324	2,720	2,154	2.27	0.07			208.01	226
8/30/2014 5:48	5	2.813	2.730	4.089	3.360	1,220	926	239	322	2,707	2,146	2.77	0.57		1.80	207.58	226
8/30/2014 7:24	7	3.187	3.367	4.110	3.884	1,220	964	204	318	2,706	2,184	3.28	1.08		43.73	209.80	228
8/30/2014 9:00	9	2.730	2.922	3.797	3.816	1,166	921	188	298	2,574	2,087	2.83	0.63		6.10	204.06	222
8/30/2014 10:36	10	1.810	2.276	2.357	2.688	1,256	881	36	251	2,424	2,137	2.04	-0.16			207.03	225
8/30/2014 12:12	12	1.913	2.041	2.054	1.950	1,513	973	218	326	3,030	2,486	1.98	-0.22			227.73	248
8/30/2014 13:48	13	1.900	1.747	1.795	1.643	1,596	1,154	347	474	3,571	2,750	1.82	-0.38			243.45	265
8/30/2014 15:24	15	1.549	1.738	1.436	1.296	1,594	1,264	325	465	3,647	2,857	1.64	-0.56			249.81	272
8/30/2014 17:00	17	1.519	1.492	1.241	1.050	1,587	1,266	327	460	3,640	2,853	1.51	-0.69			249.53	271
8/30/2014 18:36	18	1.636	1.452	1.477	1.056	1,580	1,285	320	462	3,647	2,865	1.54	-0.66			250.26	272
8/30/2014 20:12	20	1.842	1.903	1.988	1.670	1,573	1,415	249	461	3,697	2,988	1.87	-0.33			257.54	280
8/30/2014 21:48	21	1.985	2.062	2.018	2.163	1,566	1,366	220	401	3,553	2,932	2.02	-0.18			254.22	276
8/30/2014 23:24	23	2.010	2.053	2.170	2.207	1,533	1,277	232	365	3,408	2,810	2.03	-0.17			246.99	269
8/31/2014 1:00	1	1.875	2.096	2.009	1.910	1,467	1,231	194	310	3,201	2,697	1.99	-0.21			240.31	261
8/31/2014 2:36	2	1.845	2.248	2.101	2.125	1,325	1,032	164	272	2,793	2,357	2.05	-0.15			220.10	239
8/31/2014 4:12	4	2.026	2.216	2.342	2.199	1,206	865	142	249	2,462	2,071	2.12	-0.08			203.10	221
8/31/2014 5:48	5	1.985	2.236	2.328	1.990	1,162	831	131	205	2,329	1,993	2.11	-0.09			198.47	216
8/31/2014 7:24	7	1.986	2.208	2.426	1.838	1,122	781	131	208	2,242	1,903	2.10	-0.10			193.10	210
8/31/2014 9:00	9	1.701	2.249	3.433	3.325	1,124	803	233	307	2,467	1,927	1.97	-0.23			194.53	212
8/31/2014 10:36	10	1.742	2.328	3.742	3.973	1,269	866	207	304	2,646	2,135	2.03	-0.17			206.90	225
8/31/2014 12:12	12	1.724	1.943	3.507	3.358	1,520	924	226	314	2,984	2,444	1.83	-0.37			225.25	245
8/31/2014 13:48	13	1.563	2.490	1.973	2.227	1,561	1,240	310	432	3,542	2,801	2.03	-0.17			246.46	268
8/31/2014 15:24	15	1.380	2.356	1.406	1.676	1,591	1,340	301	423	3,656	2,931	1.87	-0.33			254.19	276
8/31/2014 17:00	17	1.334	1.533	1.074	1.152	1,576	1,173	306	370	3,425	2,749	1.43	-0.77			243.40	265
8/31/2014 18:36	18	1.412	1.406	1.296	1.099	1,561	1,194	268	390	3,413	2,755	1.41	-0.79			243.74	265
8/31/2014 20:12	20	1.802	1.655	1.419	1.185	1,547	1,336	237	387	3,507	2,883	1.73	-0.47			251.32	273
8/31/2014 21:48	21	1.296	1.376	1.013	1.181	1,532	1,294	239	394	3,458	2,826	1.34	-0.86			247.95	270
8/31/2014 23:24	23	2.055	1.667	1.784	1.650	1,519	1,299	252	368	3,438	2,818	1.86	-0.34			247.48	269
9/1/2014 1:00	1	2.265	2.022	1.938	2.250	1,337	1,091	168	285	2,881	2,428	2.14	-0.06			224.30	244
9/1/2014 2:36	2	1.710	2.228	1.893	2.443	1,215	939	152	257	2,562	2,154	1.97	-0.23			208.01	226
9/1/2014 4:12	4	2.023	2.121	2.231	2.019	1,169	837	179	213	2,398	2,006	2.07	-0.13			199.24	217
9/1/2014 5:48	5	2.208	2.149	2.458	2.174	1,087	775	172	225	2,260	1,862	2.18	-0.02			190.68	207
9/1/2014 7:24	7	2.322	2.301	2.614	2.533	1,089	776	148	226	2,238	1,865	2.31	0.11			190.84	208
9/1/2014 9:00	9	2.391	1.953	2.747	2.933	1,116	795	102	225	2,238	1,911	2.17	-0.03			193.61	211
9/1/2014 10:36	10	2.011	2.142	2.964	3.374	1,305	932	155	258	2,650	2,237	2.08	-0.12			212.95	232
9/1/2014 12:12	12	1.574	2.260	2.601	2.983	1,528	1,121	192	305	3,145	2,649	1.92	-0.28			237.42	258
9/1/2014 13:48	13	1.617	1.826	1.312	1.223	1,578	1,228	305	332	3,443	2,807	1.72	-0.48			246.81	268
9/1/2014 15:24	15	1.138	1.151	1.424	0.999	1,490	1,262	397	393	3,541	2,751	1.14	-1.06			243.51	265
9/1/2014 17:00	17	1.141	1.257	1.304	1.151	1,600	1,497	382	438	3,917	3,097	1.20	-1.00			264.07	287
9/1/2014 18:36	18	1.083	1.061	0.994	0.985	1,600	1,521	363	469	3,952	3,121	1.07	-1.13			265.46	289
9/1/2014 20:12	20	1.134	1.019	1.270	1.101	1,600	1,560	439	493	4,092	3,160	1.08	-1.12			267.77	291
9/1/2014 21:48	21	1.221	1.079	1.175	1.121	1,600	1,599	309	502	4,011	3,199	1.15	-1.05			270.13	294
9/1/2014 23:24	23	1.487	1.198	1.254	1.518	1,600	1,600	275	447	3,922	3,200	1.34	-0.86			270.16	294
9/2/2014 1:00	1	2.889	1.627	2.058	2.251	1,600	1,600	275	376	3,851	3,200	2.26	0.06			270.16	294
9/2/2014 2:36	2	4.795	2.304	3.477	4.074	1,589	1,598	276	376	3,839	3,187	3.55	1.35		85.19	269.40	293
9/2/2014 4:12	4	3.083	1.822	2.569	2.956	1,082	1,093	150	213	2,537	2,174	2.45	0.25			209.25	228
9/2/2014 5:48	5	2.309	1.732	1.894	2.168	1,054	1,208	194	214	2,670	2,261	2.02	-0.18			214.40	233
9/2/2014 7:24	7	2.200	1.769	2.111	2.548	1,105	1,275	202	223	2,805	2,379	1.98	-0.22			221.42	241
9/2/2014 9:00	9	2.118	1.770	2.691	2.790	1,483	1,515	231	256	3,485	2,998	1.94	-0.26			258.17	281
9/2/2014 10:36	10	1.751	1.500	2.024	1.899	1,558	1,558	257	242	3,615	3,116	1.63	-0.57			265.17	288
9/2/2014 12:12	12	0.962	1.081	1.511	1.455	1,591	1,592	423	429	4,035	3,182	1.02	-1.18			269.12	293
9/2/2014 13:48	13	0.887	0.990	1.811	2.176	1,542	1,506	557	689	4,295	3,049	0.94	-1.26			261.18	284
9/2/2014 15:24	15	1.239	2.526	1.428	1.208	1,598	1,351	406	430	3,785	2,948	1.88	-0.32			255.22	278
9/2/2014 17:00	17	1.441	2.156	1.587	1.228	1,591	1,205	390	465	3,651	2,795	1.80	-0.40			246.13	268
9/2/2014 18:36	18	3.354	2.362	3.669	2.299	1,583	1,219	395	472	3,669	2,802	2.86	0.66	10.51		246.54	268
9/2/2014 20:12	20	3.318	2.666	4.454	3.795	1,576	1,240	401	480	3,696	2,816	2.99	0.79	23.68		247.34	269
9/2/2014 21:48	21	2.856	2.516	4.154	3.760	1,569	1,245	403	482	3,699	2,814	2.69	0.49			247.26	269
9/2/2014 23:24	23	2.381	2.250	3.917	3.509	1,529	1,317	355	445	3,647	2,847	2.32	0.12			249.17	271
9/3/2014 1:00	1	1.837	2.028	2.539	2.024	1,416	1,065	299	300	3,080	2,481	1.93	-0.27			227.45	247
9/3/2014 2:36	2	2.184	2.069	3.190	1.804	1,124	914	253	255	2,546	2,038	2.13	-0.07			201.13	219
9/3/2014 4:12	4	1.828	2.873	1.791	1.991	941	898	198	240	2,277	1,839	2.35	0.15			189.32	206
9/3/2014 5:48	5	2.184	3.647	2.100	2.700	968	930	201	246	2,345	1,898	2.92	0.72		12.62	192.80	210
9/3/2014 7:24	7	2.281	3.871	2.555	3.160	986	936	203	249	2,374	1,922	3.08	0.88		25.04	194.22	211
9/3/2014 9:00	9	2.334	3.978	3.430	3.914	1,418	1,327	297	374	3,415	2,744	3.16	0.96		39.04	243.10	264
9/3/2014 10:36	10	1.985	3.482	3.929	3.940	1,432	1,121	218	288	3,059	2,553	2.73	0.53			231.74	252
9/3/2014 12:12	12	1.841	2.098	2.228	1.191	1,600	1,016	199	233	3,049	2,616	1.97	-0.23			235.50	256
9/3/2014 13:48	13	1.618	2.072	1.361	0.812	1,600	1,051	208	278	3,136	2,651	1.85	-0.35			237.53	258
9/3/2014 15:24	15	1.386	1.915	1.097	0.736	1,600	1,046	210	282	3,137	2,646	1.65	-0.55			237.26	258
9/3/2014 17:00	17	1.256	1.894	0.965	0.671	1,600	1,164	207	277	3,248	2,764	1.58	-0.62			244.24	266
9/3/2014 18:36	18	1.206	1.981	0.997	0.808	1,600	1,184	204	354	3,342	2,784	1.59	-0.61			245.48	267
9/3/2014 20:12	20	1.313	1.923	1.554	1.350	1,600	1,193	211	427	3,430	2,793	1.62	-0.58			245.98	268
9/3/2014 21:48	21	1.089	1.698	2.233	3.032	1,600	1,163	261	551	3,575	2,763	1.39	-0.81			244.21	266
9/3/2014 23:24	23	0.970	1.546	2.054	3.196	1,600	1,159	261	529	3,549	2,759	1.26	-0.94			243.96	265
9/4/2014 1:00	1	1.572	1.730	2.432	2.403	1,600	1,167	238	381	3,384	2,766	1.65	-0.55			244.39	266
9/4/2014 2:36	2	1.769	2.259	2.513	2.639	1,471	1,060	162	285	2,978	2,531	2.01	-0.19			230.44	251
9/4/2014 4:12	4	1.913	2.312	1.732	1.801	1,274	937	57	192	2,459	2,211	2.11	-0.09			211.39	230
9/4/2014 5:48	5	2.184	2.371	1.864	1.940	1,256	859	49	204	2,368	2,115	2.28	0.08			205.72	224
9/4/2014 7:24	7	2.333	2.338	2.516	2.408	1,305	846	62	215	2,428	2,151	2.34	0.14			207.86	226
9/4/2014 9:00	9	1.461	2.310	2.968	2.422	1,524	985	176	252	2,937	2,508	1.89	-0.31			229.08	249
9/4/2014 10:36	10	1.444	2.174	2.281	1.730	1,592	1,009	177	277	3,055	2,601	1.81	-0.39			234.58	255
9/4/2014 12:12	12	1.170	2.318	1.023	0.729	1,572	1,102	172	267	3,112	2,673	1.74	-0.46			238.87	260
9/4/2014 13:48	13	0.937	1.987	1.339	0.970	1,473	1,125	350	459	3,407	2,599	1.46	-0.74			234.43	255
9/4/2014 15:24	15	0.675	2.577	1.157	1.553	1,592	1,400	260	367	3,620	2,992	1.63	-0.57			257.82	280
9/4/2014 17:00	17	0.720	1.291	0.963	0.629	1,600	1,080	268	304	3,252	2,680	1.01	-1.19			239.29	260
9/4/2014 18:36	18	0.615	1.024	0.748	0.567	1,600	1,096	270	307	3,273	2,696	0.82	-1.38			240.21	261
9/4/2014 20:12	20	0.630	1.003	0.869	0.501	1,600	1,120	274	312	3,305	2,720	0.82	-1.38			241.62	263
9/4/2014 21:48	21	0.616	1.003	0.773	0.506	1,600	1,131	276	315	3,322	2,731	0.81	-1.39			242.28	263
9/4/2014 23:24	23	0.596	0.788	0.961	0.508	1,600	1,135	272	315	3,322	2,735	0.69	-1.51			242.55	264
9/5/2014 1:00	1	0.941	0.987	1.551	0.541	1,600	1,161	199	322	3,282	2,761	0.96	-1.24			244.07	265
9/5/2014 2:36	2	2.656	1.952	2.866	0.827	1,582	1,356	214	403	3,555	2,938	2.30	0.10			254.61	277
9/5/2014 4:12	4	2.822	2.914	3.642	3.099	1,499	1,228	202	480	3,409	2,727	2.87	0.67		11.30	242.09	263
9/5/2014 5:48	5	2.495	2.542	3.561	3.917	1,126	801	209	259	2,395	1,926	2.52	0.32			194.50	212
9/5/2014 7:24	7	2.103	2.476	3.505	3.159	1,149	775	213	245	2,382	1,924	2.29	0.09			194.34	211
9/5/2014 9:00	9	1.500	2.169	3.467	2.824	1,506	1,042	176	242	2,966	2,548	1.83	-0.37			231.42	252
9/5/2014 10:36	10	0.831	2.737	1.802	2.258	1,575	1,240	183	337	3,335	2,815	1.78	-0.42			247.31	269
9/5/2014 12:12	12	0.763	2.283	0.855	0.892	1,164	1,237	192	319	2,912	2,401	1.52	-0.68			222.71	242
9/5/2014 13:48	13	0.669	1.837	0.758	0.752	690	1,184	190	312	2,375	1,873	1.25	-0.95			191.36	208
9/5/2014 15:24	15	0.463	1.573	1.062	1.586	1,506	1,242	392	550	3,690	2,748	1.02	-1.18			243.30	265
9/5/2014 17:00	17	0.776	0.922	0.748	0.858	1,590	949	185	378	3,102	2,539	0.85	-1.35			230.88	251
9/5/2014 18:36	18	1.601	1.754	1.371	1.471	1,552	1,226	164	313	3,255	2,779	1.68	-0.52			245.15	267
9/5/2014 20:12	20	1.638	1.837	1.699	1.763	1,588	1,187	131	279	3,186	2,775	1.74	-0.46			244.95	266
9/5/2014 21:48	21	1.651	1.708	1.853	1.806	1,554	1,174	151	304	3,183	2,728	1.68	-0.52			242.12	263
9/5/2014 23:24	23	2.134	1.734	1.527	1.657	1,516	1,226	151	269	3,162	2,742	1.93	-0.27			242.96	264
9/6/2014 1:00	1	1.741	2.241	1.874	1.742	1,510	1,181	193	265	3,149	2,691	1.99	-0.21			239.92	261
9/6/2014 2:36	2	1.670	2.330	3.376	3.262	1,324	959	249	311	2,842	2,282	2.00	-0.20			215.66	235
9/6/2014 4:12	4	1.972	1.975	2.929	2.871	1,041	763	208	251	2,263	1,804	1.97	-0.23			187.26	204
9/6/2014 5:48	5	2.159	2.260	2.783	2.574	980	764	214	238	2,196	1,744	2.21	0.01			183.67	200
9/6/2014 7:24	7	2.453	2.530	2.961	2.840	977	775	214	237	2,204	1,753	2.49	0.29			184.20	200

9/6/2014 9:00	9	2.058	2.366	3.014	2.907	982	779	214	238	2,213	1,761	2.21	0.01			184.68	201
9/6/2014 10:36	10	1.359	2.396	3.185	3.136	1,119	897	239	266	2,522	2,016	1.88	-0.32			199.85	217
9/6/2014 12:12	12	0.830	2.734	3.692	3.620	1,589	1,298	328	366	3,582	2,887	1.78	-0.42			251.60	274
9/6/2014 13:48	13	0.610	2.038	1.725	1.520	1,561	1,306	326	410	3,603	2,868	1.32	-0.88			250.43	272
9/6/2014 15:24	15	0.394	1.388	2.190	2.593	1,504	1,241	462	633	3,839	2,745	0.89	-1.31			243.13	264
9/6/2014 17:00	17	0.595	1.049	0.715	0.795	1,596	1,204	156	363	3,318	2,800	0.82	-1.38			246.38	268
9/6/2014 18:36	18	0.959	1.168	0.750	0.897	1,578	1,232	135	309	3,255	2,811	1.06	-1.14			247.04	269
9/6/2014 20:12	20	1.905	1.925	1.899	1.660	1,561	1,403	197	305	3,466	2,964	1.91	-0.29			256.14	279
9/6/2014 21:48	21	1.606	1.796	2.225	1.957	1,543	1,161	188	273	3,165	2,704	1.70	-0.50			240.71	262
9/6/2014 23:24	23	2.124	1.810	2.480	2.277	1,526	1,243	190	291	3,250	2,769	1.97	-0.23			244.53	266
9/7/2014 1:00	1	2.149	2.086	2.147	2.104	1,510	1,087	145	243	2,985	2,597	2.12	-0.08			234.32	255
9/7/2014 2:36	2	1.879	2.036	2.000	1.910	1,403	971	113	224	2,711	2,373	1.96	-0.24			221.06	240
9/7/2014 4:12	4	2.180	1.913	1.871	1.741	1,242	841	65	196	2,343	2,083	2.05	-0.15			203.80	222
9/7/2014 5:48	5	2.322	1.978	1.777	1.793	1,154	818	39	184	2,196	1,972	2.15	-0.05			197.25	215
9/7/2014 7:24	7	2.965	1.917	2.081	2.346	1,154	832	69	186	2,240	1,986	2.44	0.24			198.03	215
9/7/2014 9:00	9	2.389	2.043	3.079	2.901	1,131	876	190	209	2,406	2,007	2.22	0.02			199.30	217
9/7/2014 10:36	10	1.775	2.117	3.283	3.322	1,322	1,039	188	223	2,772	2,361	1.95	-0.25			220.33	240
9/7/2014 12:12	12	0.927	2.026	2.920	2.692	1,582	1,164	195	267	3,209	2,746	1.48	-0.72			243.19	264
9/7/2014 13:48	13	0.645	2.043	2.278	2.582	1,542	1,457	521	595	4,116	2,999	1.34	-0.86			258.25	281
9/7/2014 15:24	15	0.593	1.999	1.586	1.975	1,600	1,455	347	506	3,908	3,055	1.30	-0.90			261.56	284
9/7/2014 17:00	17	0.617	1.197	0.932	0.799	1,600	1,321	210	288	3,419	2,921	0.91	-1.29			253.60	276
9/7/2014 18:36	18	0.826	1.128	1.250	0.677	1,600	1,350	167	286	3,402	2,950	0.98	-1.22			255.32	278
9/7/2014 20:12	20	0.964	1.325	1.917	1.596	1,600	1,475	166	308	3,548	3,075	1.14	-1.06			262.71	286
9/7/2014 21:48	21	1.098	1.310	1.653	1.547	1,600	1,460	170	266	3,497	3,060	1.20	-1.00			261.87	285
9/7/2014 23:24	23	0.965	0.910	1.475	0.851	1,600	1,394	174	278	3,447	2,994	0.94	-1.26			257.95	281
9/8/2014 1:00	1	1.871	1.998	2.008	1.764	1,600	1,600	162	265	3,628	3,200	1.93	-0.27			270.16	294
9/8/2014 2:36	2	2.029	2.217	2.431	2.136	1,474	1,330	150	195	3,149	2,804	2.12	-0.08			246.65	268
9/8/2014 4:12	4	1.971	1.898	2.463	1.819	1,359	1,156	141	170	2,826	2,515	1.93	-0.27			229.48	250
9/8/2014 5:48	5	2.148	2.230	2.497	2.115	1,241	1,186	110	174	2,711	2,427	2.19	-0.01			224.23	244
9/8/2014 7:24	7	2.119	2.218	2.608	2.735	1,282	1,230	119	187	2,818	2,512	2.17	-0.03			229.30	249
9/8/2014 9:00	9	1.491	2.113	3.673	3.121	1,580	1,331	254	283	3,447	2,910	1.80	-0.40			252.96	275
9/8/2014 10:36	10	0.608	1.910	4.405	4.137	1,542	1,535	446	533	4,057	3,077	1.26	-0.94			262.85	286
9/8/2014 12:12	12	0.661	2.120	1.169	0.627	1,600	1,599	205	226	3,630	3,199	1.39	-0.81			270.12	294
9/8/2014 13:48	13	0.581	1.764	0.674	0.410	1,600	1,598	204	224	3,627	3,198	1.17	-1.03			270.05	294
9/8/2014 15:24	15	0.557	1.524	1.364	0.762	1,600	1,597	368	385	3,951	3,197	1.04	-1.16			269.99	294
9/8/2014 17:00	17	0.629	1.484	3.941	1.100	1,600	1,596	397	418	4,011	3,196	1.06	-1.14			269.92	294
9/8/2014 18:36	18	0.775	1.615	4.977	2.703	1,600	1,595	400	422	4,017	3,195	1.19	-1.01			269.86	293
9/8/2014 20:12	20	0.848	1.919	4.868	4.168	1,599	1,594	403	425	4,023	3,194	1.38	-0.82			269.79	293
9/8/2014 21:48	21	0.704	1.760	4.700	4.108	1,599	1,593	407	430	4,030	3,193	1.23	-0.97			269.73	293
9/8/2014 23:24	23	0.725	1.690	4.467	4.012	1,599	1,592	331	386	3,909	3,192	1.21	-0.99			269.67	293
9/9/2014 1:00	1	1.662	2.170	2.990	1.413	1,593	1,558	123	191	3,464	3,150	1.92	-0.28			267.21	291
9/9/2014 2:36	2	1.919	1.845	2.271	1.421	1,369	1,290	35	166	2,860	2,659	1.88	-0.32			238.01	259
9/9/2014 4:12	4	2.560	2.031	2.202	2.043	1,283	1,223	20	194	2,721	2,506	2.30	0.10			228.96	249
9/9/2014 5:48	5	3.055	2.459	2.777	3.358	1,281	1,226	22	210	2,740	2,507	2.76	0.56		0.64	229.01	249
9/9/2014 7:24	7	3.137	2.514	3.145	3.636	1,278	1,231	29	199	2,736	2,508	2.83	0.63		6.84	229.08	249
9/9/2014 9:00	9	1.678	2.257	3.551	2.903	1,490	1,417	171	168	3,245	2,906	1.97	-0.23			252.71	275
9/9/2014 10:36	10	0.893	1.843	3.396	1.763	1,600	1,600	204	214	3,618	3,200	1.37	-0.83			270.16	294
9/9/2014 12:12	12	0.654	1.354	1.719	1.679	1,600	1,524	309	459	3,892	3,124	1.00	-1.20			265.66	289
9/9/2014 13:48	13	0.560	1.320	0.966	1.015	1,600	1,600	207	310	3,718	3,200	0.94	-1.26			270.16	294
9/9/2014 15:24	15	0.529	1.180	1.025	0.582	1,600	1,600	225	292	3,717	3,200	0.85	-1.35			270.16	294
9/9/2014 17:00	17	0.951	1.365	3.588	1.233	1,600	1,600	258	315	3,773	3,200	1.16	-1.04			270.16	294
9/9/2014 18:36	18	1.762	1.996	4.681	3.611	1,600	1,600	256	311	3,767	3,200	1.88	-0.32			270.16	294
9/9/2014 20:12	20	1.149	1.884	4.654	3.936	1,600	1,600	260	317	3,777	3,200	1.52	-0.68			270.16	294
9/9/2014 21:48	21	0.621	1.543	4.299	3.403	1,600	1,600	262	319	3,781	3,200	1.08	-1.12			270.16	294
9/9/2014 23:24	23	0.443	1.258	3.595	2.863	1,600	1,600	200	284	3,684	3,200	0.85	-1.35			270.16	294
9/10/2014 1:00	1	1.403	1.918	1.740	1.355	1,600	1,600	10	171	3,381	3,200	1.66	-0.54			270.16	294
9/10/2014 2:36	2	2.207	2.032	1.786	1.529	1,509	1,507	8	115	3,140	3,016	2.12	-0.08			259.25	282
9/10/2014 4:12	4	2.330	1.693	1.712	1.755	1,321	1,318	7	55	2,701	2,639	2.01	-0.19			236.84	258
9/10/2014 5:48	5	2.605	1.681	2.247	2.025	1,232	1,278	7	113	2,629	2,510	2.14	-0.06			229.18	249
9/10/2014 7:24	7	2.454	1.748	2.653	2.782	1,210	1,328	62	139	2,739	2,538	2.10	-0.10			230.85	251
9/10/2014 9:00	9	1.265	1.983	3.397	3.157	1,508	1,482	166	170	3,325	2,990	1.62	-0.58			257.67	280
9/10/2014 10:36	10	0.744	1.819	3.576	2.887	1,600	1,600	170	172	3,542	3,200	1.28	-0.92			270.16	294
9/10/2014 12:12	12	0.566	1.506	1.633	0.775	1,600	1,600	192	177	3,569	3,200	1.04	-1.16			270.16	294
9/10/2014 13:48	13	0.522	1.340	1.929	0.649	1,600	1,600	261	219	3,680	3,200	0.93	-1.27			270.16	294
9/10/2014 15:24	15	0.529	1.290	1.538	1.221	1,600	1,600	184	286	3,670	3,200	0.91	-1.29			270.16	294
9/10/2014 17:00	17	0.592	1.160	2.219	1.537	1,600	1,600	171	254	3,624	3,200	0.88	-1.32			270.16	294
9/10/2014 18:36	18	1.140	1.437	3.086	2.384	1,600	1,600	165	193	3,558	3,200	1.29	-0.91			270.16	294
9/10/2014 20:12	20	0.788	1.276	3.167	1.861	1,600	1,600	150	138	3,488	3,200	1.03	-1.17			270.16	294
9/10/2014 21:48	21	0.458	1.027	2.336	1.007	1,600	1,600	139	176	3,515	3,200	0.74	-1.46			270.16	294
9/10/2014 23:24	23	0.379	0.799	1.818	0.681	1,600	1,600	92	174	3,467	3,200	0.59	-1.61			270.16	294
9/11/2014 1:00	1	0.962	0.950	1.381	1.134	1,600	1,600	9	169	3,378	3,200	0.96	-1.24			270.16	294
9/11/2014 2:36	2	2.611	1.290	2.011	2.196	1,579	1,587	8	125	3,300	3,167	1.95	-0.25			268.19	292
9/11/2014 4:12	4	2.463	1.239	1.726	1.838	1,305	1,580	8	41	2,934	2,885	1.85	-0.35			251.44	273
9/11/2014 5:48	5	2.511	1.552	2.456	2.732	1,156	1,579	8	38	2,781	2,735	2.03	-0.17			242.54	264
9/11/2014 7:24	7	2.166	1.460	2.362	2.316	1,164	1,559	34	52	2,809	2,723	1.81	-0.39			241.84	263
9/11/2014 9:00	9	1.503	1.308	3.734	3.645	1,598	1,547	151	161	3,456	3,145	1.41	-0.79			266.89	290
9/11/2014 10:36	10	0.466	0.873	2.621	1.730	1,277	1,228	136	151	2,792	2,505	0.67	-1.53			228.91	249
9/11/2014 12:12	12	0.322	0.583	1.244	1.515	947	910	283	420	2,561	1,857	0.45	-1.75			190.39	207
9/11/2014 13:48	13	0.284	0.501	1.084	1.181	618	591	282	377	1,867	1,209	0.39	-1.81			151.87	165
9/11/2014 15:24	15	0.319	0.447	1.362	0.743	445	432	253	274	1,404	878	0.38	-1.82			132.21	144
9/11/2014 17:00	17	0.672	0.513	3.087	1.022	1,595	1,600	201	170	3,565	3,195	0.59	-1.61			269.86	293
9/11/2014 18:36	18	0.870	0.610	3.666	1.583	1,546	1,600	204	138	3,488	3,146	0.74	-1.46			266.98	290
9/11/2014 20:12	20	0.695	0.621	3.519	1.606	1,589	1,600	203	140	3,532	3,189	0.66	-1.54			269.50	293
9/11/2014 21:48	21	0.449	0.527	3.512	0.999	1,600	1,600	204	145	3,549	3,200	0.49	-1.71			270.16	294
9/11/2014 23:24	23	0.385	0.474	3.285	0.718	1,600	1,600	211	165	3,576	3,200	0.43	-1.77			270.16	294
9/12/2014 1:00	1	1.559	0.383	3.205	2.323	1,600	1,600	153	248	3,600	3,200	0.97	-1.23			270.16	294
9/12/2014 2:36	2	3.553	0.707	3.963	4.440	1,564	1,560	160	251	3,535	3,124	2.13	-0.07			265.64	289
9/12/2014 4:12	4	4.758	0.799	4.648	4.998	1,505	1,497	161	253	3,416	3,002	2.78	0.58		2.88	258.40	281
9/12/2014 5:48	5	4.702	0.833	4.989	4.930	1,449	1,435	197	295	3,377	2,884	2.77	0.57		1.73	251.40	273
9/12/2014 7:24	7	3.569	0.512	4.999	4.856	1,291	1,286	251	239	3,067	2,577	2.04	-0.16			233.17	254
9/12/2014 9:00	9	2.280	0.426	4.784	4.624	1,600	1,600	146	209	3,555	3,200	1.35	-0.85			270.16	294
9/12/2014 10:36	10	0.473	0.296	3.029	2.123	1,436	1,418	129	190	3,173	2,854	0.38	-1.82			249.59	271
9/12/2014 12:12	12	0.349	0.184	1.158	0.613	1,271	1,236	220	237	2,964	2,507	0.27	-1.93			229.01	249
9/12/2014 13:48	13	0.330	0.174	1.305	0.601	1,107	1,054	221	237	2,619	2,161	0.25	-1.95			208.43	227
9/12/2014 15:24	15	0.359	0.152	2.529	0.614	953	883	208	229	2,273	1,836	0.26	-1.94			189.12	206
9/12/2014 17:00	17	1.125	0.191	2.836	1.440	1,579	1,600	83	126	3,388	3,179	0.66	-1.54			268.90	292
9/12/2014 18:36	18	1.121	0.197	2.756	1.445	1,600	1,600	70	106	3,375	3,200	0.66	-1.54			270.16	294
9/12/2014 20:12	20	0.567	0.211	2.321	1.328	1,600	1,600	77	110	3,386	3,200	0.39	-1.81			270.16	294
9/12/2014 21:48	21	0.531	0.213	2.039	1.145	1,600	1,600	91	118	3,409	3,200	0.37	-1.83			270.16	294
9/12/2014 23:24	23	0.845	0.178	2.300	1.262	1,600	1,600	101	130	3,431	3,200	0.51	-1.69			270.16	294
9/13/2014 1:00	1	2.601	0.178	3.029	1.647	1,600	1,600	99	143	3,442	3,200	1.39	-0.81			270.16	294
9/13/2014 2:36	2	3.678	0.226	3.936	2.613	1,600	1,600	100	167	3,466	3,200	1.95	-0.25			270.16	294
9/13/2014 4:12	4	4.745	0.256	4.563	3.880	1,600	1,600	102	185	3,487	3,200	2.50	0.30			270.15	294
9/13/2014 5:48	5	4.994	0.271	4.938	4.558	1,600	1,600	103	186	3,488	3,200	2.63	0.43			270.15	294
9/13/2014 7:24	7	4.942	0.318	4.999	4.911	1,600	1,600	103	186	3,488	3,200	2.63	0.43			270.14	294
9/13/2014 9:00	9	4.856	0.302	4.997	4.930	1,600	1,600	97	184	3,481	3,200	2.58	0.38			270.13	294
9/13/2014 10:36	10	3.468	0.258	4.939	4.427	1,599	1,600	87	177	3,464	3,199	1.86	-0.34			270.13	294
9/13/2014 12:12	12	1.196	0.215	3.980	3.297	1,599	1,600	86	174	3,459	3,199	0.71	-1.49			270.12	294
9/13/2014 13:48	13	0.411	0.156	0.879	0.634	1,599	1,600	83	171	3,454	3,199	0.28	-1.92			270.11	294
9/13/2014 15:24	15	0.343	0.168	0.782	0.509	1,599	1,600	216	211	3,626	3,199	0.26	-1.94			270.11	294
9/13/2014 17:00	17	0.332	0.143	0.480	0.324	1,599	1,600	162	144	3,505	3,199	0.24	-1.96			270.10	294
9/13/2014 18:36	18	0.495	0.155	1.451	0.327	1,599	1,600	138	140	3,477	3,199	0.32	-1.88			270.09	294
9/13/2014 20:12	20	0.980	0.144	2.080	0.288	1,599	1,600	137	137	3,473	3,199	0.56	-1.64			270.09	294
9/13/2014 21:48	21	1.628	0.169	2.710	0.413	1,599	1,600	138	134	3,471	3,199	0.90	-1.30			270.08	294
9/13/2014 23:24	23	2.097	0.158	3.178	0.993	1,599	1,600	129	140	3,468	3,199	1.13	-1.07			270.08	294
9/14/2014 1:00	1	1.986	0.166	1.993	1.681	1,599	1,600	8	142	3,350	3,199	1.08	-1.12			270.13	294
9/14/2014 2:36	2	2.412	0.189	1.791	2.099	1,523	1,600	17	74	3,214	3,123	1.30	-0.90			265.59	289
9/14/2014 4:12	4	2.864	0.206	2.741	2.778	1,386	1,600	12	80	3,078	2,986	1.53	-0.67			257.45	280
9/14/2014 5:48	5	3.139	0.207	3.189	3.546	1,390	1,600	14	82	3,086	2,990	1.67	-0.53			257.67	280
9/14/2014 7:24	7	3.445	0.189	3.689	4.061	1,393	1,600	59	106	3,158	2,993	1.82	-0.38			257.89	280
9/14/2014 9:00	9	3.225	0.211	4.816	4.947	1,358	1,600	200	174	3,332	2,958	1.72	-0.48			255.80	278
9/14/2014 10:36	10	2.855	0.177	4.887	4.597	1,547	1,600	198	171	3,516	3,147	1.52	-0.68			267.03	290
9/14/2014 12:12	12	1.183	0.134	4.255	2.971	1,600	1,600	156	169	3,526	3,200	0.66	-1.54			270.16	294
9/14/2014 13:48	13	0.436	0.126	1.314	0.720	1,600	1,600	235	269	3,705	3,200	0.28	-1.92			270.16	294
9/14/2014 15:24	15	0.355	0.115	0.860	0.859	1,600	1,600	233	308	3,741	3,200	0.24	-1.96			270.16	294
9/14/2014 17:00	17	0.352	0.110	0.253	0.275	1,600	1,600	116	108	3,423	3,200	0.23	-1.97			270.16	294
9/14/2014 18:36	18	0.671	0.111	0.932	0.247	1,600	1,600	117	110	3,427	3,200	0.39	-1.81			270.16	294
9/14/2014 20:12	20	1.213	0.108	1.846	0.239	1,600	1,600	130	124	3,453	3,200	0.66	-1.54			270.16	294
9/14/2014 21:48	21	1.035	0.109	1.836	0.260	1,600	1,600	137	145	3,482	3,200	0.57	-1.63			270.16	294

9/14/2014 23:24	23	1.106	0.113	1.244	0.247	1,600	1,600	128	159	3,487	3,200	0.61	-1.59			270.16	294
9/15/2014 1:00	1	2.036	0.118	1.203	0.576	1,600	1,600	19	153	3,372	3,200	1.08	-1.12			270.16	294
9/15/2014 2:36	2	2.364	0.123	1.503	1.491	1,480	1,410	17	100	3,008	2,890	1.24	-0.96			251.77	274
9/15/2014 4:12	4	3.156	0.172	1.903	1.773	1,482	1,107	18	33	2,641	2,589	1.66	-0.54			233.88	254
9/15/2014 5:48	5	3.494	0.210	2.542	2.385	1,488	803	21	36	2,348	2,291	1.85	-0.35			216.16	235
9/15/2014 7:24	7	3.579	0.145	2.819	2.847	1,485	500	17	33	2,035	1,985	1.86	-0.34			197.97	215
9/15/2014 9:00	9	1.065	0.126	2.487	2.260	1,458	660	9	12	2,139	2,117	0.60	-1.60			205.84	224
9/15/2014 10:36	10	0.451	0.115	1.697	1.500	1,599	1,578	189	192	3,559	3,177	0.28	-1.92			268.80	292
9/15/2014 12:12	12	0.420	0.395	1.278	1.239	1,598	1,512	301	332	3,744	3,111	0.41	-1.79			264.85	288
9/15/2014 13:48	13	0.309	0.251	1.165	1.312	1,474	1,460	449	495	3,878	2,934	0.28	-1.92			254.34	277
9/15/2014 15:24	15	0.309	0.167	1.390	1.251	1,600	1,600	347	389	3,937	3,200	0.24	-1.96			270.16	294
9/15/2014 17:00	17	0.428	0.172	2.947	1.549	1,600	1,600	295	392	3,888	3,200	0.30	-1.90			270.16	294
9/15/2014 18:36	18	0.950	0.167	4.326	3.854	1,600	1,600	296	394	3,890	3,200	0.56	-1.64			270.16	294
9/15/2014 20:12	20	0.853	0.159	3.938	4.027	1,600	1,600	202	329	3,731	3,200	0.51	-1.69			270.16	294
9/15/2014 21:48	21	0.489	0.141	1.865	3.055	1,600	1,600	82	291	3,573	3,200	0.31	-1.89			270.16	294
9/15/2014 23:24	23	0.455	0.149	0.012	2.259	1,600	1,600	6	214	3,419	3,200	0.30	-1.90			270.16	294
9/16/2014 1:00	1	1.245	0.149	0.622	0.238	1,600	1,600	17	7	3,224	3,200	0.70	-1.50			270.16	294
9/16/2014 2:36	2	2.917	0.177	1.647	0.418	1,574	1,600	18	9	3,200	3,174	1.55	-0.65			268.60	292
9/16/2014 4:12	4	2.999	0.195	1.551	1.516	1,415	1,600	29	9	3,053	3,015	1.60	-0.60			259.15	282
9/16/2014 5:48	5	3.116	0.210	1.964	2.302	1,361	1,600	156	10	3,127	2,961	1.66	-0.54			255.96	278
9/16/2014 7:24	7	2.868	0.253	3.475	2.719	1,256	1,600	197	10	3,063	2,856	1.56	-0.64			249.72	272
9/16/2014 9:00	9	0.465	0.245	3.065	2.461	1,343	1,600	191	73	3,206	2,943	0.36	-1.84			254.87	277
9/16/2014 10:36	10	0.464	0.197	2.280	2.861	1,599	1,600	173	275	3,647	3,199	0.33	-1.87			270.09	294
9/16/2014 12:12	12	0.369	0.162	0.897	1.506	1,596	1,600	263	281	3,740	3,196	0.27	-1.93			269.95	294
9/16/2014 13:48	13	0.351	0.133	1.011	1.047	1,594	1,600	314	327	3,834	3,194	0.24	-1.96			269.79	293
9/16/2014 15:24	15	0.398	0.120	1.693	1.296	1,600	1,600	311	395	3,906	3,200	0.26	-1.94			270.16	294
9/16/2014 17:00	17	0.498	0.111	3.013	1.936	1,600	1,600	290	398	3,889	3,200	0.30	-1.90			270.16	294
9/16/2014 18:36	18	0.999	0.116	4.489	4.353	1,600	1,600	291	401	3,892	3,200	0.56	-1.64			270.16	294
9/16/2014 20:12	20	0.714	0.117	4.550	4.807	1,600	1,600	294	405	3,899	3,200	0.42	-1.78			270.16	294
9/16/2014 21:48	21	0.436	0.106	3.994	4.366	1,600	1,600	296	409	3,905	3,200	0.27	-1.93			270.16	294
9/16/2014 23:24	23	0.394	0.106	2.508	3.721	1,600	1,600	122	289	3,611	3,200	0.25	-1.95			270.16	294
9/17/2014 1:00	1	1.465	0.106	0.716	0.537	1,600	1,600	9	18	3,227	3,200	0.79	-1.41			270.16	294
9/17/2014 2:36	2	2.654	0.112	1.704	1.018	1,455	1,399	37	36	2,927	2,854	1.38	-0.82			249.63	271
9/17/2014 4:12	4	3.029	0.118	2.085	2.349	1,346	1,078	10	54	2,488	2,424	1.57	-0.63			224.06	244
9/17/2014 5:48	5	3.527	0.128	2.058	3.150	1,327	757	11	54	2,149	2,083	1.83	-0.37			203.83	222
9/17/2014 7:24	7	3.618	0.136	2.690	3.710	1,325	435	10	51	1,821	1,760	1.88	-0.32			184.64	201
9/17/2014 9:00	9	2.484	0.631	2.839	4.726	1,049	1,038	175	250	2,513	2,087	1.56	-0.64			204.08	222
9/17/2014 10:36	10	2.307	1.324	1.457	3.933	878	1,590	284	273	3,024	2,467	1.82	-0.38			226.64	246
9/17/2014 12:12	12	2.086	1.229	1.545	2.164	925	1,598	371	289	3,184	2,523	1.66	-0.54			229.97	250
9/17/2014 13:48	13	2.358	1.088	1.896	2.263	995	1,580	382	300	3,257	2,575	1.72	-0.48			233.05	253
9/17/2014 15:24	15	2.281	0.636	2.503	2.580	966	1,090	297	328	2,681	2,056	1.46	-0.74			202.22	220
9/17/2014 17:00	17	2.226	0.572	1.941	2.598	985	1,068	256	329	2,638	2,053	1.40	-0.80			202.02	220
9/17/2014 18:36	18	2.189	0.577	2.324	1.882	990	1,068	283	287	2,628	2,058	1.38	-0.82			202.30	220
9/17/2014 20:12	20	2.206	0.532	1.894	1.732	1,033	1,111	292	304	2,740	2,144	1.37	-0.83			207.46	226
9/17/2014 21:48	21	2.440	0.647	1.862	1.935	999	1,069	389	412	2,869	2,067	1.54	-0.66			202.88	221
9/17/2014 23:24	23	2.331	0.636	2.122	2.500	1,007	1,080	445	386	2,919	2,087	1.48	-0.72			204.07	222
9/18/2014 1:00	1	3.197	0.853	1.849	1.794	1,059	1,179	334	267	2,839	2,238	2.03	-0.17			213.03	232
9/18/2014 2:36	2	3.023	0.940	1.716	1.677	881	1,007	314	242	2,444	1,888	1.98	-0.22			192.22	209
9/18/2014 4:12	4	2.850	0.978	1.892	1.636	784	946	320	246	2,295	1,729	1.91	-0.29			182.80	199
9/18/2014 5:48	5	2.952	1.105	2.193	1.956	773	941	320	250	2,284	1,714	2.03	-0.17			181.90	198
9/18/2014 7:24	7	3.322	1.026	2.416	2.225	761	813	297	260	2,131	1,574	2.17	-0.03			173.56	189
9/18/2014 9:00	9	2.271	0.883	2.085	2.779	644	753	307	306	2,010	1,397	1.58	-0.62			163.08	177
9/18/2014 10:36	10	2.886	0.626	2.540	2.169	756	673	313	281	2,023	1,429	1.76	-0.44			164.97	179
9/18/2014 12:12	12	2.613	0.778	2.043	2.185	773	830	362	368	2,333	1,603	1.70	-0.50			175.32	191
9/18/2014 13:48	13	1.881	0.508	2.032	2.186	784	956	386	378	2,504	1,740	1.19	-1.01			183.46	200
9/18/2014 15:24	15	2.118	0.531	2.016	1.986	834	859	397	370	2,460	1,693	1.32	-0.88			180.66	196
9/18/2014 17:00	17	2.261	0.403	2.145	2.377	828	815	388	436	2,467	1,642	1.33	-0.87			177.63	193
9/18/2014 18:36	18	2.170	0.513	1.974	2.293	808	903	390	401	2,503	1,711	1.34	-0.86			181.73	198
9/18/2014 20:12	20	2.190	0.498	2.233	2.110	842	942	407	380	2,570	1,783	1.34	-0.86			186.02	202
9/18/2014 21:48	21	2.033	0.461	2.264	2.122	883	984	407	385	2,660	1,868	1.25	-0.95			191.02	208
9/18/2014 23:24	23	2.122	0.396	1.899	1.882	962	1,061	378	393	2,794	2,022	1.26	-0.94			200.21	218
9/19/2014 1:00	1	2.145	0.499	2.084	2.104	921	1,099	407	405	2,833	2,020	1.32	-0.88			200.07	218
9/19/2014 2:36	2	2.880	0.740	2.508	2.540	939	1,127	416	414	2,896	2,066	1.81	-0.39			202.82	221
9/19/2014 4:12	4	3.592	1.050	3.045	3.195	958	1,156	424	422	2,959	2,114	2.32	0.12			205.63	224
9/19/2014 5:48	5	4.011	1.241	3.628	3.820	975	1,180	430	428	3,014	2,155	2.63	0.43			208.09	226
9/19/2014 7:24	7	4.280	1.346	3.869	4.087	967	1,207	409	402	2,985	2,174	2.81	0.61		5.21	209.22	228
9/19/2014 9:00	9	3.939	1.428	3.639	3.786	830	1,022	346	324	2,522	1,852	2.68	0.48			190.09	207
9/19/2014 10:36	10	3.071	1.766	2.880	2.889	702	703	332	315	2,053	1,406	2.42	0.22			163.59	178
9/19/2014 12:12	12	1.996	0.772	2.407	2.553	618	762	342	324	2,046	1,380	1.38	-0.82			162.05	176
9/19/2014 13:48	13	1.898	0.648	2.059	2.230	669	834	356	334	2,193	1,503	1.27	-0.93			169.34	184
9/19/2014 15:24	15	1.978	0.580	1.963	2.304	737	853	348	352	2,290	1,590	1.28	-0.92			174.54	190
9/19/2014 17:00	17	2.367	0.534	2.088	2.100	802	860	374	357	2,392	1,662	1.45	-0.75			178.80	194
9/19/2014 18:36	18	2.327	0.570	2.074	1.957	807	951	355	342	2,454	1,758	1.45	-0.75			184.50	201
9/19/2014 20:12	20	2.167	0.546	2.033	1.988	822	971	369	356	2,519	1,794	1.36	-0.84			186.62	203
9/19/2014 21:48	21	2.120	0.518	2.015	1.897	830	981	373	359	2,543	1,811	1.32	-0.88			187.66	204
9/19/2014 23:24	23	2.043	0.489	1.946	1.891	843	1,028	366	371	2,608	1,871	1.27	-0.93			191.20	208
9/20/2014 1:00	1	2.268	0.630	1.915	2.126	849	1,067	356	381	2,653	1,916	1.45	-0.75			193.91	211
9/20/2014 2:36	2	2.572	0.791	2.117	2.361	848	1,066	355	380	2,649	1,913	1.68	-0.52			193.74	211
9/20/2014 4:12	4	2.933	0.896	2.142	2.565	838	1,053	350	375	2,617	1,892	1.91	-0.29			192.45	209
9/20/2014 5:48	5	2.976	0.977	2.348	2.791	844	1,046	354	379	2,623	1,890	1.98	-0.22			192.35	209
9/20/2014 7:24	7	3.257	0.937	2.691	2.992	845	940	361	387	2,533	1,785	2.10	-0.10			186.12	202
9/20/2014 9:00	9	3.201	0.915	3.029	3.081	826	919	352	378	2,474	1,744	2.06	-0.14			183.70	200
9/20/2014 10:36	10	2.727	0.790	2.884	2.803	769	860	328	356	2,313	1,629	1.76	-0.44			176.84	192
9/20/2014 12:12	12	2.485	0.723	2.237	2.578	739	827	315	344	2,225	1,566	1.60	-0.60			173.12	188
9/20/2014 13:48	13	1.935	0.525	1.831	2.267	802	889	340	373	2,405	1,691	1.23	-0.97			180.55	196
9/20/2014 15:24	15	1.945	0.494	2.128	2.456	1,005	1,036	378	408	2,827	2,041	1.22	-0.98			201.33	219
9/20/2014 17:00	17	2.189	0.390	1.410	1.396	993	999	312	348	2,652	1,993	1.29	-0.91			198.44	216
9/20/2014 18:36	18	1.877	0.409	1.509	1.457	949	1,060	393	383	2,784	2,008	1.14	-1.06			199.38	217
9/20/2014 20:12	20	1.932	0.459	2.054	2.076	987	1,111	462	463	3,023	2,098	1.20	-1.00			204.72	223
9/20/2014 21:48	21	2.003	0.394	1.807	1.702	996	1,022	420	419	2,857	2,018	1.20	-1.00			199.95	217
9/20/2014 23:24	23	1.876	0.396	1.747	1.693	961	1,029	423	423	2,837	1,990	1.14	-1.06			198.29	216
9/21/2014 1:00	1	2.017	0.452	1.709	1.634	956	1,053	379	388	2,776	2,009	1.23	-0.97			199.41	217
9/21/2014 2:36	2	2.221	0.607	1.090	1.180	932	1,133	287	308	2,661	2,066	1.41	-0.79			202.79	221
9/21/2014 4:12	4	2.417	0.631	1.554	1.409	945	1,028	329	338	2,639	1,973	1.52	-0.68			197.28	215
9/21/2014 5:48	5	2.507	0.570	2.277	1.547	935	984	312	358	2,588	1,919	1.54	-0.66			194.07	211
9/21/2014 7:24	7	2.598	0.641	1.652	1.815	988	1,014	287	387	2,676	2,002	1.62	-0.58			198.99	216
9/21/2014 9:00	9	4.379	1.114	3.676	2.886	1,255	1,222	374	455	3,305	2,476	2.75	0.55			227.18	247
9/21/2014 10:36	10	3.035	1.029	3.719	3.725	709	967	303	357	2,336	1,676	2.03	-0.17			179.61	195
9/21/2014 12:12	12	2.077	0.957	1.996	3.246	671	864	301	293	2,129	1,535	1.52	-0.68			171.27	186
9/21/2014 13:48	13	1.793	0.618	1.641	1.699	786	888	392	318	2,383	1,673	1.21	-0.99			179.48	195
9/21/2014 15:24	15	1.816	0.542	1.766	1.595	864	988	484	362	2,699	1,853	1.18	-1.02			190.13	207
9/21/2014 17:00	17	1.871	0.541	1.874	1.724	971	1,083	532	440	3,026	2,054	1.21	-0.99			202.11	220
9/21/2014 18:36	18	1.985	0.509	1.792	1.743	1,001	1,070	515	458	3,044	2,071	1.25	-0.95			203.12	221
9/21/2014 20:12	20	1.891	0.505	1.728	1.626	1,073	1,091	518	461	3,144	2,164	1.20	-1.00			208.65	227
9/21/2014 21:48	21	1.899	0.458	1.646	1.634	1,172	1,152	527	500	3,350	2,323	1.18	-1.02			218.08	237
9/21/2014 23:24	23	1.940	0.434	1.493	1.558	1,221	1,195	494	469	3,379	2,416	1.19	-1.01			223.60	243
9/22/2014 1:00	1	2.026	0.427	1.290	1.274	1,105	1,083	443	418	3,050	2,188	1.23	-0.97			210.06	228
9/22/2014 2:36	2	1.878	0.463	1.317	1.228	929	1,035	437	429	2,831	1,964	1.17	-1.03			196.75	214
9/22/2014 4:12	4	1.910	0.710	3.131	1.842	818	1,111	425	456	2,809	1,929	1.31	-0.89			194.64	212
9/22/2014 5:48	5	2.354	0.732	2.903	2.189	819	1,022	284	341	2,465	1,840	1.54	-0.66			189.39	206
9/22/2014 7:24	7	2.563	0.811	1.967	2.715	816	984	224	268	2,291	1,800	1.69	-0.51			186.99	203
9/22/2014 9:00	9	1.955	0.618	1.751	2.012	762	854	296	276	2,188	1,616	1.29	-0.91			176.08	191
9/22/2014 10:36	10	2.015	0.599	1.546	1.331	769	786	363	318	2,236	1,555	1.31	-0.89			172.43	188
					Max	1,600	1,600	1,044	1,388	5,572	3,200		**Savings @ 4,714 Hours**	1,592	48,048	270	635,315
					Min	445	432	6	7	1,404	878		**Total Yearly Savings**	**2,958.11**	**89,294.35**	132	**1,180,702**
					Average	1,038	951	355	364	2,708	1,989					198	
													Hours of Data	**4,714**			

Appendix for ESM 33:
WPCP - Aeration Control Improvements

II. Manufacturer Specification Sheets

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

Migration Solutions

PLC-5® Controllers and 1771 I/O to ControlLogix®

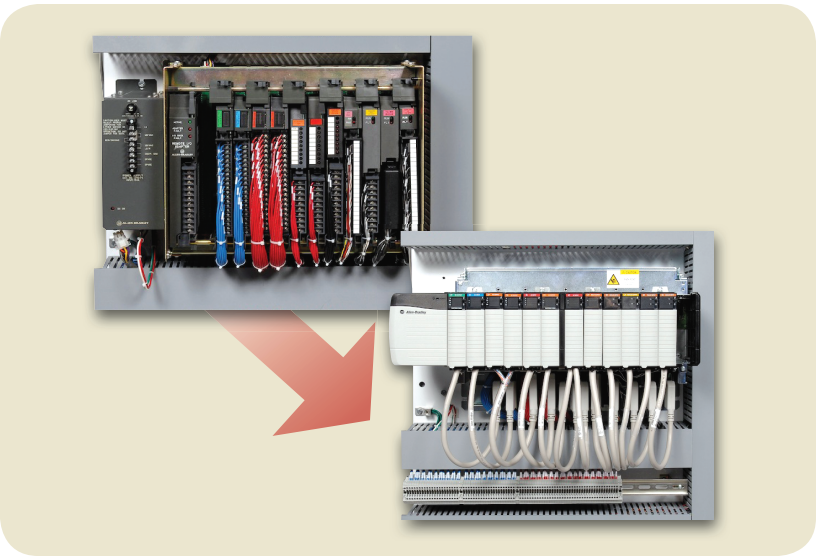
Allen-Bradley

Simplifying 1771 I/O Migrations

- Eliminates risk and reduces labor time
  - convert I/O without disturbing field wiring connections
  - no need for drilling and tapping to mount hardware
  - code conversion tools reduce time to rewrite controller program
- Improves migration and planning using Integrated Architecture Builder tool
- Provides network option to preserve existing Remote I/O network with new 1756-RIO module

New Control System Benefits

- Increased flexibility with new open architecture
- Reduced development time and costs through re-use of engineering practices
- Maximized returns on existing assets through improved control and monitoring
- Increased access to plant and production information
- One programming environment for discrete, motion, process, drive, batch, and safety control



Philosophy

In today's economy it is necessary to have migration solutions that help you to achieve increased productivity and lessen your risk of maintaining your legacy equipment. You need to work with a supplier that has the product, service, and industry knowledge to partner with you on an upgrade strategy that will help you maximize your competitive advantage.

Rockwell Automation and its partners will work with you to outline a plan that fits your application needs and long-term goals. We can help you migrate all at once or in phases, at the pace that is comfortable for you and fits your budget.

With your goals in mind, Rockwell Automation has developed a migration strategy that will allow you to quickly and easily migrate from PLC-5 controller and 1771 I/O to Integrated Architecture, while maintaining the existing field wiring and physical footprint in your control cabinet. This approach will provide you with the following:

- Lower conversion time and labor costs
- Reduce risk by preserving existing field wiring connections
- Lower engineering costs
- Minimizing production downtime

LISTEN. THINK. SOLVE.®

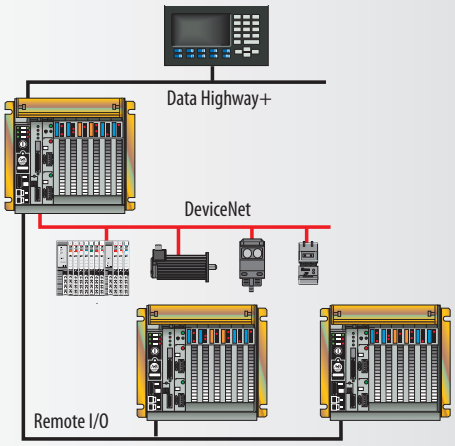
Supporting Your Investment Through a Phased Migration

With industry knowledge and worldwide service support, Rockwell Automation will partner with you to ensure a smooth transition from your PLC-5 controllers and 1771 I/O to the flexible, scalable Integrated Architecture. Here's how:

PHASE I: Application Code Conversion

Phase I often begins by converting PLC-5 processor code to Logix code. Our logic and tag database conversion utilities will help you quickly upgrade your processor code allowing you to take full advantage of the Rockwell Automation Logix family of Programmable Automation Controllers (PAC). Once the converted code has been downloaded to the Logix PAC, the new 1756-RIO Remote I/O module can be used as the network interface to the 1771 I/O over the existing Remote I/O network.

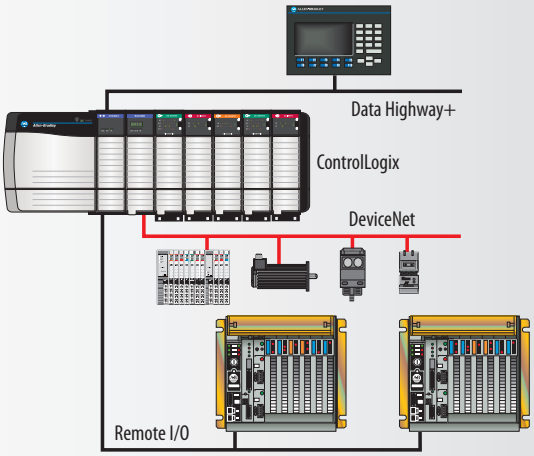
Phase I Tools: Logic Code Conversion Services and 1756-RIO Module



PHASE II: Replace PLC-5 Controllers

Phase II involves replacing the existing PLC-5 controller(s), while continuing to use the 1771 Remote I/O. Replace the PLC-5 controller with the Logix PAC and the 1756-RIO Module. The same 1756-RIO Module used in Phase I is now configured to perform as the master instead of the monitor. The Logix PAC can now control any I/O that resides on an 1771 network.

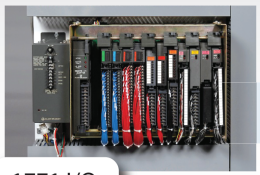
Phase II Tools: 1756-RIO Module



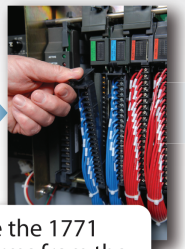
Roadmap to an Easy and Cost-Effective PLC-5 to ControlLogix Migration

Using the I/O Wiring Conversion System can save you hours and eliminate the risk of costly rewiring mistakes.

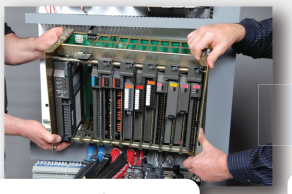




1771 I/O chassis.



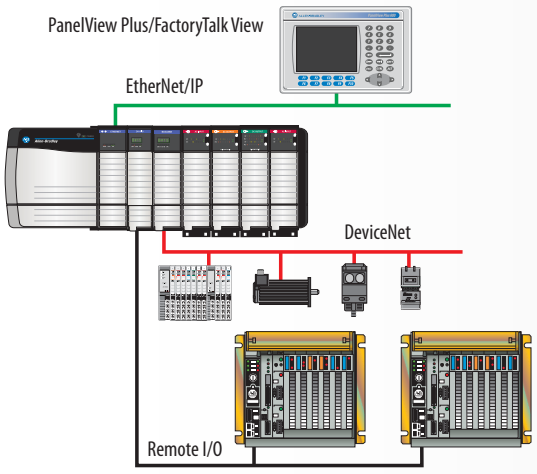
Remove the 1771 swing-arms from the 1771 modules.



Remove the 1771 chassis from the control cabinet.



Install the I/O conversion base plate in the control panel. Attach conversion base plate.

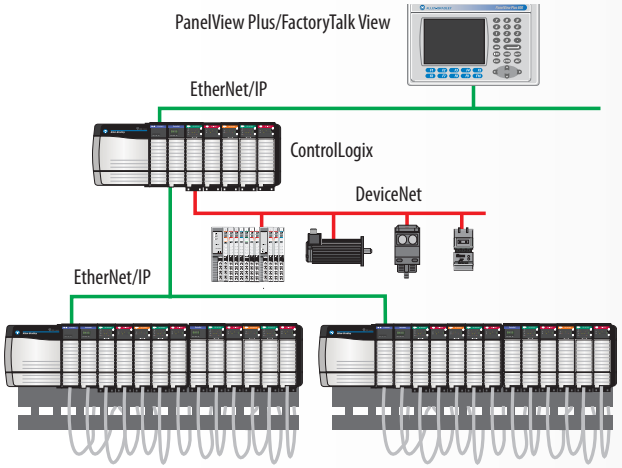


PHASE III: HMI/EOI Migration

During this phase of the migration, existing HMIs or EOIs can be replaced with FactoryTalk View products using Application Conversion Utilities (ACU). ACUs not only make operator interface conversion much more cost effective, but give you greater flexibility regarding the final product. This means that you can account for how operators use your equipment and design interfaces that help maximize their productivity. In the end, this will allow you to give your operators the tools they need to get quality product to your customers.

Rockwell Automation currently offers free conversion from WonderWare and Intellution iFIX HMI interfaces.

Phase III Tools: HMI Application Conversion Utility (ACU)



1756 I/O with ControlLogix Swing-Arm Interface

PHASE IV: I/O Replacement

In the final phase of the migration process, the I/O Wiring Conversion System is used to replace the 1771 I/O with the ControlLogix I/O. Because I/O replacement represents a large investment, we provide an approach that's right for your schedule and budget.

The I/O Wiring Conversion System provides a method to connect the existing 1771 I/O wiring to the 1756 I/O modules without disturbing the field wiring connections, dramatically reducing labor time and eliminating the potential for downtime that could result from wiring mistakes during the migration. Planning your migration is more manageable as I/O can be swapped one rack at a time or all at once based on your schedule and budget. In either case, you can run both new and old I/O networks simultaneously. Additionally, I/O cross reference documentation assures correctness and provides historical back-up for future troubleshooting or diagnostics.

Phase IV Tools: I/O Wiring Conversion System, and ProposalWorks Selection Software



Install the conversion modules into the baseplate.



Insert the 1771 swing-arm with attached field wires to the conversion module.



Attach the Bulletin 1492 conversion interface cable to the conversion module and 1756 I/O module.



Converted system.

Complete Conversion Services

In any phase of your conversion project, Rockwell Automation can provide you with technical, industry and project management expertise to help make a migration project easier. We will help you design a plan to account for your short- and long-term goals. You will be assigned a primary engineer who will be responsible for coordinating and scheduling implementation activities and resources, and who will also be the primary communications contact.

On-site Assessment

Using standardized checklists and processes, a job site visit will be perfromed to confirm the project scope, validate risks, review testing and acceptance criteria, and gather the required information and software to convert existing screens and configurations.

You will receive:

- Completed risk assessment form
- Bill of materials
- Conversion acceptance criteria
- Project schedule and timeline
- Required information sent to conversion engineer team

Application Conversion Engineering Services

Using custom-developed proprietary software applications designed to convert existing configurations, our engineers will complete and test the screen conversion process and any required PLC code changes necessary.

We can help you:

- Decrease turn-around time
- Save money
- Minimize errors that can occur in a manual conversion

Deliverables include:

- The existing console and configurations converted to the appropriate Logix controller and FactoryTalk products
- Conversion of the documentation database
- Correct and convert any instruction and/or addressing errors to the new processor family
- Multilingual database conversion offered

Start-up and Acceptance

Prior to installation, comprehensive functional testing will be performed including pre-loading of all applicable software and firmware. Once installation is complete, our engineer, working closely with your plant staff, will conduct an operational compliance review. Comprehensive system documentation will be provided upon project acceptance.

Deliverables include:

- Pre-operational checklist
- Operational test performed and validated by customer
- Customer acceptance
- Necessary documentation, including product sheets and software files

If you need additional help, Rockwell Automation can provide:

Application level phone support during the start-up and debugging phase of the project

Consultation on system re-engineering, operator interface, architecture and communication strategies, training, and on-site start-up is available through our local Rockwell Automation office.

PLC-5, Listen.Think.Solve., ControlLogix and Rockwell Automation are registered trademarks of Rockwell Automation, Inc.
RSLogix is a trademark of Rockwell Automation, Inc.

www.rockwellautomation.com

Power, Control and Information Solutions Headquarters

Americas: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 USA, Tel: (1) 414.382.2000, Fax: (1) 414.382.4444
Europe/Middle East/Africa: Rockwell Automation NV, Pegasus Park, De Kleetlaan 12a, 1831 Diegem, Belgium, Tel: (32) 2 663 0600, Fax: (32) 2 663 0640
Asia Pacific: Rockwell Automation, Level 14, Core F, Cyberport 3, 100 Cyberport Road, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846

Publication MIGRAT-PP003B-EN-E – December 2011
Supersedes Publication MIGRAT-PP003A-EN-E – August 2009

Copyright ©2011 Rockwell Automation, Inc. All Rights Reserved. Printed in USA.

ESM 34:
WPCP - Install High Speed Turbo Blower

ESM Overview

Ameresco proposes to replace one (1) 350 HP blower serving the aeration tanks at the Water Pollution Control Park (WPCP) with a new High Speed Turbo Blower (HSTB). The new blower will not only replace an old blower near the end of its useful life, but will provide a much more efficient and reliable unit.



Figure 34.1: Ameresco proposes to replace the existing 350 HP Blower #1 serving the aeration tanks at the WPCP with a new High Speed Turbo Blower.

ESM Detail

Existing System

The Water Pollution Control Aeration System consists of six (6) aeration tanks operated in two parallel trains. The air is currently supplied to the tanks by two (2) 250 HP blowers, each with VFDs and two (2) 350 HP constant speed blowers without VFDs. Primarily, one 250 HP blower operates most of the time, with one 350 HP blower used only at peak periods during the summer. Staff reports that the 350 HP blowers are near the end of their life, and a replacement blower is needed.

Proposed System

Ameresco proposes to replace one of the existing 350 HP blowers located in the Air Blowers building with a new high speed turbo blower. There are two types of direct drive HSTB bearing technologies: airfoil and magnetic. Ameresco has proposed a magnetic bearing HSTB at this time. The wastewater treatment industry has used magnetic bearing HSTBs longer than airfoil design, and over the years magnetic bearing machines have been very reliable in part due to the magnetic bearing controller that prevents catastrophic failure. Out of the current blower technologies such as multistage centrifugal blowers (MSCB), integrally geared turbo blowers (IGTB), and HSTBs, HSTBs have the greatest upside when considering energy efficiency, footprint, and integrated control systems.

The scope of work includes all mechanical, electrical and demolition work required to install a new High Speed Turbo Blower in place of the existing 350 HP blower serving the aeration tanks at the Water Pollution Control Park.

- Demo and remove the existing Gardner Denver Air Blower #1 located in the 'Air Blowers' building including:
    - Removing existing 350 HP Motor

"Page content is subject to Confidentiality Restrictions"

  - Disconnect electric power at the unit; verify power is off at the disconnect;
  - Remove existing disconnect, leaving the electric feeders in place
- Provide and Install one (1) new Spencer Hi Speed AyrJet AJ215-1 Series Single Stage Centrifugal Blower (or approved equal) with 10" inlet flange connection and with 10" flanged outlet connection.
  - Includes AJ215-1 permanent magnet, lubrication free motor with electromagnetic bearing on drive end and non-drive end and thrust bearing with integrated Variable Frequency Drive (VFD) and Siemens OIT (Operator Interface Terminal)
  - The blower is equipped with a single forged aluminum, machined and balanced impeller, standard electronic air cooling system, glycol/water closed loop cooling system and H2O filter system, Spencer's standard epoxy primer and Urethane finish coat paint System on a carbon steel sound enclosure for quiet 85 dBA sound attenuation and installation indoors.
  - The new blower will have the option of being tied into the new aeration control system or automatically controlled and staged by the Spencer Siemens PLC located in the AyrJet enclosure to an operator DO, flow (SCFM) or RPM set point entered at the OIT on the enclosure.
  - The blower will deliver the following:
    - Maximum: 2500 SCFM-02 of clean air @ 12.00 psig with inlet conditions of 100 °F, 90% relative humidity and 14.55 psia inlet pressure based on 271 ft ASL elevation.
    - Minimum: 1314 SCFM-02 of clean air @ 12.00 psig with inlet conditions of 100°F 90% relative humidity and 14.55 psia inlet pressure based on 271 ft ASL elevation.
  - The blower will include the following:
    - One (1) H2S Sensor – detects levels of H2S that exceed .5 ppm safe operating level that may be detrimental to the safe operation of the blower.
    - Remote connectivity from Bristol CT to The Spencer Turbine Company in Windsor CT via Horizon for password protected monitoring of system operation from Spencer Headquarters for diagnostic and troubleshooting purposes.
    - One (1) Pancake Compressor for operation of the blow off valve (one required and includes 100 ft of flexible tubing.
    - 1 x 10" Discharge Expansion Joint. STC P/N EXP90027.
    - 1 x 10" Inlet Filter/silencer for mounting directly on the blower's inlet flange. STC P/N FSL90236 with felt element STC P/N ELE90088.
    - 1 x 10" Wafer Check Valve. STC P/N VLV90490.
    - 1 x 10" Discharge butterfly valve with lever operator for isolation purposes. STC P/N VLV90037
    - Spare parts – one (1) set consisting of the following:
      - Electronic air filters
      - Glycol coolant
      - H2O filter
- Includes start up assistance consisting of the following services:
  - Controls Engineering Start Up services: one (1) trip, three (3) man-days on site, includes operator training in English language.

Exclusions:

The measure assumes the following:

- Existing isolation valves in air piping are assumed to be in working order.
- Repair of existing piping that shall be tied into as part of this scope of work is excluded.
- Work shall occur during normal business hours.
- Any abatement or remediation of asbestos or other hazardous materials beyond that specifically called out to be included in the scope of work above is excluded from the scope and cost of the proposed work.

>Equipment, Design and Construction Documentation

Equipment will be identified in submittals provided for approval prior to procurement. Documents will be submitted to the facilities department for their review and comment. Upon approval, these will constitute the construction documents. Upon completion of the construction phase, the documents will be revised as needed to reflect "As-Built" conditions and submitted in multiple for record.

> Impact on Facility Operations and Performance

Energy savings will be realized by the improved efficiency of the new induction units and reduced maintenance cost requirements.

"Page content is subject to Confidentiality Restrictions"

This page is intentionally left blank.

Appendix for ESM 34:
WPCP - Install High Speed Turbo Blower

I. Energy Savings Calculations

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

City of Bristol, CT	
Energy and Demand Savings Summary	
Measure ID:	**34**
Measure Name:	**Install High Speed Turbo Blower**
Measure Location:	
Engineers:	

Site Name:		**WPCP - Install High Speed Turbo Blower**
Item	Units	Savings
Electricity		
Energy On-Peak	kWh	40,051
Energy Off-Peak	kWh	13,586
Energy Total	kWh	53,637
Demand On-Peak, Monthly	kW	74.9
Demand On-Peak, Annual	kW	224.8
Demand Off-Peak, Monthly	kW	
Demand Off-Peak, Annual	kW	
Fossil Fuel		
Natural Gas (NG)	CCF	
Liquid Propane Gas (LPG)	Gallons	
Steam	Mlbs	
Fuel Oil, #2	Gallons	
Fuel Oil, #4	Gallons	
Fuel Oil, #6	Gallons	
Max Daily Demand (Natural Gas)	CCF (Demand)	
Water		
Water Savings	CF	
Sewer		
Sewer Savings	CF	

City of Bristol, CT

Install High Speed Turbo Blower

Estimates of Percentage of Hours to Water Loads					Proposed Schedule and Loads						Existing Pump Usage		Proposed System Usage				Savings		
Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Total Bin Hours	Occ On-Peak Hrs.	UnOcc On-Peak Hrs.	Occ Off-Peak Hrs.	UnOcc Off-Peak Hrs.	Occ. Aeration Tank Load	UnOcc. Aeration Tank Load	Peak Blower Usage (kWh)	Off-Peak Blower Usage (kWh)	Proposed Occ VFD Load Percentage (%)	Proposed UnOcc VFD Load Percentage (%)	Peak Blower Usage (kWh)	Off-Peak Blower Usage (kWh)	Blower Savings (Peak kWh)	Blower Savings (Off-Peak kWh)	Demand Savings kW
				H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
30%	30%	30%	0%	195	98	49	49	0	100	100	28,019	9,340	100%	100%	17,408	5,803	10,611	3,537	
15%	15%	15%	10%	98	49	24	24	0	97	98	14,009	4,670	100%	100%	8,704	2,901	5,305	1,768	
15%	15%	15%	15%	98	49	24	24	0	93	96	14,009	4,670	97%	98%	8,144	2,686	5,865	1,984	
15%	15%	15%	45%	98	49	24	24	0	90	94	14,009	4,670	93%	96%	7,606	2,479	6,404	2,191	
15%	15%	15%	15%	98	49	24	24	0	87	92	14,009	4,670	90%	94%	7,088	2,282	6,921	2,388	
10%	10%	10%	15%	65	33	16	16	0	83	90	9,340	3,113	86%	92%	4,395	1,395	4,945	1,718	
0%	0%	0%	0%	0	0	0	0	0	80	88	0	0	83%	90%	0	0	0	0	
0%	0%	0%	0%	0	0	0	0	0	77	86	0	0	80%	88%	0	0	0	0	
100%	**100%**	**100%**	**100%**	**650**	325	163	163				93,397	31,132			53,346	17,546	40,051	13,586	75
					50%	25%	25%												

Cell Ref.	Comment
A-D	Estimates of Percentage of Hours to Water Loads
H	Total Bin Hours
I-L	Proposed Hrs
M-N	Aeration Tank Load
O	= ([col I] + [col J]) x P24
P	= ([col K] + [col L]) x P24
Q	Estimated VFD Loading based on 100% at design day load and 80% at minimum
R	Estimated VFD Loading based on 100% at design day load and 80% at minimum
S	= ([col I] x P26 x [col Q] ^2.2 / 0.98 + ([col J] x P26 x [col R] ^2.2 / 0.98
T	= ([col K] x P26 x [col Q] ^2.2 / 0.98 + ([col L] x P26 x [col R] ^2.2 / 0.98
U	= ([col O] - [col S])
V	= ([col P] - [col T])

Assumptions:	Value	Unit	CELL	Description
			REF	
Occupied Area	257	SF	P23	
350 Blower Power (Existing) Peak Load	191.6	kW	P24	kW of Existing 350 HP Blower
Pump Power (Existing) Normal	136.3	kW	P25	total kW (One Blower on VFD)
Pump Power (Proposed)	116.7	kW	P26	kW of new 214 HP Turbo Blower
	80.0%		P27	
UnOcc. Pump Cycling	10.0%		P28	% Operating Hours During UnOcc.

MOTOR	MOTOR									Existing	
Facility	Facility	Size (HP)	Frame Size	RPM	Type (ODP or TEFC)	Efficiency	Load Fraction	Annual Operation (Mths)	Annual Operation (Hrs)	Demand (kW)	Energy (kWh)
Air Blowers Blo	AB-1	350.00				95.4%	70.0%	12	650	191.6	124,529
Air Blowers Blo	AB-2	350.00				95.4%	70.0%	12		191.6	0
Air Blowers Blo	AB-3 (VFD	250.00				95.8%	70.0%	12	750	111.7	83,808
Air Blowers Blo	AB-4 (VFD	250.00				95.8%	70.0%	12	8,010	111.7	895,072
New Turbo Blov	AB-3 (VFD	214.00				95.8%	70.0%	12		95.7	

Appendix for ESM 34:
WPCP - Install High Speed Turbo Blower

II. Manufacturer Specification Sheets

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

AyrJet® Series 215
High Speed Turbo Blower

TECHNICAL DATA SHEET



High speed, high efficiency turbo blower provides energy efficient air delivery

Made in the USA by The Spencer Turbine Company, the AyrJet® Series 215 is a high speed, high efficiency single-stage turbo blower, driven by a direct drive oil-free permanent magnet motor. It has an integrated variable frequency drive (VFD) with PLC controls.

The product expands Spencer's product offerings for the water and wastewater treatment industries. The AyrJet Series 215 has flows to 4000 cfm (113 m^3/min) and pressures to 18 psig (124 kPa) and handles applications to 200 hp (149 kW), includes built-in vibration and temperature monitoring, and features best-in-industry wire to air efficiencies. Built-in inlet filtration is standard, and externally mounted inlet filters are available.

The AyrJet's highly engineered, proven technology magnetic bearings monitor and manage shaft position for proactive protection against catastrophic failure.

Designed especially to meet continuous-duty aeration requirements with peak energy efficiency, the AyrJet Series 215 is the ideal solution for applications in municipal wastewater treatment plants.

Materials of Construction

- Casing material: Aluminum 356-T6
- Enclosure material: Carbon steel
- Finish: Powder coated

Product Features

Technical Data

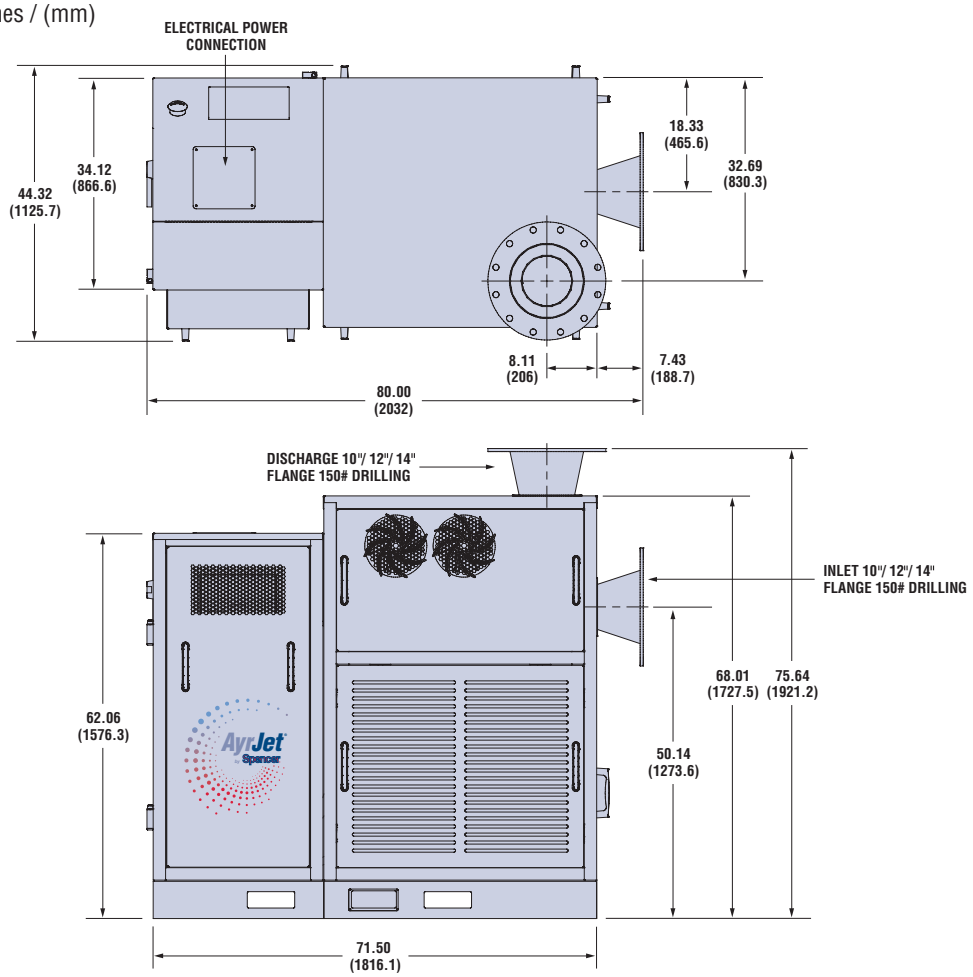
- Number of stages: 1
- Operating speed: Up to 27,000 RPM
- Casing design pressure: 50 psig (3.4 bar)
- Inlet connection: Integrated filter (standard); pipe flange (optional)
- Outlet connection: 14" flange
- Seals: Teflon labyrinth impeller seal
- Bearings:
  - Magnetic
  - Self-monitoring
  - Non-contact
  - Built-in power failure back-up protection (UPS system)
  - 2 modes of fail safe (back-up roller bearing and auto shutdown on fault)
- Lubrication: None
- Impeller: Machined high strength forged aluminum – 7075-T6 alloy
- Cooling system: Integrated air
- Filters: Nominal retention 98% @ 15 microns
- First critical speed: 20% over maximum operating
- Vibration free operation

Control System – UL Listed

PLC based with touch-screen and interface to the plant SCADA system

- Blower system start/stop selection and status indicator
- Blower control selection: Local or remote
- Blower set-point entry (RPM or SCFM)
- Remote signal set point for speed (RPM) and flow (SCFM)
- Display status for:
  - Actual blower speed (RPM) and set point
  - Actual blower flow (SCFM) and set point
  - Blow-off valve
  - Blower discharge pressure
  - Magnetic bearing
  - Shaft position
  - Motor winding temperature indicator
  - VFD and alarm indicator
  - System vibration alarm indicator

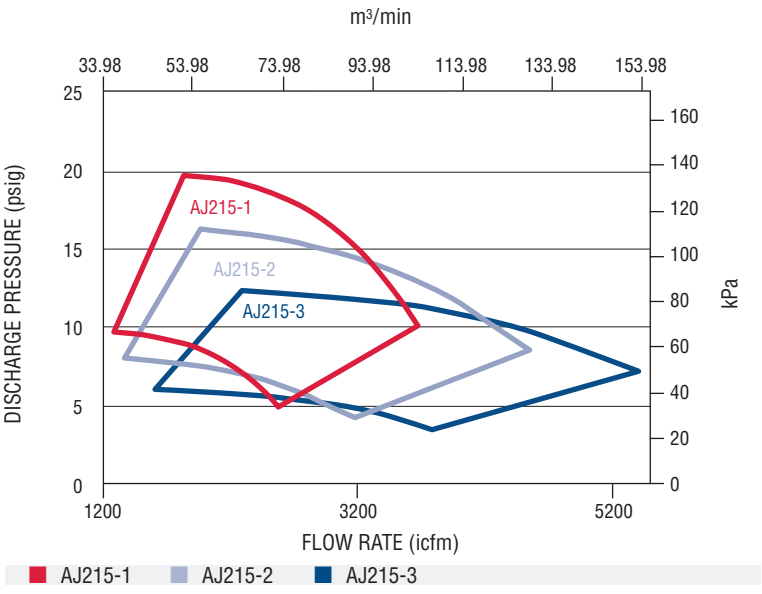
Dimensions: Shown in inches / (mm)



Performance Range

Performance at Standard Conditions

(Air at 68 ˚F, Relative Humidity of 36%, Inlet Pressure 14.7 psia)



▶ Spencer may make improvements and dimensional changes to equipment designs based on market trends and requirements.

For product selection assistance, please email marketing@spencer-air.com or visit our website at www.spencerturbine.com to locate the Spencer representative in your area.

AyrJet® is a registered trademark of The Spencer Turbine Company.

The Spencer Turbine Company, 600 Day Hill Road, Windsor, CT 06095 USA

TEL 800-232-4321 ◆ 860-688-8361 ◆ FAX 860-688-0098 ◆ www.spencerturbine.com

 Copyright ©2014 The Spencer Turbine Company

ESM 38: Street Lighting

ESM Overview

Ameresco has developed a Street Lighting system to benefit the residents of Bristol, CT. Our project replaces or upgrades 5,535 exterior fixtures and will enhance the quality of the City's street lighting.



Figure 38.1: New LED street lights will not only improve aesthetics but will also provide substantial energy savings.

ESM Detail

Existing System

Based on the inventory provided by the City of Bristol, our team has identified approximately 5,535 HP Sodium street lighting fixtures ranging from approximately 50 to 500 watts as shown in the Table below. This table shows the expected annual costs for the street lights after the City has purchased them from Eversource.

Type of Fixture	Existing Wattage	Existing Lamp Type	Quantity of Fixtures	Annual kWh	Annual Distribution Charge	Annual Delivery Costs	Annual Supply Costs	Total Annual Costs
Decorative	84	6300 LUMEN HP SODIUM	5	1,726	$61	$43	$145	$249
Decorative	118	9500 LUMEN HP SODIUM	56	27,149	$867	$674	$2,288	$3,828
Decorative	172	16000 LUMEN HP SODIUM	10	7,067	$208	$175	$596	$978
Decorative	472	50000 LUMEN HP SODIUM	1	1,939	$50	$48	$163	$262
Cobra	59	4000 LUMEN HP SODIUM	2	485	$19	$12	$41	$72
Cobra	84	6300 LUMEN HP SODIUM	3,945	1,361,475	$48,287	$33,778	$114,731	$196,796
Cobra	118	9500 LUMEN HP SODIUM	1,022	495,469	$15,821	$12,293	$41,753	$69,866
Cobra	172	16000 LUMEN HP SODIUM	138	97,519	$2,865	$2,419	$8,218	$13,502
Cobra	311	27500 LUMEN HP SODIUM	204	260,660	$7,026	$6,467	$21,966	$35,459
Cobra	472	50000 LUMEN HP SODIUM	124	240,462	$6,220	$5,966	$20,264	$32,449
Flood	311	27500 LUMEN HP SODIUM	16	20,444	$551	$507	$1,723	$2,781
Flood	472	50000 LUMEN HP SODIUM	11	21,331	$552	$529	$1,798	$2,879
Flood	451	36000 LUMEN METAL HALIDE	1	1,853	$48	$46	$156	$250
Totals			**5,535**	**2,537,578**	**$82,574**	**$62,957**	**$213,842**	**$359,373**

Proposed System

Ameresco proposes to replace existing fixtures as described in the table below. Replacement wattages were selected based upon existing wattages, which are assumed to be appropriate for each given application. The proposed distribution and delivery costs are based on the current Eversource rate 117.

"Page content is subject to Confidentiality Restrictions"

Type of Fixture	Existing Wattage	Retrofit LED Watts	Quantity of Fixtures	Annual kWh	Annual Distribution Charge	Annual Delivery Costs	Annual Supply Costs	Total Annual Costs
Decorative	84	55	5	1,141	$4	$28	$96	$128
Decorative	118	55	56	12,782	$44	$315	$1,077	$1,436
Decorative	172	55	10	2,283	$8	$56	$192	$256
Decorative	472	55	1	228	$1	$6	$19	$26
Cobra	59	27	2	224	$1	$6	$19	$26
Cobra	84	29	3,945	474,781	$2,234	$11,713	$40,010	$53,957
Cobra	118	43	1,022	182,376	$695	$4,499	$15,369	$20,563
Cobra	172	68	138	38,944	$122	$961	$3,282	$4,365
Cobra	311	113	204	95,666	$255	$2,360	$8,062	$10,677
Cobra	472	139	124	71,529	$181	$1,765	$6,028	$7,974
Flood	311	144	16	9,562	$24	$236	$806	$1,066
Flood	472	144	11	6,574	$17	$162	$554	$733
Flood	451	144	1	598	$2	$15	$50	$67
Totals			**5,535**	**896,686**	**$3,588**	**$22,121**	**$75,564**	**$101,273**

Ameresco generally considers fixtures manufactured by major, nationally recognized companies with proven track records, extensive testing, and many successful installations. It should be noted that LED lighting is a rapidly advancing technology. To ensure the City is getting the best and latest LED systems available at the time of installation, Ameresco will continue to monitor product developments from all major reputable manufacturers.

These LED fixtures include a "field adjustable option" which allows for customization to local field conditions. Existing streetlight infrastructure is rarely uniform- therefore the ability to increase or decrease light output as needed during installation is a valuable benefit, ensuring a successful project. For example, during installation many customers decide that, due to the improved visual perception of a "white" light source, even lower wattage settings are possible and desirable.

The recommended LED systems will operate in the color temperature range of 4000K which will produce a white light as opposed to the existing HPS systems that produce a yellow colored light. The vast majority of people agree that "white" light improves visibility and aesthetics compared to "yellow" light.

Additionally, the fixtures will include a good quality photocell. Though slightly more expensive than other photocells, we seek to avoid premature failures which cause street lights to operate during the daytime.

Scope of Work

Using the provided inventory and gathered data as a starting point, Ameresco will perform a GIS audit to confirm the street name, fixture type, wattage, and quantity, locations, pole number, control method, obstructions, and equipment condition. To facilitate photometric designs, Ameresco also gathers pole spacing & setback, fixture mounting height, roadway classification, pedestrian conflict, pavement type, etc. The data captured will be provided in formats compatible with typical asset management systems and/or Google Earth. Using the detailed information gathered during the GIS audit, and with input from City staff, our in-house designers produce accurate photometric analysis of key representative locations.

Ameresco will install new street lighting fixtures and retrofits in accordance with the provided inventory from the City of Bristol. Lighting products used will be in accordance with those presented in Appendix II below. The scope of work will include removal of the existing equipment and installation of the new equipment in

"Page content is subject to Confidentiality Restrictions"

accordance with the above referenced lighting fixtures and quantities, proper disposal of all job site waste, including any hazardous waste, and job-site cleanup. Existing poles, arms, brackets, power wiring and controls will be reused, unless otherwise noted.

During construction, Ameresco will remove, package, and recycle all existing lamps that contain mercury and ballasts that contain PCBs or DEHP according to applicable regulations. All installations will be conducted during normal business hours or after normal operating hours if interruption of functions is anticipated. Installations will be coordinated with appointed personnel.

Sizing Considerations

Ameresco believes the new LED system will provide improved visibility when compared to the existing streetlight system. However, compliance with any recommended practice, standard, or code is neither assumed nor guaranteed.

Integration of Proposed Equipment with Existing Systems

The new lighting system, and all components thereof, will be fully integrated into the existing lighting systems. We assume the entire street lighting portfolio comply with, but not limited to, the latest codes, the latest standards, local jurisdictions, and work was done in a quality workmanship manner, per NECA, and other applicable recommend best practices universally accepted throughout the electrical industry. All existing poles, mounting surfaces and structures are assumed to be in acceptable condition to allow the installation of the products indicated in the scope. Required upgrades to meet safety or other codes, and/or to prepare the location for the installation as described above are not included.

Our price includes material, installation labor, and disposal of existing fixtures. Our labor cost assumes a standard 1-1 fixture change-out per Eversource terms, with no additional work or fees included.

>Equipment, Design, and Construction Documentation

The customer provided inventory is the basis for pricing this measure. Prior to construction, the City of Bristol will supply street addresses for all fixtures in this scope with sufficient detail as to enable the installers to accurately locate the fixtures. Ameresco will compile product specification sheets for all specified equipment. These documents will be submitted for review and comment. Upon approval, these will constitute the construction documents. Upon completion of the construction phase, the documents will be revised as needed to reflect “As-Built” conditions, and submitted in multiple for record.

“Page content is subject to Confidentiality Restrictions”

This page is left intentionally blank

Appendix for ESM 38: Street Lighting

I. Energy Savings Calculations

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2027	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	3/15/1961	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2260	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	3/15/1961	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2266	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	3/15/1961	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2269	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	3/15/1961	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2273	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	3/15/1961	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	MIDDLE ST	8830	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	11/28/1961	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	MIDDLE ST	9273	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	11/28/1961	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	MIDDLE ST	9275	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	11/28/1961	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	MIDDLE ST	9276	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	11/28/1961	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	MIDDLE ST	9278	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	11/28/1961	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	MIDDLE ST	10939	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	11/28/1961	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	MINE RD	4532	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/6/1962	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BATTLE ST	3316	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/18/1963	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DIANE LN	11532	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/22/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MALTBY ST	10813	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/3/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	809	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/22/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2220	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	7/15/1965	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2221	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	7/15/1965	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2223	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	7/15/1965	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2226	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	7/15/1965	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2228	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	7/15/1965	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2230	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	7/15/1965	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2236	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	7/15/1965	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2238	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	7/15/1965	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2240	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	7/15/1965	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2242	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	7/15/1965	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2244	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	7/15/1965	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2246	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	7/15/1965	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2250	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	7/15/1965	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2253	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	7/15/1965	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2255	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	7/15/1965	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	PINE ST	306	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/29/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	307	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/29/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	309	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	7/29/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	312	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	7/29/1965	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	PINE ST	314	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	7/29/1965	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	PINE ST	318	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/29/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PINE ST	320	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	7/29/1965	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	PINE ST	324	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	7/29/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	326	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/29/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	328	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/29/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	316-1/2	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	7/29/1965	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	WOODHAVEN RD	11327	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/9/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODHAVEN RD	11329	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/9/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODHAVEN RD	11331	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/9/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODHAVEN RD	11333	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/9/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	APPLE RD	5059	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/17/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	APPLE RD	5060	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/17/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PROSPECT PL	1175	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/18/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PROSPECT PL	4936	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/18/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PROSPECT PL	4979	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/18/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STEVENS ST	7577	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/23/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIX ST	9733	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/31/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	COLLINS RD	7581	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/8/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COLLINS RD	7597	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	9/8/1965	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	HOOVER AVE	6958	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/10/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VANCE DR	9494	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/10/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VANCE DR	11098	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/10/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JEROME AVE	2075	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/14/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JEROME AVE	2081	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	9/14/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JEROME AVE	2028	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JEROME AVE	2029	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JEROME AVE	2031	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JEROME AVE	2033	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JEROME AVE	2035	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JEROME AVE	2039	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JEROME AVE	2043	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JEROME AVE	2046	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JEROME AVE	2049	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JEROME AVE	2052	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JEROME AVE	2053	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JEROME AVE	2056	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JEROME AVE	2060	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JEROME AVE	2064	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JEROME AVE	2068	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JEROME AVE	2070	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JEROME AVE	2072	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JEROME AVE	2074	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JEROME AVE	2076	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JEROME AVE	2079	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JEROME AVE	2083	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JEROME AVE	2088	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JEROME AVE	2090	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JEROME AVE	2092	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JEROME AVE	2095	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JEROME AVE	2098	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JEROME AVE	2100	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JEROME AVE	2103	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JEROME AVE	2105	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JEROME AVE	9619	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MALTBY ST	10811	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	MALTBY ST	10831	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	2335	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	2337	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	2339	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	2341	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	2343	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	5149	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	5151	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	5153	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	5155	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	5159	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	5161	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	5163	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	5165	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	5166	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	5167	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	5168	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	5176	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	5179	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	5182	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	5584	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	5586	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	5588	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	5590	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	5592	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	5594	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	5597	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	5600	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	7428	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	7516	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	10352	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	10439	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STEVENS ST	5603	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STEVENS ST	5610	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STEVENS ST	5612	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STEVENS ST	5613	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STEVENS ST	5972	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STEVENS ST	6522	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STEVENS ST	6523	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STEVENS ST	7434	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STEVENS ST	7437	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STEVENS ST	7440	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STEVENS ST	7574	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STEVENS ST	7575	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STEVENS ST	10456	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STEVENS ST	10577	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/17/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	5598	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/22/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BRENTWOOD DR	11416	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/29/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COUNTRY LN	11469	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/29/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COUNTRY LN	11470	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/29/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COUNTRY LN	11471	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/29/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COUNTRY LN	11474	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/29/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRIGHTWOOD RD	4460	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/7/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	251	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	10/7/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WEST ST	1313	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	10/14/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WEST ST	1315	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	10/14/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WEST ST	2211	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	10/14/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WEST ST	3885	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	10/14/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WEST ST	4000	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	10/14/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WEST ST	4003	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	10/14/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WEST ST	4004	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	10/14/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WEST ST	4006	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	10/14/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WEST ST	4007	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	10/14/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WEST ST	4009	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	10/14/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WEST ST	4011	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	10/14/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WEST ST	4013	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	10/14/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WEST ST	4015	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	10/14/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WEST ST	4017	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	10/14/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WILLOUGHBY ST	2788	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/14/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLOUGHBY ST	2789	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/14/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLOUGHBY ST	2790	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/14/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLOUGHBY ST	2855	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/14/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLOUGHBY ST	4040	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/14/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MALTBY ST	6783	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	STD DECOR-TRADITIONL(POST TOP)	10/19/1965	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	MIX ST	9736	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	10/19/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIX ST	9748	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	10/19/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIX ST	9749	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	10/19/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIX ST	9750	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	10/19/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIX ST	9753	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	10/19/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BRIGHTWOOD RD	3342	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/20/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRIGHTWOOD RD	3344	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/20/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RICH LN	11236	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/20/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DIANE LN	11518	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/22/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DIANE LN	11534	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/22/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DONNA LN	11530	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/22/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DONNA LN	11531	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/22/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ACADEMY ST	2523	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/4/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KING ST	35	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	11/4/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD PL	3748	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/5/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROAD PL	3822	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/5/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROAD PL	6572	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/5/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	BROAD PL	6641	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/5/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GREGORY RD	11313	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/10/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GREGORY RD	11315	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/10/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JACQUELINE DR	11318	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/10/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JACQUELINE DR	11342	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/10/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JACQUELINE DR	11344	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/10/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JACQUELINE DR	11347	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/10/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JASMINE ST	11322	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/10/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JASMINE ST	11324	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/10/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PRIMROSE LN	11454	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/10/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PRIMROSE LN	11456	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/10/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROSEWOOD DR	11316	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/10/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROSEWOOD DR	11319	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/10/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROSEWOOD DR	11451	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/10/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROSEWOOD DR	11452	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/10/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROSEWOOD DR	11453	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/10/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PINE ST	322	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	11/25/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	OLD TERRYVILLE RD	4386	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/2/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PARK ST	8020	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/2/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PARK ST	8022	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	12/2/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PARK ST	8024	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/2/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PARK ST	8028	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	12/2/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PARK ST	8030	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/2/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PARK ST	8032	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/2/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PARK ST	8034	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/2/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PARK ST	8038	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/2/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PARK ST	8040	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/2/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PARK ST	8042	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/2/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PARK ST	8044	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/2/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PARK ST	8048	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/2/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PARK ST	8050	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/2/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PARK ST	8052	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/2/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PARK ST	8054	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/2/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PARK ST	8056	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/2/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PARK ST	8058	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/2/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE RD	8061	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	12/2/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE RD	8062	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/2/1965	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BALDWIN DR	4901	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/7/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BALDWIN DR	4903	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/7/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ADDISON ST	3274	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/8/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ADDISON ST	3275	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/8/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FRANCES ST	3064	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/8/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FRANCES ST	3511	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/8/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GAYLORD ST	1341	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/8/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GAYLORD ST	1343	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/8/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GAYLORD ST	1345	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/8/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TIMBER LN	11521	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/16/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ILLINOIS AVE	11504	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/29/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	INDIAN TRL	4872	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/30/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	INDIAN TRL	5100	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/30/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	INDIAN TRL	5102	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/30/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	INDIAN TRL	5104	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/30/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JULIA RD	11553	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/30/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JULIA RD	11554	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/30/1965	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SOUTH ST	2887	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/13/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SOUTH ST	2898	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/13/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SOUTH ST	2899	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/13/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SOUTH ST	2900	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/13/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SOUTH ST	2904	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	1/13/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SOUTH ST	2905	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	1/13/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SOUTH ST	3724	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/13/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SOUTH ST	3725	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/13/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SOUTH ST	3728	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	1/13/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SOUTH ST	5908	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/13/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SOUTH ST	14583	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/13/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SOUTH ST	14585	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/13/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SOUTH ST	14587	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/13/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SOUTH ST	14592	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/13/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SOUTH ST	14595	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/13/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SOUTH ST	14596	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/13/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SOUTH ST	14597	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/13/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SOUTH ST	14599	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	1/13/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SOUTH ST	14603	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	1/13/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SOUTH ST	14604	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/13/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SOUTH ST	14605	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/13/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SOUTH ST	14608	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/13/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SOUTH ST	14610	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/13/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SOUTH ST	14611	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/13/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WILLIS ST	1490	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	1/13/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MOUNTAIN RD	372	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/20/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MOUNTAIN RD	374	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/20/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PARK DEPT	PAGE AVE	11465	NEW WOOD POLE FOR STREETLIGHTG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/27/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PARK DEPT	PAGE AVE	11466	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	1/27/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PARK DEPT	PAGE AVE	11743	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/27/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PARK DEPT	PAGE AVE	11744	NEW WOOD POLE FOR STREETLIGHTG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/27/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PARK DEPT	PAGE AVE	11746	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/27/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PARK DEPT	PAGE AVE	11747	NEW WOOD POLE FOR STREETLIGHTG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/27/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PARK DEPT	PAGE AVE	11748	NEW WOOD POLE FOR STREETLIGHTG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	1/27/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PARK DEPT	PAGE AVE	11749	NEW WOOD POLE FOR STREETLIGHTG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/27/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PARK DEPT	PAGE AVE	11750	NEW WOOD POLE FOR STREETLIGHTG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/27/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PARK DEPT	PAGE AVE	11752	NEW WOOD POLE FOR STREETLIGHTG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/27/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	BRIER RD	11726	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/9/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KING ST	2857	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	330	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	333	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	338.5	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	340	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	342	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	343	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	346	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	350	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	351	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	352	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	355	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	357	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	358	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	359	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	360	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	362	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	363	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	364	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	365	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	2/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	367	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	369	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	370	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/10/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PINE ST	3882	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	3883	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CENTRAL ST	3756	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	3/2/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CENTRAL ST	3757	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	3/2/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CENTRAL ST	3759	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	3/2/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CENTRAL ST	3772	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	3/2/1966	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	CENTRAL ST	3774	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	3/2/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CENTRAL ST	6867	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	3/2/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CENTRAL ST	6869	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	3/2/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	GARDEN ST	1268	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/2/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GARDEN ST	3803	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/2/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GARDEN ST	3805	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/2/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GARDEN ST	4890	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/2/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GARDEN ST	4893	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/2/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROWE PL	5140	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/2/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BATTISTO RD	8271	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	3/4/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROADVIEW ST	3311	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROADVIEW ST	3312	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROADVIEW ST	6860	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GARDEN ST	3807	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/14/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GARDEN ST	4891	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/14/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GARDEN ST	5961	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/14/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GARDEN ST	10838	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/14/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRIGHTWOOD RD	3347	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/21/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRIGHTWOOD RD	4461	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/21/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2293	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	3/21/1966	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2295	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	3/21/1966	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2303	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	3/21/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2309	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	3/21/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2311	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	3/21/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2322	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	3/21/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2324	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	3/21/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WINTHROP ST	4041	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/21/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DOGWOOD LN	10955	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FLEETWOOD RD	10650	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FLEETWOOD RD	10652	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAIDEN LN	11199	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAIDEN LN	11201	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAIDEN LN	11203	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAIDEN LN	11205	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRIGHTWOOD RD	3346	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRIGHTWOOD RD	3348	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HAVILAND ST	3512	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HAVILAND ST	3514	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HAVILAND ST	3516	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HAVILAND ST	3518	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HAVILAND ST	3519	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HAVILAND ST	3521	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HAVILAND ST	3524	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAWSON RD	3651	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STEELE RD	3946	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STEELE RD	3947	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STEELE RD	3948	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STEELE RD	4866	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TERRY RD	3969	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TERRY RD	4459	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WINTHROP ST	3251	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2290	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	3/26/1966	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2291	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	3/26/1966	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2297	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	3/26/1966	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2318	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	3/26/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2323	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	3/26/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2325	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	3/26/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2327	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	3/26/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	7380	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	3/26/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BEECHWOOD LN	11138	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BEECHWOOD LN	11154	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	BEECHWOOD LN	11156	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRENTWOOD DR	10850	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRENTWOOD DR	10950	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRENTWOOD DR	10952	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRENTWOOD DR	11077	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRENTWOOD DR	11197	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DELMAR DR	10461	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DELMAR DR	10463	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DELMAR DR	10465	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DELMAR DR	10467	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DOGWOOD LN	10956	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	4/4/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	DOGWOOD LN	11052	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DOGWOOD LN	11054	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DRIFTWOOD RD	10808	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DRIFTWOOD RD	10810	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DRIFTWOOD RD	10843	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FLEETWOOD RD	10488	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FLEETWOOD RD	10651	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FLEETWOOD RD	10709	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FLEETWOOD RD	10711	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FLEETWOOD RD	10712	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FLEETWOOD RD	10742	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD FARM RD	11262	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD FARM RD	11263	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD FARM RD	11288	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	1813	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	1815	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	1817	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	4/12/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	1819	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	4/12/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	1823	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	4/12/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	1825	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	1828	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	1830	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	1832	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	1834	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	4/12/1966	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	1836	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	1839	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	1841	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	1843	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	1846	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	1848	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	1854	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	10513	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	10515	NEW WOOD POLE FOR STREETLIGHTG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	1821	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	4/16/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	1874	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	4/19/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BIRCH ST	9461	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BIRCH ST	9443	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BIRCH ST	9446	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BIRCH ST	9449	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BIRCH ST	9451	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BIRCH ST	9453	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BIRCH ST	9456	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BIRCH ST	9458	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BIRCH ST	9460	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BIRCH ST	9833	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BIRCH ST	9835	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BIRCH ST	9837	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BIRCH ST	9839	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BIRCH ST	9841	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	METRO ST	8367	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	805	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	4/29/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	5150	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	4/29/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BALSAM ST	2540	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BENHAM ST	2543	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DEWEY AVE	2693	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EVERGREEN ST	4816	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JOSEPH ST	6974	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JOSEPH ST	6975	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JOSEPH ST	6977	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARGERIE ST	4805	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MITCHELL ST	2552	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MITCHELL ST	8692	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STEVENS ST	10820	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/6/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FELICE RD	10536	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/18/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FELICE RD	10538	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/18/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FELICE RD	10540	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/18/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FELICE RD	10541	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/18/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STEVENS ST	10821	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	FLOOD LIGHT (FULL) 27500	5/18/1966	$2.87	$34	1,278	$32	$108	144	$1.50	598	$15	$50	680
BRISTOL PWD STREET LIGHTING	STEVENS ST	10823	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	FLOOD LIGHT (FULL) 27500	5/18/1966	$2.87	$34	1,278	$32	$108	144	$1.50	598	$15	$50	680
BRISTOL PWD STREET LIGHTING	STEVENS ST	10823	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	FLOOD LIGHT (FULL) 27500	5/18/1966	$2.87	$34	1,278	$32	$108	144	$1.50	598	$15	$50	680
BRISTOL PWD STREET LIGHTING	FERN HILL RD	6031	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/20/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FERN HILL RD	7427	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/20/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FERN HILL RD	7944	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/20/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FERN HILL RD	7961	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/20/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FERN HILL RD	8233	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/20/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FERN HILL RD	8298	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/20/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAN RD	11727	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/20/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAN RD	11729	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/20/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PILGRIM RD	6992	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/20/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PILGRIM RD	7568	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/20/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	ROUND HILL RD	6783	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/20/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CIRCLE ST	2628	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/21/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CIRCLE ST	5630	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/21/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CIRCLE ST	5632	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/21/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OVERLOOK AVE	1346	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/21/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PINE ST	304	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	5/21/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PLEASANT AVE	2669	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/21/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PLEASANT AVE	2672	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/21/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SPRING ST	1177	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/21/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SPRING ST	1179	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/21/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TOWER RD	3157	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/21/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WATERBURY RD	3154	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/21/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WATERBURY RD	3155	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/21/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WATERBURY RD	5071	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/21/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GAYLORD ST	1340	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/24/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GAYLORD ST	1342	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/24/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GAYLORD ST	1344	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/24/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	4621	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	5/24/1966	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	GAYLORD ST	6555	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JACOBS ST	1331	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JACOBS ST	1333	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JACOBS ST	3618	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JACOBS ST	3620	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JENNINGS PL	3114	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JENNINGS TER	3110	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JENNINGS TER	3112	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NEWELL AVE	3712	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NEWELL AVE	3713	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NEWELL AVE	3715	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NEWELL AVE	3719	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NEWELL AVE	3721	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROCKWELL AVE	3898	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROCKWELL AVE	3900	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROCKWELL AVE	3903	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROCKWELL AVE	3905	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROCKWELL AVE	3907	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROCKWELL AVE	3909	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RONZO RD	11435	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RONZO RD	11436	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RONZO RD	11584	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RONZO RD	11585	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RONZO RD	11586	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ARTISAN ST	4868	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/11/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COLONIAL RD	8794	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/11/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DOUGLAS RD	3777	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/11/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DUTTON AVE	3462	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/11/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FOLEY ST	3509	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/11/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	INGRAHAM PL	484	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/11/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LINCOLN ST	3085	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/11/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LINCOLN ST	3655	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/11/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LINCOLN ST	3658	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/11/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MANROSS RD	3855	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/11/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MANROSS RD	3857	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/11/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MELROSE ST	1466	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/11/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MELROSE ST	2126	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/11/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MELROSE ST	2128	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/11/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MELROSE ST	2984	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/11/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REILLY PL	3890	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/11/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REILLY PL	9285	NEW WOOD POLE FOR STREETLIGHTG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/11/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RUDOLPH PL	5845	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/11/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUNSET DR	8371	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/11/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUNSET DR	8492	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/11/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FAIRFIELD ST	1172	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/14/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLEARVIEW AVE	7544	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/15/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLIN ALY	4565	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/15/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLINE ALY	4561	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/15/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLINE ALY	4563	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/15/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FOURTH ST	5862	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/15/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOLDEN ST	4575	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/15/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOWARD AVE	8735	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/15/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SEYMOUR ST	15	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/15/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SEYMOUR ST	3720	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/15/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SIXTH ST	5989	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/15/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SPELMAN ST	5143	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/15/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SPELMAN ST	7343	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/15/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TOLLAND RD	6796	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/15/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VINCENT RD	5583	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/15/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EASTVIEW ST	4418	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/17/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EASTVIEW ST	4420	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/17/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HAIG AVE	6483	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/17/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BREWSTER RD	11779	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/18/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	E NEW ST	4051	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/18/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TWINING ST	6770	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/18/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TWINING ST	7941	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/18/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODLAND ST	2413	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/18/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOODLAND ST	2414	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/18/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOODLAND ST	2416	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/18/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOODLAND ST	2418	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/18/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOODLAND ST	2419	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/18/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOODLAND ST	2420	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/18/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODLAND ST	2422	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/18/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	WOODLAND ST	4422	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/18/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOODLAND ST	4423	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/18/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FEDERAL CT	3501	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/20/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SPRING ST	1181	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/20/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SPRING ST	3009	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	6/20/1966	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	EVERETT ST	2968	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EVERETT ST	2972	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FRANKLIN ST	436	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FRANKLIN ST	437	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOUGHTON ST	2962	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOUGHTON ST	2963	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOCUST ST	1425	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOCUST ST	2977	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	6/22/1966	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	MELLEN ST	2838	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	POUND ST	6379	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RATHBUN RD	8800	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SANDY DR	7207	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CONLON ST	652	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/23/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CURTISS ST	474	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/23/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CURTISS ST	3408	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/23/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLIAMS ST	470	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/23/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RONZO RD	11437	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/24/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RONZO RD	11788	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/24/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAKRIDGE RD	7916	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/27/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	486	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/28/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	487	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/28/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	488	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/28/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	489	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/28/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	490	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/28/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	491	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/28/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	492	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/28/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	493	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/28/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	494	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/28/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	498	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/28/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	499	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/28/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	500	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/28/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	502	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/28/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	504	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/28/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	506	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/28/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	512	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/28/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	514	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	6/28/1966	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	516	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/28/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	518	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/28/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	520	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/28/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	522	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/28/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	526	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/28/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	528	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/28/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	530	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/28/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	535	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/28/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	539	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/28/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	AMBLER RD	456	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	AMBLER RD	459	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	AMBLER RD	4101	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	541	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	543	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	547	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	549	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	551	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	553	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/30/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	555	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/30/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	559	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	561	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	564	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	568	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	576	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/30/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	579	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	584	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	587	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	593	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/30/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	596	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/30/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	599	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/30/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	603	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JEROME AVE	2108	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ARNOLD CT	4324	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/1/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BARBARA RD	192	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/1/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CURTISS ST	3410	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/1/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DOROTHY RD	194	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/1/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HIGHLAND ST	3527	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/1/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LINCOLN ST	3653	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/1/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NORTH ST	3729	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	7/1/1966	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	NORTH ST	3731	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	7/1/1966	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	NORTH ST	3733	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	7/1/1966	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	PARDEE ST	2992	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/1/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RACE ST	3884	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/1/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SESSION ST	3921	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/1/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SESSION ST	3923	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/1/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TOLLAND RD	6470	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/1/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VINCENT RD	4515	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/1/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VINCENT RD	5580	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/1/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORRIS AVE	190	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/5/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORRIS AVE	9662	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/5/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	MORRIS AVE	9663	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/5/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORRIS AVE	10957	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/5/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MIX ST	10150	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/7/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIX ST	10151	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/7/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BRIARWOOD RD	11755	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/11/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRITTON RD	6053	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/11/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAROL DR	7192	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/11/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COLUMBUS AVE	4488	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/11/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FANWAY AVE	4499	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/11/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOOVER AVE	4480	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/11/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JOHN AVE	4508	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/11/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MERCIER AVE	1356	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/11/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MERCIER AVE	4486	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/11/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MISSAL AVE	6487	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/11/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PAGE AVE	4474	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/11/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VANDERBILT RD	25	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/11/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FAIR ST	3808	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/13/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GROVE AVE	2685	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/13/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GROVE AVE	9935	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/13/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JEWEL ST	9386	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/13/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	801	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	7/13/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	803	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/13/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	2361	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/13/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	2366	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/13/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	2373	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/13/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	2375	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/13/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	6956	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/13/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	10176	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/13/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CIRCLE ST	2626	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/18/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CIRCLE ST	10689	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/18/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GRAND ST	7406	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/18/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LINCOLN AVE	3846	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/18/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MARION ST	7404	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/18/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MARION ST	7407	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/18/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARION ST	7409	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/18/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARION ST	7411	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/18/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHURCH AVE	2377	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/20/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CHURCH AVE	2379	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/20/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CHURCH AVE	2381	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/20/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CHURCH AVE	2383	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/20/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CHURCH AVE	2384	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/20/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CHURCH AVE	2386	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/20/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CHURCH AVE	2387	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/20/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CHURCH AVE	2576	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/20/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FREDERICK ST	1245	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/20/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FREDERICK ST	1247	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/20/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FREDERICK ST	1249	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/20/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FREDERICK ST	1251	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/20/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FREDERICK ST	1253	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/20/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FREDERICK ST	1259	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/20/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FREDERICK ST	2687	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/20/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FREDERICK ST	2690	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/20/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FREDERICK ST	9291	NEW WOOD POLE FOR STREETLIGHTG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/20/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PEACEDALE ST	238	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/20/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ANDREWS ST	1243	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/21/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ANDREWS ST	5077	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/21/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ANDREWS ST	6155	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/21/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ANDREWS ST	6157	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/21/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ANDREWS ST	7214	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/21/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ANDREWS ST	9915	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/21/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PRESTON ST	6191	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/21/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PRESTON ST	6193	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/21/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PRESTON ST	6195	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/21/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PRESTON ST	9218	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/21/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CURTISS ST	3414	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	INGRAHAM ST	2079	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	IRVING ST	3607	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	IRVING ST	3609	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LARDNER RD	3645	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LONGVIEW AVE	5116	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	N MAIN ST	444	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	7/22/1966	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	N MAIN ST	449	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	N MAIN ST	3753	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	N MAIN ST	3754	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	N MAIN ST	3756	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	N POND ST	3962	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GLENVIEW DR	4569	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/26/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KING ST	36	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	7/26/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	KING ST	37	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/26/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	KING ST	38	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/26/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	KING ST	8509	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	7/26/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	KING ST	8511	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/26/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	KING ST	8517	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/26/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KING ST	8521	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/26/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	KING ST	8523	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/26/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	KING ST	8525	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/26/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	KING ST	8527	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/26/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	KING ST	8531	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/26/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	KING ST	8539	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/26/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	KING ST	8541	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/26/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	KING ST	8547	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	7/26/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	KING ST	8551	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/26/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	KING ST	8552	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/26/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	KING ST	8553	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	7/26/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	KING ST	8558	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/26/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	KING ST	8562	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	7/26/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	KING ST	8563	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/26/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KING ST	8575	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	7/26/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	W WASHINGTON ST	1206	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/1/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	W WASHINGTON ST	1238	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/1/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	W WASHINGTON ST	1239	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/1/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	W WASHINGTON ST	1810	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/1/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	W WASHINGTON ST	3928	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/1/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	W WASHINGTON ST	3931	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/1/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	W WASHINGTON ST	3935	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/1/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	W WASHINGTON ST	4587	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/1/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	W WASHINGTON ST	5074	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/1/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	W WASHINGTON ST	6178	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/1/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	W WASHINGTON ST	8716	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/1/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	W WASHINGTON ST	9062	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/1/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WASHINGTON ST	1599	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/1/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WASHINGTON ST	1777	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/1/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WASHINGTON ST	3108	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/1/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WASHINGTON ST	3111	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/1/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WASHINGTON ST	3114	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/1/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WASHINGTON ST	3116	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/1/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WASHINGTON ST	3118	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/1/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WASHINGTON ST	3120	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/1/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WASHINGTON ST	3122	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/1/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WASHINGTON ST	3124	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/1/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WASHINGTON ST	3126	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/1/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WASHINGTON ST	3937	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/1/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WASHINGTON ST	3939	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/1/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WASHINGTON ST	3941	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/1/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WASHINGTON ST	7553	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/1/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BENHAM ST	3014	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CROSS ST	9869	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CROSS ST	9871	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CROSS ST	11430	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MIDDLE ST	145	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/4/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIDDLE ST	2858	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/4/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIDDLE ST	2860	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/4/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIDDLE ST	2861	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/4/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIDDLE ST	2862	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/4/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIDDLE ST	2864	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/4/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIDDLE ST	6202	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	8/4/1966	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	MIDDLE ST	6268	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/4/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIDDLE ST	6269	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/4/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIDDLE ST	6270	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/4/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIDDLE ST	6271	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/4/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIDDLE ST	6272	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/4/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIDDLE ST	6273	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/4/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIDDLE ST	6275	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/4/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIDDLE ST	6277	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/4/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIDDLE ST	6279	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/4/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIDDLE ST	6281	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/4/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIDDLE ST	6283	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/4/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIDDLE ST	6285	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/4/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIDDLE ST	7525	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/4/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIDDLE ST	7527	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/4/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIDDLE ST	8775	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/4/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIDDLE ST	9271	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/4/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIDDLE ST	11140	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/4/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIDDLE ST	14006	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/4/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIDDLE ST	14452	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/4/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	DRISCOLL DR	4251	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/5/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DRISCOLL DR	4253	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/5/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DRISCOLL DR	4255	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/5/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NORRIS DR	4232	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/5/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NORRIS DR	4240	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/5/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NORRIS DR	4242	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/5/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODARD DR	4244	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/5/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODARD DR	4246	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/5/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODARD DR	4248	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/5/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODARD PL	4848	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/5/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAMP ST	98761	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAKE AVE	2553	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/8/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LAKE AVE	2554	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/8/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LAKE AVE	2555	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	8/8/1966	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	LAKE AVE	4609	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/8/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LAKE AVE	6033	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/8/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LAKE AVE	6034	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/8/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LAKE AVE	6035	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/8/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LAKE AVE	6037	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/8/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LAKE AVE	6039	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/8/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LAKE AVE	6041	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/8/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LAKE AVE	6043	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/8/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LAKE AVE	6047	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/8/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LAKE AVE	6048	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/8/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LAKE AVE	6049	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/8/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LAKE AVE	6051	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/8/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	GEORGE ST	2161	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/9/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	GEORGE ST	2164	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/9/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GEORGE ST	2166	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/9/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GEORGE ST	2167	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/9/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GEORGE ST	2168	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/9/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GEORGE ST	2170	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/9/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GEORGE ST	2213	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/9/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GEORGE ST	2215	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/9/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DIVINITY ST	1432	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	DIVINITY ST	1434	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	DIVINITY ST	1436	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	DIVINITY ST	1438	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	DIVINITY ST	2930	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	DIVINITY ST	3432	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	DIVINITY ST	3434	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	DIVINITY ST	3438	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	DIVINITY ST	3440	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	DIVINITY ST	3442	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	DIVINITY ST	3446	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	DIVINITY ST	3449	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	DIVINITY ST	4146	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/10/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	DIVINITY ST	9232	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/10/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DOWNS ST	3783	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/10/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DOWNS ST	3785	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/10/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DOWNS ST	3787	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/10/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CENTER ST	22	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/12/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CENTER ST	3508	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/12/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CENTER ST	3510	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	8/12/1966	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	CENTER ST	3513	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/12/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CENTER ST	6863	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/12/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MAPLE AVE	1100	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAPLE AVE	5055	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAPLE AVE	5955	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAPLE AVE	5959	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAPLE AVE	6824	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAPLE AVE	6833	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAPLE AVE	6837	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAPLE AVE	11769	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HULL ST	1526	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/15/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	HULL ST	1527	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/15/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HULL ST	1529	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/15/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HULL ST	1532	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/15/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HULL ST	1533	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/15/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	UPSON ST	1371	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/15/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	UPSON ST	1373	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/15/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	UPSON ST	3714	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/15/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	UPSON ST	3988	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/15/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BLAKESLEE ST	2467	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/16/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BLAKESLEE ST	2489	NEW WOOD POLE FOR STREETLIGHTG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/16/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BLAKESLEE ST	9279	NEW WOOD POLE FOR STREETLIGHTG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/16/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD TERRYVILLE RD	7990	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/17/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD TERRYVILLE RD	7991	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/17/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD TERRYVILLE RD	9056	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/17/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TERRYVILLE RD	1753	NEW WOOD POLE FOR STREETLIGHTG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/17/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE RD	8071	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/17/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE RD	8074	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/17/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE RD	8076	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/17/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE RD	8077	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/17/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE RD	8079	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/17/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE RD	8092	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/17/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE RD	8095	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/17/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE RD	8097	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/17/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE RD	8099	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/17/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE RD	8101	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/17/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE RD	8104	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/17/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE RD	8111	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/17/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TERRYVILLE RD	8113	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/17/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE RD	8115	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/17/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE RD	9058	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/17/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE RD	9059	NEW WOOD POLE FOR STREETLIGHTG	1	27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	8/17/1966	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	TERRYVILLE RD	10283	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/17/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE RD	10285	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/17/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WATERBURY RD	8066	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/17/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CYPRESS ST	3419	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/18/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CYPRESS ST	3421	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/18/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CYPRESS ST	3423	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/18/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CYPRESS ST	3425	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/18/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROCKWELL AVE	3901	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/18/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROCKWELL AVE	3908	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/18/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLIS ST	1513	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/19/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WILLIS ST	1515	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/19/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WILLIS ST	1544	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/19/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WILLIS ST	1546	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/19/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WILLIS ST	2654	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/19/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLIS ST	2768	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/19/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WILLIS ST	2770	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/19/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LAUREL ST	1354	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/24/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAUREL ST	1356	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/24/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAUREL ST	1358	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/24/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAUREL ST	1360	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/24/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAUREL ST	4619	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/24/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEADOW ST	3685	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/24/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	MEADOW ST	3688	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/24/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEADOW ST	3689	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/24/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEADOW ST	3690	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/24/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEADOW ST	3691	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/24/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHESTNUT ST	2509	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CROWN ST	3401	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EARL ST	3391	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EARL ST	3467	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GREENE ST	3315	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GREENE ST	3346	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GREENE ST	3459	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GREENE ST	4341	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GRIDLEY ST	3581	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAPLE AVE	1096	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAPLE AVE	1099	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAPLE AVE	6822	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/25/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MAPLE AVE	6828	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAPLE AVE	6835	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD WOLCOTT RD	2424	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PECK LN	2025	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROUND HILL RD	6841	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SOUTH ST EXT	1377	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WITCHES ROCK RD	1912	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/25/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CYPRESS ST	3417	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/26/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CYPRESS ST	3991	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/26/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	N POND ST	3761	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/26/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ALDER ST	3277	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BARNES ST	3310	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BEECH ST	3325	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BEECH ST	3327	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BEECH ST	3329	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CRESCENT DR	2791	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CRESCENT DR	3279	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CRESCENT DR	4100	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CURTISS ST	3412	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HIGHLAND ST	2497	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HIGHLAND ST	2499	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MUZZY ST	7913	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	N POND ST	3760	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	N POND ST	3763	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	N POND ST	3766	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	N POND ST	5049	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TULIP ST	1471	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TULIP ST	1473	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMILY LN	10424	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/31/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FEDERAL ST	9146	NEW WOOD POLE FOR STREETLIGHTG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/31/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GOODWIN ST	2435	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/31/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GOODWIN ST	2437	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/31/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GOODWIN ST	2439	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/31/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	GOODWIN ST	2440	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/31/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GOODWIN ST	2441	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/31/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GOODWIN ST	2445	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/31/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GOODWIN ST	10998	NEW WOOD POLE FOR STREETLIGHTG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/31/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAPLE ST	673	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/31/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MAPLE ST	4387	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/31/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MAPLE ST	4388	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/31/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MAPLE ST	4389	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/31/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MAPLE ST	4403	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/31/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MAPLE ST	8941	NEW WOOD POLE FOR STREETLIGHTG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/31/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MAPLE ST	10801	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/31/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MAPLE ST	11299	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/31/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MAPLE ST	14225	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/31/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	POUND ST	3450	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/31/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	POUND ST	3451	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/31/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SEYMOUR ST	3718	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/31/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SEYMOUR ST	3723	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/31/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUMMER ST	3960	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/31/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TERRYVILLE RD	8091	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/31/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	VALLEY ST	3692	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/31/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MCKINLEY AVE	4793	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/1/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STONECREST DR	7252	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/1/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BELLEVUE AVE	3460	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/2/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BELLEVUE AVE	4112	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/2/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BELLEVUE AVE	5470	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/2/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BELLEVUE AVE	8374	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/2/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GOODWIN ST	2447	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/2/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HARRISON ST	3379	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/2/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PROSPECT ST	6847	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/2/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	QUEEN ST	3021	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	9/2/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	QUEEN ST	3022	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/2/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	QUEEN ST	3023	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/2/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	QUEEN ST	3025	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/2/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	QUEEN ST	3027	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/2/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	QUEEN ST	3029	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/2/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	QUEEN ST	3600	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/2/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	QUEEN ST	3602	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	9/2/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	QUEEN ST	3603	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	9/2/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	QUEEN ST	3604	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	9/2/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	QUEEN ST	3606	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/2/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	QUEEN ST	3607	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/2/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	QUEEN ST	3610	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/2/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	QUEEN ST	3612	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/2/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	QUEEN ST	5605	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/2/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	QUEEN ST	7039	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/2/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	EAST RD	1272	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/6/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EAST RD	2556	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/6/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HULL ST	2617	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/6/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JACOBS ST	3623	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/7/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JACOBS ST	3626	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/7/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JACOBS ST	3628	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/7/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JACOBS ST	10137	NEW WOOD POLE FOR STREETLIGHTG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/7/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TULIP ST	3987	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/7/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMILY LN	10425	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMILY LN	10426	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMILY LN	10428	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMILY LN	10430	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMILY LN	10432	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HIGH ST	2452	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HIGH ST	2456	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HIGH ST	3464	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HIGH ST	3467	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HIGH ST	3532	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HIGH ST	10117	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LEWIS RD	1137	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LEWIS RD	4728	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LEWIS RD	6892	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LEWIS RD	6894	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LEWIS ST	1139	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRADLEY ST	3376	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/9/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BRADLEY ST	8486	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/9/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GROVE ST	2409	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/9/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAKLAND ST	6777	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/9/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAKLAND ST	6909	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/9/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHERMAN ST	8451	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/9/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODLAND ST	5760	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/10/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODLAND ST	5762	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/10/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BREWSTER RD	9270	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NEWELL RD	159	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/12/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	NEWELL RD	4463	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/12/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	EAST ST	11393	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/13/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOOKER CT	3744	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/13/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MELLEN ST	9967	NEW WOOD POLE FOR STREETLIGHTG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/13/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MUNCHAUSEN AVE	1286	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/13/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PROSPECT ST	3595	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/13/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FEDERAL ST	7	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUMMER ST	1213	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUMMER ST	1215	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUMMER ST	1217	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUMMER ST	3962	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/16/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUMMER ST	3964	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/16/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUMMER ST	4093	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUMMER ST	8319	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUMMER ST	9182	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUMMER ST	1212-S	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/16/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHARLES ST	9072	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/17/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COVENTRY RD	8882	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/17/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DOROTHY RD	4521	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/17/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DOROTHY RD	4523	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/17/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ELM ST	3377	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/17/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JEWEL ST	9070	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/17/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JEWEL ST	9075	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/17/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JEWEL ST	9077	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/17/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JEWEL ST	9079	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/17/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PROSPECT ST	3871	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/17/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PROSPECT ST	3872	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/17/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PROSPECT ST	3873	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/17/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PROSPECT ST	6651	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/17/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PROSPECT ST	6849	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/17/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PROSPECT ST	6854	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/17/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RUSTIC TER	1187	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/17/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RUSTIC TER	4738	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/17/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODFIELD RD	11571	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/19/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODFIELD RD	11575	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/19/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODFIELD RD	11577	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/19/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ATKINS AVE	3290	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/20/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAWNDALE AVE	1408	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/20/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAWNDALE AVE	1411	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/20/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAWNDALE AVE	2137	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/20/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MELLEN ST	12592	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/20/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FERN HILL RD	8475	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/23/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FERN HILL RD	8691	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/23/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HENDERSON ST	1158	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/23/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HENDERSON ST	1161	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/23/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HENDERSON ST	5471	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/23/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HENDERSON ST	5472	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/23/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PILGRIM RD	5139	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/23/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JOSEPHINE TER	4390	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/24/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JOSEPHINE TER	4392	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/24/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LESLIE CT	4396	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/24/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LESLIE CT	4398	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/24/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PECK LN	4991	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/24/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ADELINE AVE	4494	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	ADELINE AVE	4495	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ADELINE AVE	4496	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COLLIER AVE	4505	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COLLIER AVE	4507	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COLLIER AVE	6858	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COLUMBUS AVE	4490	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FANWAY AVE	4501	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FANWAY AVE	6553	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FANWAY AVE	7946	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOOVER AVE	4482	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOOVER AVE	6556	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOOVER AVE	6957	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JOHN AVE	4510	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JOHN AVE	4512	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MERCIER AVE	6711	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MISSAL AVE	6691	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MISSAL AVE	6693	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MISSAL AVE	7105	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORRIS AVE	4497	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORRIS AVE	5072	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MECHANIC ST	1768	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/26/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MECHANIC ST	1770	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/26/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MECHANIC ST	4873	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/26/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	METRO ST	8364	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/26/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	METRO ST	8689	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/26/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHESTNUT ST	4314	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ACADEMY ST	10	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ACADEMY ST	2522	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ACADEMY ST	2525	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ACADEMY ST	3301	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ACADEMY ST	8331	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ACADEMY ST	9039	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ACADEMY ST	10839	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GAYLORD ST	4322	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/7/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	INGRAHAM PL	656	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/7/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	POUND ST	3859	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	10/7/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	INGRAHAM ST	476	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/10/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	INGRAHAM ST	478	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/10/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VALLEY ST	3695	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/10/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KING ST	8520	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	10/17/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	HEPWORTH ST	8472	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HEPWORTH ST	9958	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HEPWORTH ST	11517	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOLCOTT RD	5140	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/22/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAMBRIDGE RD	4774	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/1/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FERN HILL RD	7611	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/1/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAKWOOD CIR	7604	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/1/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAKWOOD CIR	8325	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	11/1/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PILGRIM RD	6740	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/1/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PILGRIM RD	6989	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/1/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PILGRIM RD	6991	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/1/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PURITAN RD	8342	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/1/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PURITAN RD	8344	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/1/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FIELD ST	1469	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FIELD ST	2506	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FIELD ST	3062	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FIELD ST	3504	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FIELD ST	3506	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FIELD ST	3507	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/4/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	IPSWITCH RD	4275	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/16/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KING ST	8519	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	11/16/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	ROGERS RD	5575	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/18/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROGERS RD	8247	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/18/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROGERS RD	8248	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	11/18/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROGERS RD	8250	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/18/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROGERS RD	9052	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/18/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROGERS RD	9288	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	11/18/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REDSTONE ST	4818	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REDSTONE ST	4820	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REDSTONE ST	4822	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REDSTONE ST	5332	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REDSTONE ST	5333	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REDSTONE ST	6729	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REDSTONE ST	6745	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REDSTONE ST	7396	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/25/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ANTHONY DR	10372	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/28/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LACAVA RD	11659	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/29/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NORTHWESTERN DR	11565	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/29/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NORTHWESTERN DR	11567	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/29/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NORTHWESTERN DR	11569	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	11/29/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SONSTROM RD	11429	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/29/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SONSTROM RD	11502	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/29/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BIRCH ST	4675	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BIRCH ST	4677	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BIRCH ST	4680	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/30/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ARBOR CT	10607	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/6/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ARBOR CT	10609	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/6/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ARBOR CT	10758	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/6/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRIDGEPORT AVE	10790	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/6/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DEBRA LN	9409	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/6/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DEBRA LN	9411	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/6/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	DEBRA LN	10165	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/6/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DEBRA LN	11140	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/6/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GREGORY RD	10353	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/6/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GREGORY RD	10355	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/6/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GREGORY RD	10358	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/6/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HARTFORD AVE	10470	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/6/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HARTFORD AVE	10472	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/6/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JEROME AVE	2113	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/6/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MINE RD	198	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/6/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MINE RD	201	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/6/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MINE RD	208	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/6/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MINE RD	211	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/6/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MINE RD	4528	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/6/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MINE RD	4536	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/6/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MINE RD	4537	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/6/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MINE RD	4540	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/6/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WINDHAM RD	10588	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/6/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WINDHAM RD	10629	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/6/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WINDHAM RD	10631	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/6/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BEN ST	8920	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BEN ST	9572	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BEN ST	9573	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BEN ST	9574	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DEERFIELD RD	10253	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DEERFIELD RD	10255	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DEERFIELD RD	10602	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RAMBLER ST	10604	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RAMBLER ST	10815	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROSEMARY LN	8996	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROSEMARY LN	9651	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROSEMARY LN	9653	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHAGBARK DR	9647	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHAGBARK DR	9649	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHAGBARK DR	10775	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHAGBARK DR	10777	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHAGBARK DR	10778	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SONSTROM RD	9971	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SONSTROM RD	10206	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SONSTROM RD	10400	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SONSTROM RD	10401	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SONSTROM RD	10402	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/8/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HIGH ST	2459	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/10/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HIGH ST	2463	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/10/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HIGH ST	2464	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/10/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HIGH ST	6220	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/10/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BOARDMAN RD	4527	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BOARDMAN RD	7135	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BOARDMAN RD	7139	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COLLINS RD	7599	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COLLINS RD	7876	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COLLINS RD	8274	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COLLINS RD	8960	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COLLINS RD	9033	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GROVE ST	2402	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GROVE ST	2405	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GROVE ST	2407	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GROVE ST	2410	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GROVE ST	2412	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GROVE ST	2427	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GROVE ST	4444	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GROVE ST	7320	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HANNAH ST	8989	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HANNAH ST	8991	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HANNAH ST	8993	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARVIN ST	8455	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARVIN ST	8457	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROSE ST	8988	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROSE ST	10189	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RUTH ST	8839	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SANDRA ST	8751	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SANDRA ST	8841	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	791	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	795	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	797	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	799	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	814	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	819	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	2363	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	12/12/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	2365	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	12/12/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	3943	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	3947	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	3949	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	3950	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	3951	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	12/12/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	3953	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	7230	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	7232	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/12/1966	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JUDD ST	1188	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/15/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JUDD ST	3432	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/15/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JUDD ST	6881	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/15/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JUDD ST	6884	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/15/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	JUDD ST	6886	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/15/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JUDD ST	6888	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/15/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STEARNS ST	1118	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/27/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STEARNS ST	3516	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/27/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STEARNS ST	3517	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/27/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STEARNS ST	3519	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/27/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STEARNS ST	3520	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/27/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STEARNS ST	3521	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/27/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STEARNS ST	3523	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/27/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STEARNS ST	3525	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/27/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STEARNS ST	3528	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/27/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STEARNS ST	6910	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/27/1966	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BLAKESLEE ST	2469	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/3/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BLAKESLEE ST	2471	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/3/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BLAKESLEE ST	2475	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/3/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BLAKESLEE ST	2478	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/3/1967	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BLAKESLEE ST	2479	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/3/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BLAKESLEE ST	2480	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/3/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BLAKESLEE ST	2482	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/3/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BLAKESLEE ST	2484	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/3/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BLAKESLEE ST	6759	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/3/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BLAKESLEE ST	13981	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/3/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRIDGEPORT AVE	11419	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CROSS ST	11825	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CROSS ST	11940	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DANBURY LN	11420	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FAIRWAY VIEW DR	11887	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LACAVA RD	11889	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAKE AVE	3860	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAKE AVE	3862	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAKE AVE	3864	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAKE AVE	3867	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAKE AVE	3869	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAKE AVE	3871	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAKE AVE	3872	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAKE AVE	3874	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAKE AVE	3876	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAKE AVE	4637	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAKE AVE	4639	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAKE AVE	4642	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAKE AVE	4645	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAKE AVE	4652	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	1/4/1967	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LAKE AVE	4655	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/4/1967	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LAKE AVE	4657	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAKE AVE	6001	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAKE AVE	6003	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAKE AVE	6006	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAKE AVE	6007	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAKE AVE	10783	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/4/1967	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LAKE AVE	10784	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/4/1967	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MARCIA DR	11819	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARCIA DR	11885	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RACE ST	13896	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SONSTROM RD	11821	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PLEASANT VIEW AVE	4515	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/5/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BALDWIN DR	5115	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/6/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BALDWIN DR	5158	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/6/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CENTER ST	946	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/6/1967	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CENTER ST	3514	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/6/1967	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CENTER ST	3515	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/6/1967	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	COUNTRY LN	11671	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/6/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COUNTRY LN	11719	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/6/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COUNTRY LN	11882	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/6/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GLENDALE DR	4643	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/6/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REVERE DR	10752	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/6/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REVERE DR	10753	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/6/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	7535	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	1/6/1967	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BERKSHIRE DR	4965	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BERKSHIRE DR	5056	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GLENDALE DR	4543	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GLENDALE DR	4555	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GLENDALE DR	4557	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GLENDALE DR	4564	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GLENDALE DR	4566	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GLENDALE DR	4640	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GLENDALE DR	4642	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GLENDALE DR	4917	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GLENDALE DR	4928	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GLENDALE DR	4929	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GLENDALE DR	4987	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GLENDALE DR	4989	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GLENVIEW DR	4548	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GLENVIEW DR	4571	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GLENVIEW DR	5449	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAKLAND ST	188	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAKLAND ST	1183	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAKLAND ST	1184	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAKLAND ST	1185	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAKLAND ST	3434	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAKLAND ST	3531	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAKLAND ST	3536	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	OAKLAND ST	3539	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAKLAND ST	3541	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAKLAND ST	6843	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAKLAND ST	6845	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STEWART ST	3071	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STEWART ST	3073	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STEWART ST	4097	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STEWART ST	4456	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUMMIT ST	3862	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUMMIT ST	3966	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUMMIT ST	3967	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WESTMINSTER RD	6404	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WESTMINSTER RD	6405	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WESTMINSTER RD	6498	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WESTMINSTER RD	6500	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODCREST DR	4963	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WYNDWOOD DR	4601	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WYNDWOOD DR	4603	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WYNDWOOD DR	4605	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CARLETON PL	4450	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CARLETON PL	4453	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GRIDLEY ST	3582	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GRIDLEY ST	3584	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GRIDLEY ST	3586	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GRIDLEY ST	3588	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GRIDLEY ST	3590	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GRIDLEY ST	3592	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GRIDLEY ST	3595	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GRIDLEY ST	3597	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GRIDLEY ST	3599	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GRIDLEY ST	3601	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MILLS ST	2097	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MILLS ST	3268	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MILLS ST	7197	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MILLS ST	9330	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MILLS ST	9331	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MILLS ST	9332	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MILLS ST	9333	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PUTNAM ST	3264	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PUTNAM ST	3265	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PUTNAM ST	3267	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PUTNAM ST	5907	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PUTNAM ST	9297	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PUTNAM ST	9298	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PUTNAM ST	9299	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHERMAN ST	2090	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHERMAN ST	8452	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHERMAN ST	8453	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODLAND ST	957	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODLAND ST	2424	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODLAND ST	3698	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODLAND ST	3699	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODLAND ST	4430	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODLAND ST	4432	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODLAND ST	4436	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODLAND ST	5764	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODLAND ST	6954	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRADLEY ST	1291	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/13/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRADLEY ST	1293	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/13/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRADLEY ST	2428	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/13/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRADLEY ST	5640	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/13/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CROWN ST	3392	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/13/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CROWN ST	3394	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/13/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CROWN ST	3396	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/13/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CROWN ST	3399	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/13/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CROWN ST	3403	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/13/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CROWN ST	4310	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/13/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CROWN ST	4311	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/13/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CROWN ST	4340	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/13/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CROWN ST	4625	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/13/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HARRISON ST	3381	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/13/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HARRISON ST	3383	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/13/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HARRISON ST	6877	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/13/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PECK LN	1449	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PECK LN	3063	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PECK LN	3829	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PECK LN	3831	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PECK LN	4111	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PECK LN	4444	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PECK LN	4445	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PECK LN	4715	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PECK LN	4992	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BOY ST	4749	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BOY ST	4753	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BOY ST	4857	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BOY ST	4859	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DWIGHT ST	654	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ELAINE DR	4423	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ELAINE DR	4425	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ELAINE DR	4427	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAXINE RD	4431	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	MAXINE RD	4433	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAXINE RD	4435	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAXINE RD	4468	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAXINE RD	4855	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PARDEE ST	646	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PARDEE ST	647	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PARDEE ST	649	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PARDEE ST	650	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ALLEN ST	3282	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ALLEN ST	3285	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ALLEN ST	3660	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GEARY AVE	3549	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GEARY AVE	3551	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GEARY AVE	3553	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GEARY AVE	4450	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JUDSON AVE	2172	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JUDSON AVE	3638	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JUDSON AVE	3640	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JUDSON AVE	3642	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JUDSON AVE	4199	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JUDSON AVE	4200	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JUDSON AVE	4259	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAGNOLIA AVE	3661	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAGNOLIA AVE	3663	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAGNOLIA AVE	3665	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAGNOLIA AVE	4544	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAGNOLIA AVE	4546	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROBBINS AVE	4503	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROBBINS AVE	4505	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BENJAMIN ST	4319	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GARFIELD RD	7273	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MOSSA DR	4849	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MOSSA DR	4851	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MOSSA DR	5014	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	S STREET EXT	1379	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SOUTH ST EXT	1381	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SOUTH ST EXT	3939	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SOUTH ST EXT	3941	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SOUTH ST EXT	3943	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SOUTH ST EXT	3945	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SOUTH ST EXT	4382	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SOUTH ST EXT	4473	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SOUTH ST EXT	4474	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EVELYN RD	9978	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EVELYN RD	9980	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EVELYN RD	9981	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EVELYN RD	10898	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EVELYN RD	10969	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EVELYN RD	10971	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	POITRAS RD	11232	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ALLEN ST	3280	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/3/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROOK ST	1371	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROOK ST	1375	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROOK ST	1383	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROOK ST	1386	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROOK ST	1389	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROOK ST	2346	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	3/4/1967	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	BROOK ST	2348	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROOK ST	2350	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	3/4/1967	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROOK ST	2352	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROOK ST	2354	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	3/4/1967	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROOK ST	2357	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROOK ST	2359	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROOK ST	6646	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROOK ST	6683	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROOK ST	6684	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROOK ST	6932	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROOK ST	7238	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROOK ST	9211	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROOK ST	9939	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROOK ST	10225	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FRENCH ST	9105	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FRENCH ST	9107	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FRENCH ST	9161	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FRENCH ST	9163	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FRENCH ST	9165	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FRENCH ST	9167	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FRENCH ST	10852	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JEWEL ST	9175	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARK ST	9071	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARK ST	9121	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARK ST	9123	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARK ST	9125	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARK ST	9354	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARK ST	9355	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARK ST	9357	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARK ST	9359	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARK ST	9381	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARK ST	9383	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RENEE ST	9110	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RENEE ST	9144	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	RENEE ST	9176	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOCHAVEN RD	11081	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOCHAVEN RD	11083	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VANCE RD	9402	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VANCE RD	9404	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VANCE RD	9405	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VANCE RD	9488	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VANCE RD	9490	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VANCE RD	9492	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VANDERBILT RD	28	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VANDERBILT RD	31	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VANDERBILT RD	7817	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VANDERBILT RD	7819	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VANDERBILT RD	8631	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	3/14/1967	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	VANDERBILT RD	9497	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOUISIANA AVE	8566	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOUISIANA AVE	8568	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOUISIANA AVE	8570	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOUISIANA AVE	8572	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOUISIANA AVE	8573	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOUISIANA AVE	8575	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOUISIANA AVE	8577	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOUISIANA AVE	8578	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOUISIANA AVE	8580	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOUISIANA AVE	8581	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOUISIANA AVE	8582	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOUISIANA AVE	8583	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOUISIANA AVE	8584	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOUISIANA AVE	8585	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOUISIANA AVE	8586	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOUISIANA AVE	8587	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOUISIANA AVE	8588	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOUISIANA AVE	8590	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOUISIANA AVE	8592	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOUISIANA AVE	8594	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOUISIANA AVE	8596	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHRUB RD	6492	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHRUB RD	6494	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHRUB RD	7392	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHRUB RD	7393	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHRUB RD	7394	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHRUB RD	7838	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHRUB RD	9096	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHRUB RD	9611	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHRUB RD	10243	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHRUB RD	10246	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ADELINE AVE	4492	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	171	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	181	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	186	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/23/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	189	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	192	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	198	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	238	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	240	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	242	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	249	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	3672	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	3674	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	3675	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	3677	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	3678	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	3837	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	4609	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	4740	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ARCADIA RD	3040	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ARCADIA RD	3042	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BARLOW ST	1280	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BARLOW ST	1283	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BARLOW ST	2933	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BARLOW ST	3020	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BARLOW ST	3054	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BARLOW ST	3305	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BARLOW ST	3307	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BARLOW ST	4400	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BARLOW ST	5032	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BARLOW ST	5355	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FARRELL AVE	4207	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FARRELL AVE	4209	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FARRELL AVE	9064	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARTIN RD	3044	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARTIN RD	3087	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARTIN RD	3100	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARTIN RD	4137	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ANDREWS ST	12032	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/31/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BAYBERRY DR	7185	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BAYBERRY DR	7187	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BAYBERRY DR	7190	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BAYBERRY DR	7240	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BAYBERRY DR	7288	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BAYBERRY DR	7289	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	BAYBERRY DR	7291	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BAYBERRY DR	7292	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BAYBERRY DR	7295	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BAYBERRY DR	7298	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DEERING LN	7309	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DEERING LN	7313	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARCONI AVE	3019	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARCONI AVE	4334	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SURREY DR	7302	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SURREY DR	7304	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SURREY DR	7306	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SURREY DR	7308	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SURREY DR	7310	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SURREY DR	7312	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SYLVIA LN	7175	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SYLVIA LN	7177	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WEST GATE	7174	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WESTWOOD RD	5175	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODMERE RD	7181	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODMERE RD	7183	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODMERE RD	7299	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODMERE RD	7300	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GARFIELD RD	7275	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/3/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GARFIELD RD	7277	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/3/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GARFIELD RD	7281	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/3/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GARFIELD RD	7283	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/3/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MADISON DR	7269	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/3/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STONECREST DR	7253	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/3/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STONECREST DR	7254	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/3/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STONECREST DR	7256	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/3/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STONECREST DR	7258	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/3/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STONECREST DR	7259	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/3/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STONECREST DR	7261	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/3/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STONECREST DR	7264	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/3/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TOPVIEW TER	7266	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/3/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TOPVIEW TER	7268	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/3/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TOPVIEW TER	7816	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/3/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHESTNUT ST	1418	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHESTNUT ST	2951	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	4/4/1967	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	CHESTNUT ST	3379	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHESTNUT ST	3381	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHESTNUT ST	3383	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHESTNUT ST	4313	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHESTNUT ST	4315	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHESTNUT ST	4613	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EDWARD ST	3473	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	4/4/1967	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	EDWARD ST	4501	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MELVILLE ST	3693	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TALMADGE ST	2154	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/5/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TALMADGE ST	2156	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/5/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TALMADGE ST	3012	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/5/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TALMADGE ST	3014	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/5/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CEDAR ST	4413	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/7/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CEDAR ST	4415	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/7/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CEDAR ST	4416	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/7/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CEDAR ST	15433	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/7/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	5160	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	4/8/1967	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STEVENS ST	11670	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	4/8/1967	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TIMBER LN	11523	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/8/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TIMBER LN	11525	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/8/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WESTWOOD RD	5178	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/8/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHARLES ST	9111	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LONGVIEW AVE	4531	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LONGVIEW AVE	5433	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BIRD RD	1284	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CAROL DR	7194	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAROL DR	7196	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAROL DR	7197	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAROL DR	7198	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAROL DR	7200	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAROL DR	7202	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAROL DR	7204	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DANIEL RD	9026	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DANIEL RD	9027	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EAST RD	16	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EAST RD	18	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EAST RD	178	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EAST RD	1280	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EAST RD	1282	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EAST RD	1284	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EAST RD	2553	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EAST RD	2608	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EAST RD	2610	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EAST RD	2613	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EAST RD	2616	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EAST RD	2620	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EAST RD	2656	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EAST RD	2658	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EAST RD	3145	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EAST RD	3146	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EAST RD	3954	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	EAST RD	5753	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EAST RD	9117	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOLLEY RD	8844	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOLLEY RD	8846	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KAREN RD	10203	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARILYN DR	10433	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATILDA DR	7165	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATILDA DR	7203	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATILDA DR	7205	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WESTCHESTER DR	7210	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODING ST	3706	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODING ST	4446	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODING ST	6917	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GREYSTONE AVE	3568	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GREYSTONE AVE	3570	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GREYSTONE AVE	3572	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GREYSTONE AVE	3574	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GREYSTONE AVE	3576	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GREYSTONE AVE	3578	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GREYSTONE AVE	4133	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GREYSTONE AVE	4674	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORNINGSIDE DR E	7004	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORNINGSIDE DR E	7006	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORNINGSIDE DR E	7021	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORNINGSIDE DR E	7023	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORNINGSIDE DR E	7025	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORNINGSIDE DR E	7108	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORNINGSIDE DR E	7110	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORNINGSIDE DR E	7112	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORNINGSIDE DR E	7114	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORNINGSIDE DR E	7157	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORNINGSIDE DR W	7121	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORNINGSIDE DR W	7123	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORNINGSIDE DR W	7125	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORNINGSIDE DR W	7130	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORNINGSIDE DR W	9926	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD WOLCOTT RD	2426	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/13/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD WOLCOTT RD	2429	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/13/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD WOLCOTT RD	2432	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/13/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD WOLCOTT RD	2435	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/13/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD WOLCOTT RD	2437	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/13/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD WOLCOTT RD	2441	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/13/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD WOLCOTT RD	2448	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/13/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD WOLCOTT RD	2450	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/13/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD WOLCOTT RD	2452	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/13/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	363	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	365	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	372	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	375	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	378	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	420	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	423	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	426	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	2867	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	2901	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	3840	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	3842	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	3846	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	3849	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	3852	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	3855	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	4616	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	4766	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLOVER RD	4728	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/15/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLOVER RD	4732	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/15/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLOVER RD	4733	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/15/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FARMSTEAD RD	4671	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/15/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FARMSTEAD RD	4673	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/15/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JANICE LN	4723	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/15/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JANICE LN	4725	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/15/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SMITH ST	3929	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/15/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SMITH ST	3931	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/15/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUSAN LN	4744	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/15/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PEACEDALE ST	605	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PEACEDALE ST	607	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PEACEDALE ST	609	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PEACEDALE ST	611	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PEACEDALE ST	613	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PEACEDALE ST	616	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PEACEDALE ST	618	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PEACEDALE ST	620	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PEACEDALE ST	2568	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PINEHURST RD	392	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PINEHURST RD	399	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PINEHURST RD	400	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PINEHURST RD	404	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PINEHURST RD	410	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PINEHURST RD	412	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PINEHURST RD	414	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PINEHURST RD	418	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	AMBLER RD	4053	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	AMBLER RD	4328	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BATTLE ST	2906	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BATTLE ST	2909	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BATTLE ST	2912	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BATTLE ST	3319	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BATTLE ST	10977	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BIRGE RD	3056	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BIRGE RD	3058	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BIRGE RD	3338	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BIRGE RD	3340	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHAPEL ST	348	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHAPEL ST	357	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FEDERAL ST	3	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FEDERAL ST	5	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JENNINGS RD	3121	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JENNINGS RD	3123	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JENNINGS RD	3629	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JENNINGS RD	3631	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JENNINGS RD	3633	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LARDNER RD	3647	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LARDNER RD	3649	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PAGE AVE	6619	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PAGE AVE	7103	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TANGLEWOOD RD	4769	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KELLEY ST	1309	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/21/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KELLEY ST	2218	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/21/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KELLEY ST	2496	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/21/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	1300	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/21/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	1304	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/21/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	1306	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/21/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	1308	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/21/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	1311	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/21/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	1314	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/21/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	1320	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/21/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	1326	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/21/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	8746	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/21/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	8891	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/21/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	9531	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/21/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	9977	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/21/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JOHN AVE	4513	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ARLINGTON ST	1164	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ARLINGTON ST	1166	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ARLINGTON ST	5273	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ARLINGTON ST	9642	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CONCORD ST	6410	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FAIRFIELD ST	1174	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FAIRFIELD ST	8636	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FAIRFIELD ST	9885	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FAIRLAWN ST	8313	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FAIRLAWN ST	8945	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LEWIS RD	4730	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LEWIS RD	4737	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LEWIS RD	8820	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LEWIS RD	10392	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LEWIS RD	10408	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DOVER ST	10122	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DOVER ST	10123	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JEFFERSON AVE	10542	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JEFFERSON AVE	11101	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JEFFERSON AVE	11103	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LEXINGTON ST	1142	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LEXINGTON ST	1144	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LEXINGTON ST	1146	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LEXINGTON ST	1148	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LEXINGTON ST	1151	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LEXINGTON ST	1154	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LEXINGTON ST	1156	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARE RD	10582	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHARON ST	10126	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHARON ST	10128	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHARON ST	10130	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHAWN DR	10579	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHAWN DR	10581	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WARREN ST	10121	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ARROWHEAD DR	10624	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CANDY LN	10419	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CANDY LN	10421	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EDROW RD	11112	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FOX DEN RD	9628	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FOX DEN RD	9821	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FOX DEN RD	9825	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FOX DEN RD	9830	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JUNIPER RD	7059	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JUNIPER RD	9243	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JUNIPER RD	9245	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOVELAND LN	11114	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REDWOOD DR	10441	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REDWOOD DR	10443	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REDWOOD DR	10445	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SAW MILL RD	10416	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SAW MILL RD	10417	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	TUFTS ST	9498	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TUFTS ST	9500	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TUFTS ST	9527	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VALMORE RD	11116	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VALMORE RD	11118	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CARMELO RD	10715	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FERRARO DR	10696	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FERRARO DR	10701	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	5/1/1967	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FERRARO DR	10703	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROUND HILL RD	6727	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROUND HILL RD	6729	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROUND HILL RD	6731	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROUND HILL RD	6782	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROUND HILL RD	6967	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROUND HILL RD	6969	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROUND HILL RD	7359	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROUND HILL RD	7815	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROUND HILL RD	8809	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SURREY DR	11637	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SURREY DR	11695	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SURREY DR	11696	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HAIG AVE	4478	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOOVER AVE	4484	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOOVER AVE	6558	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOOVER AVE	7713	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MERCIER AVE	1358	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MERCIER AVE	1360	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MERCIER AVE	1362	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MERCIER AVE	1364	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MERCIER AVE	1366	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DOROTHY RD	4522	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/3/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DOROTHY RD	8850	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/3/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DOROTHY RD	9385	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/3/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DOROTHY RD	9820	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/3/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TOLLAND RD	8938	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/3/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHERWOOD RD	9255	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHERWOOD RD	9257	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHERWOOD RD	9259	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHERWOOD RD	9261	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHERWOOD RD	9263	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHERWOOD RD	9265	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/4/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BLUE MEADOW RD	10738	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/5/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KNOLLWOOD DR	10734	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/5/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KNOLLWOOD DR	10736	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/5/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHEFFIELD LN	10613	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/5/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CASE ST	1367	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/8/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CASE ST	1369	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/8/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CASE ST	4780	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/8/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FALLS BROOK RD	8425	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/8/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FALLS BROOK RD	8427	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/8/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FALLS BROOK RD	9098	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/8/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FALLS BROOK RD	9135	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/8/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FALLS BROOK RD	9137	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/8/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FALLS BROOK RD	9229	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/8/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WARNER ST	4550	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/8/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WARNER ST	4552	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/8/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRAEBURN RD	10482	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRAEBURN RD	10573	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SWANSON DR	10480	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SWANSON DR	10481	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SWANSON DR	10484	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TERRACE LN	10486	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TERRACE LN	10814	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAK HILL DR	9589	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAK HILL DR	9591	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAK HILL DR	10391	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAK HILL DR	11555	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TWINING ST	10636	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CASWELL AVE	10024	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAWLEY ST	4783	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAWLEY ST	11334	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	5/17/1967	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	NESTICO CT	7748	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIDGE RD	9025	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIDGE RD	9222	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIDGE RD	9252	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIDGE RD	9908	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIDGE RD	11213	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TUTTLE ST	6529	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TUTTLE ST	7538	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TUTTLE ST	7540	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TUTTLE ST	8394	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILCOX ST	6615	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILCOX ST	7141	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILCOX ST	7143	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILCOX ST	7171	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILCOX ST	7221	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILCOX ST	7618	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CRESTWOOD DR	4719	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FAIRVIEW AVE	4787	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FAIRVIEW AVE	4789	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FAIRVIEW AVE	9230	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	GLENN ST	2698	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GLENN ST	2701	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GLENN ST	5402	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOBSON AVE	2685	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOBSON AVE	4790	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOBSON AVE	9231	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HULL ST	1536	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HULL ST	2866	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HULL ST	4148	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HULL ST	4157	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAURICE ST	7459	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAURICE ST	7461	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAURICE ST	8892	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAY ST	5073	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MCKINLEY AVE	8257	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PLEASANT VIEW AVE	2996	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PLEASANT VIEW AVE	3142	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PLEASANT VIEW AVE	3144	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PLEASANT VIEW AVE	4716	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUNNYDALE AVE	6161	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUNNYDALE AVE	8166	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUNNYDALE AVE	8225	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VINCENT P KELLY RD	8736	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VINCENT P KELLY RD	9183	NEW WOOD POLE FOR STREETLIGHTG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VINCENT P KELLY RD	9969	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BUCKINGHAM ST	3005	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/19/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CARLSON ST	3354	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/19/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CARLSON ST	3356	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/19/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GRANGER RD	6746	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/19/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILLSIDE AVE	4836	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/19/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MURRAY RD	2518	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/19/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SEYMOUR ST	10535	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/19/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SIGOURNEY ST	1538	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/19/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SIGOURNEY ST	1540	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/19/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SIGOURNEY ST	1543	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/19/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHERBROOKE ST	4180	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHERBROOKE ST	4182	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHERBROOKE ST	4365	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHERBROOKE ST	4500	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHERBROOKE ST	4594	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLIS ST	1547	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLIS ST	1549	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLIS ST	1551	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLIS ST	1553	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLIS ST	1557	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLIS ST	1559	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLIS ST	4116	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLIS ST	4118	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLIS ST	4119	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLIS ST	4120	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLIS ST	4121	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLIS ST	4122	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLIS ST	4123	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLIS ST	4124	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLIS ST	4125	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLIS ST	4158	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLIS ST	4227	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLIS ST	4236	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLIS ST	4238	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DANBURY LN	11914	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/23/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VINE RD	10473	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/23/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MECHANIC ST	8323	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/24/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODARD PL	4682	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/24/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ALEXANDER ST	4812	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/31/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ALEXANDER ST	5565	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/31/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ALEXANDER ST	7841	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/31/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ALEXANDER ST	8333	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/31/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BENHAM ST	4809	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/31/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BISHOP ST	6672	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/31/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BISHOP ST	7562	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/31/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BISHOP ST	7564	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/31/1967	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CHRISTOPHER ST	7098	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/31/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHRISTOPHER ST	7360	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/31/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOIS ST	6912	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/31/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOIS ST	6916	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/31/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARGERIE ST	4808	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/31/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	POPLAR ST	1274	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/31/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	POPLAR ST	8994	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/31/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SYCAMORE ST	3105	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/31/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SYCAMORE ST	4814	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/31/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SYCAMORE ST	10154	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/31/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SYCAMORE ST	10351	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/31/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BINGHAM ST	2530	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BINGHAM ST	4838	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BINGHAM ST	8346	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BINGHAM ST	8815	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILLCREST CT	3794	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILLCREST CT	3797	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KENNEY ST	3823	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KENNEY ST	3825	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KENNEY ST	3831	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	KENNEY ST	3833	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SYCAMORE ST	6998	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/1/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CRONIN ST	9413	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CRONIN ST	9429	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CRONIN ST	9436	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CRONIN ST	9438	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CRONIN ST	9440	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CRONIN ST	9442	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CRONIN ST	10385	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CRONIN ST	10387	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CRONIN ST	10388	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DALEY ST	9516	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DALEY ST	9520	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DALEY ST	9523	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DINO RD	9712	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DINO RD	9717	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HEPWORTH ST	8317	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HEPWORTH ST	8834	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HEPWORTH ST	9994	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HEPWORTH ST	9995	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LUCIEN RD	9714	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LUCIEN RD	9718	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERRY RD	10743	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERRY RD	10745	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERRY RD	10747	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERRY RD	10750	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	YARDE DR	9376	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EASTWOOD RD	4588	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/5/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EASTWOOD RD	4590	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/5/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EL TORO DR	5036	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/5/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EL TORO DR	5037	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/5/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EL TORO DR	5038	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/5/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EL TORO DR	5040	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/5/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HART ST	623	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/5/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HART ST	627	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/5/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HART ST	629	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/5/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HART ST	630	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/5/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HART ST	636	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/5/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAYWOOD LN	4993	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/5/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAYWOOD LN	4994	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/5/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAYWOOD LN	4995	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/5/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAYWOOD LN	4996	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/5/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PIERCE ST	4447	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/5/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PIERCE ST	4659	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/5/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODRIDGE RD	5079	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/5/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TUTTLE RD	3161	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TUTTLE RD	4358	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TUTTLE RD	4360	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/9/1967	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TUTTLE RD	4362	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TUTTLE RD	4368	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MOUNTAIN VIEW AVE	6559	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MOUNTAIN VIEW AVE	6563	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MOUNTAIN VIEW AVE	6564	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MOUNTAIN VIEW AVE	6565	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MOUNTAIN VIEW AVE	6566	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MOUNTAIN VIEW AVE	6567	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MOUNTAIN VIEW AVE	6568	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MOUNTAIN VIEW AVE	6569	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MOUNTAIN VIEW AVE	6570	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MOUNTAIN VIEW AVE	6961	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MOUNTAIN VIEW AVE	7286	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BETHS AVE	7086	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/13/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BETHS AVE	7106	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/13/1967	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BETHS AVE	7893	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/13/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BETHS AVE	7895	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/13/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BETHS AVE	8243	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/13/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BETHS AVE	10360	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/13/1967	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BIANCA RD	11692	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/13/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BIANCA RD	11694	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/13/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KATHERN ST	7586	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/13/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KATHERN ST	8377	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/13/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ANTHONY DR	10291	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KOZANI ST	10288	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KOZANI ST	10365	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KOZANI ST	10367	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KOZANI ST	10369	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KOZANI ST	11187	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PAUL ST	9674	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/15/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PAUL ST	9676	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/15/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VERA RD	6598	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/15/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VERA RD	7094	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/15/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VERA RD	9465	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/15/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VERA RD	9466	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/15/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VERA RD	9468	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/15/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VERA RD	9588	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/15/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRACE AVE	9616	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRACE AVE	9680	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRACE AVE	9682	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRACE AVE	9683	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRACE AVE	10196	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRACE AVE	10198	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	BRACE AVE	10286	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CABOT ST	9693	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CABOT ST	9694	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DUNCAN ST	9685	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DUNCAN ST	9687	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DUNCAN ST	9688	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/16/1967	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	DUNCAN ST	9690	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DUNCAN ST	9691	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BURTON ST	9470	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/21/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BURTON ST	9472	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/21/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BURTON ST	9474	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/21/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BURTON ST	9475	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/21/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BURTON ST	10170	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/21/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BURTON ST	10171	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/21/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BURTON ST	10173	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/21/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BURTON ST	10296	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/21/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BURTON ST	10298	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/21/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KNOLL ST	9209	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KNOLL ST	9210	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MICHAEL ST	9677	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MICHAEL ST	9678	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MILTON RD	9336	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MILTON RD	9338	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MILTON RD	9340	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SKYRIDGE RD	5168	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SKYTOP DR	5167	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VINE RD	7145	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VINE RD	10259	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VINE RD	10261	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VINE RD	10263	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ANDERSON AVE	2525	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ANDERSON AVE	2527	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ANDERSON AVE	3303	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ANDERSON AVE	3305	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ANDERSON AVE	6767	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BUCKLEY AVE	4895	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BUCKLEY AVE	9084	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BUCKLEY AVE	10638	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BUCKLEY AVE	10639	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BUCKLEY AVE	11312	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHERRY ST	3375	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHERRY ST	3378	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CURTISS AVE	1261	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CURTISS AVE	1263	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CURTISS AVE	7151	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FAIR ST	3809	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FAIR ST	3852	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FAIR ST	4883	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FAIR ST	4884	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FAIR ST	4885	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FAIR ST	4887	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FAIR ST	4888	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FAIR ST	6873	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FAIR ST	9234	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GARDEN TER	10891	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GROVE AVE	2681	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GROVE AVE	2683	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GROVE AVE	4879	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GROVE AVE	4881	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	INDIAN TRL	4518	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	INDIAN TRL	4520	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	INDIAN TRL	4573	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	INDIAN TRL	4869	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	INDIAN TRL	4871	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	IROQUOIS RD	4873	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	IROQUOIS RD	4875	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	IROQUOIS RD	4877	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	IROQUOIS RD	4879	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	IROQUOIS RD	4985	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTATUCK RD	4374	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTATUCK RD	4376	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTATUCK RD	4378	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTATUCK RD	4380	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MOHAWK RD	4633	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MOHAWK RD	4635	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MOHAWK RD	4637	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROWE PL	7347	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROWE PL	7349	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROWE PL	7351	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TUNXIS RD	4370	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TUNXIS RD	4372	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TUNXIS RD	4527	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TUNXIS RD	4529	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TUNXIS RD	4661	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TUNXIS RD	4756	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TUNXIS RD	4758	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TUNXIS RD	5070	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VERNON ST	2675	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VERNON ST	2677	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VERNON ST	3848	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VERNON ST	3850	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	WELCH DR	8383	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WELCH DR	8384	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WELCH DR	9079	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ZIPP AVE	1265	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ZIPP AVE	1267	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BARLOW ST	5096	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/6/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LINCOLN ST	3654	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/6/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LINCOLN ST	3657	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/6/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LINCOLN ST	4665	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/6/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAMP ST	4914	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/7/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAMP ST	4917	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/7/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAMP ST	4924	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/7/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAMP ST	4928	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/7/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAMP ST	7383	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/7/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAMP ST	10498	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/7/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAMP ST	10502	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/7/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAMP ST	10657	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/7/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAMP ST	10659	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/7/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAMP ST	57348	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/7/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAMP ST	98763	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/7/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAMP ST	98765	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/7/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAMP ST	98767	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/7/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAMP ST	98773	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/7/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAMP ST	98780	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/7/1967	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	OSULLIVAN DR	11166	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/7/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OSULLIVAN DR	11184	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/7/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OSULLIVAN DR	11186	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/7/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BELMONT ST	3958	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRIARWOOD RD	9604	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRIARWOOD RD	9606	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLAREMONT ST	6537	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLAREMONT ST	6538	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HARVEST LN	8869	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HARVEST LN	9505	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROSEMONT AVE	3959	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROSEMONT AVE	6240	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROSEMONT AVE	9785	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUNRISE TER	11758	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ADAMS ST	4679	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	IPSWITCH RD	3082	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	IPSWITCH RD	3910	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	IPSWITCH RD	3912	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	IPSWITCH RD	4953	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SALEM LN	3084	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TOPSFIELD RD	5219	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ORCHARD ST	1414	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ORCHARD ST	1416	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ORCHARD ST	2048	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PLEASANT ST	2067	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PLEASANT ST	2069	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PLEASANT ST	2071	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PLEASANT ST	2073	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COLONY ST	3388	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COLONY ST	4103	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COLONY ST	4320	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COLONY ST	4321	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NORTON ST	2157	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NORTON ST	2159	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NORTON ST	2991	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ATKINS AVE	3292	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ATKINS AVE	3293	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ATKINS AVE	3294	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ATKINS AVE	3295	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BARNES ST	3312	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BARNES ST	3314	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILLSIDE PL	3546	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JACOBS ST	3621	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LANDRY ST	1427	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LANDRY ST	2319	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PRATT ST	1420	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PRATT ST	1423	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PRATT ST	2354	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RUSS LN	1413	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RUSS LN	2767	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TULIP ST	2945	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TULIP ST	3980	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TULIP ST	3982	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/28/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BETHEL ST	3333	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/31/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BETHEL ST	3334	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/31/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CONDON RD	1115	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/31/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COTTAGE ST	3384	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/31/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COTTAGE ST	3386	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/31/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DIVISION ST	3455	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/31/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DUDLEY ST	3456	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/31/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DUDLEY ST	3457	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/31/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DUDLEY ST	3458	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/31/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EDGEWOOD ST	3469	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/31/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EDGEWOOD ST	3471	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/31/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODBINE ST	4047	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/31/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODBINE ST	4049	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/31/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	APPLE RD	4893	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/7/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	CONSOLATION ST	3091	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/7/1967	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LAUREL PL	11271	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/7/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NORWALK AVE	3074	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/7/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NORWALK AVE	3094	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/7/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROSEMONT ST	4840	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/7/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VALLEY ST	4233	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/7/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WARD ST	3994	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/7/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WARD ST	3996	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/7/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CENTRAL AVE	4919	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMAICA ST	462	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MISSETT ST	3892	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MOLZON PL	2985	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MOLZON PL	4308	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MOODY ST	6713	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MOODY ST	7101	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MOODY ST	7399	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MOODY ST	7445	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MOODY ST	7810	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MOODY ST	8448	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MOODY ST	9093	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MOODY ST	9095	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROBERTS ST	464	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/9/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ARTISAN ST	4871	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ARTISAN ST	6256	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CASTLE RD	10033	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CASTLE RD	10035	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CASTLE RD	10037	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARINE CT	7422	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MECHANIC ST	5046	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MECHANIC ST	5088	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROOT AVE	4864	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/10/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROOKSIDE DR	4877	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROOKSIDE DR	8802	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROOKSIDE DR	8804	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROOKSIDE DR	8806	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROOKSIDE DR	11010	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROOKSIDE DR	11011	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROOKSIDE DR	11012	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROOKSIDE DR	11013	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LYNN RD	10319	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LYNN RD	10320	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LYNN RD	10322	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LYNN RD	10324	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LYNN RD	10695	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHORT ST	11725	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VANTANA DR	10325	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VANTANA DR	10327	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VANTANA DR	10922	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/11/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ARLENE DR	10333	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CARPENTER AVE	10155	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CARPENTER AVE	10156	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CARPENTER AVE	10158	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CARPENTER AVE	10381	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CARPENTER AVE	10585	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORRIS AVE	9656	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORRIS AVE	9657	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORRIS AVE	9658	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORRIS AVE	9659	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORRIS AVE	9664	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORRIS AVE	9665	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORRIS AVE	9666	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORRIS AVE	9667	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORRIS AVE	9668	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PRISCILLA LN	10160	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PRISCILLA LN	10332	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RICH LN	10382	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RICH LN	10635	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RICH LN	10655	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SPARK AVE	10404	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SPARK AVE	10405	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SPARK AVE	10407	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/14/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HARDWICK RD	9188	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HARDWICK RD	9190	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HARDWICK RD	9584	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARSH RD	4657	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEADOWBROOK DR	8887	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEADOWBROOK DR	8889	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEADOWBROOK DR	9186	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RUDOLPH PL	5847	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TANGLEWOOD RD	4768	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAKRIDGE RD	13577	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAKRIDGE RD	13578	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAKRIDGE RD	13579	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAKRIDGE RD	13580	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAKRIDGE RD	13581	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAKRIDGE RD	13582	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAKRIDGE RD	13583	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAKRIDGE RD	13584	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/17/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BEL AIR DR	9920	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BEL AIR DR	9922	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BEL AIR DR	9924	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	ELIZABETH RD	8999	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ELIZABETH RD	9395	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ELIZABETH RD	10331	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LANCASTER RD	6381	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LANCASTER RD	6383	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LANCASTER RD	6528	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LANCASTER RD	6532	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BATT PL	9023	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BECKWITH DR	7358	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LEON RD	9155	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LEON RD	9157	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LINCOLN AVE	3840	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LINCOLN AVE	3843	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LINCOLN AVE	3844	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LYONS RD	4058	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LYONS RD	4060	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LYONS RD	9015	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LYONS RD	9017	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LYONS RD	9019	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LYONS RD	9021	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BERNSIDE DR	8864	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BERNSIDE DR	9101	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BUFF RD	5335	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BUFF RD	5337	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BUFF RD	5340	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DEWITT DR	9910	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	E VIEW ST	5871	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FIFTH ST	4570	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FIFTH ST	5728	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FIFTH ST	8479	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HARMONY RD	10707	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOLDEN ST	3816	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOLDEN ST	4571	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOLT ST	7151	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOLT ST	7751	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOLT ST	9159	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KINGSWOOD DR	9080	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NEW ST	2722	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NEW ST	2724	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NEW ST	2726	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NEW ST	2729	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NEW ST	2731	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NEW ST	4583	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NEW ST	4584	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIVER ST	4090	NEW WOOD POLE FOR STREETLIGHTG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIVER ST	8296	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SIXTH ST	5986	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SIXTH ST	5990	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/29/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COLLINS RD	7598	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/8/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COLLINS RD	12132	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/8/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BREWSTER RD	5962	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BREWSTER RD	6763	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BREWSTER RD	8408	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BREWSTER RD	8906	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BREWSTER RD	9002	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BREWSTER RD	9045	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BREWSTER RD	9140	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BREWSTER RD	9431	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BREWSTER RD	10941	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BREWSTER RD	10942	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BREWSTER RD	10943	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	252	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	HILL ST	255	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	259	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	263	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	266	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	268	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	270	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	273	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	277	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	281	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	294	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	299	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	303	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	307	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	312	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	316	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	321	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	323	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	325	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	330	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	331	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	335	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	3534	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	HILL ST	3536	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	9/16/1967	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	HILL ST	3538	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	HILL ST	3541	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	HILL ST	3544	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/16/1967	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SHEERAN RD	10295	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/16/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BARTHOLOMEW ST	1288	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BARTHOLOMEW ST	1290	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	BEACON ST	5082	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BELEDEN GARDENS DR	3224	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BELEDEN GARDENS DR	6754	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BELEDEN GARDENS DR	6986	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GOODWIN ST	2449	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KNOX PL	10975	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PRINCE ST	3472	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STAGE COACH RD	8884	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	9/18/1967	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	STAGE COACH RD	9001	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/18/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BELRIDGE RD	959	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/19/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BELRIDGE RD	961	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/19/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BELRIDGE RD	963	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/19/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BELRIDGE RD	965	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/19/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BELRIDGE RD	8637	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/19/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES ST	3611	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/19/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES ST	3612	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/19/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LINCOLN PL	1220	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/21/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LINCOLN PL	2976	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/21/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MERRIMAN ST	4439	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/21/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MERRIMAN ST	4441	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/21/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PROSPECT PL	1211	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/21/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PROSPECT PL	10584	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/21/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RICHMOND PL	3887	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/21/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EUGENE AVE	4385	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EUGENE AVE	4386	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/22/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EARL ST	3466	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/25/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VIEW ST	1453	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/25/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VIEW ST	1455	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/25/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VIEW ST	1458	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/25/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VIEW ST	1460	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/25/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CROSS ST	9868	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CROSS ST	9870	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CROSS ST	9872	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CROSS ST	9874	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/26/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PEACH TREE LN	5160	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PEACH TREE LN	5161	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PEACH TREE LN	5162	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHORT ST	11726	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/27/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MINOR ST	2315	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/30/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WITCHES ROCK RD	107	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/2/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TANGLEWOOD RD	4770	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/5/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DEWEY AVE	2692	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DEWEY AVE	7770	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FIFTH ST	9427	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	275	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORRIS AVE	9962	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/20/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PARK ST	8027	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	11/20/1967	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MORNINGSIDE DR W	7008	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORNINGSIDE DR W	7011	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORNINGSIDE DR W	7013	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORNINGSIDE DR W	7016	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORNINGSIDE DR W	7018	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORNINGSIDE DR W	7117	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/12/1967	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SENECA RD	5105	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/2/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SENECA RD	5125	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/2/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SENECA RD	5127	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/2/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SENECA RD	5129	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/2/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HIGH ST	4959	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/20/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MUIR AVE	3702	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/20/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MUIR AVE	3704	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/20/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	157	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/21/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	159	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/21/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	163	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/21/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	166	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/21/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	168	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/21/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	173	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/21/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	175	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/21/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	177	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/21/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	180	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/21/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	188	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/21/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	194	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/21/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NORTHMONT RD	4685	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/22/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FOREST ST	7565	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/25/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OVERLOOK AVE	1342	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/25/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OVERLOOK AVE	1344	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/25/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OVERLOOK AVE	1348	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/25/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OVERLOOK AVE	1351	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/25/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PINE ST	303	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/10/1968	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	12005	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/23/1968	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BRENTWOOD DR	12113	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/26/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CARRIAGE RD	12114	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/26/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ILLINOIS AVE	11845	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/26/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ILLINOIS AVE	11846	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/26/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ILLINOIS AVE	12091	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/26/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	INDIANA ST	11665	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/26/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	INDIANA ST	12110	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/26/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	INDIANA ST	12111	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/26/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	IOWA PL	12095	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/26/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MINNESOTA LN	11847	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/26/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MINNESOTA LN	11849	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/26/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MINNESOTA LN	11851	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/26/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	OHIO DR	12092	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/26/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OHIO DR	12094	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/26/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD TURNPIKE RD	12137	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/26/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD TURNPIKE RD	12139	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/26/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GOODWIN ST	2451	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/28/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HULL ST	12248	NEW WOOD POLE FOR STREETLIGHTG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/28/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAWNDALE AVE	1407	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/28/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAWNDALE AVE	1410	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/28/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAWNDALE AVE	2135	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/28/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	586	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/10/1968	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FAIRLAWN ST	11667	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/10/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MERRILL CT	3772	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/11/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STONECREST DR	11897	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/18/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLARK AVE	2956	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/6/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLARK AVE	2957	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/6/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLARK AVE	2958	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/6/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLARK AVE	2959	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/6/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLARK AVE	4188	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/6/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLARK AVE	12058	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/6/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLARK AVE	12059	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/6/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLARK AVE	12163	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/6/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLARK AVE	12165	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/6/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLARK AVE	12167	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/6/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLARK AVE	12170	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/6/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLARK AVE	12172	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/6/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLARK AVE	12176	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/6/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLARK AVE	12178	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/6/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLARK AVE	12180	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/6/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	12316	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/6/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	12352	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/6/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOLLEY RD	9011	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/9/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CANDY LN	12251	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/21/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PREDEM RD	7129	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/13/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ALBA DR	12216	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/28/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ALBA DR	12218	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/28/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOLLEY RD	10835	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/28/1968	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CROSS ST	9875-S	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/2/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PECK LN	3833	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/17/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PECK LN	3835	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/17/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PECK LN	4108	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/17/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CARRIAGE RD	12116	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/31/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CARRIAGE RD	12269	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/31/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JEFFREY RD	12366	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/31/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REDWOOD DR	12368	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/31/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SIXTH ST	5984	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/31/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SONSTROM RD	12196	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/31/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SONSTROM RD	12198	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/31/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SONSTROM RD	12200	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/31/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODCHUCK LN	12270	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/31/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DEL PRADO DR	5230	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/20/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EASTWOOD RD	4585	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/28/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD TURNPIKE RD	12135	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/24/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BALSAM ST	2537	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/9/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAMP ST	98776	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/10/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAMP ST	98778	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/10/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PARK DEPARTMENT	DEWITT DR	12568	NEW WOOD POLE FOR STREETLIGHTG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/29/1969	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PARK DEPARTMENT	DEWITT DR	12569	NEW WOOD POLE FOR STREETLIGHTG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	5/29/1969	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PARK DEPARTMENT	DEWITT DR	12570	NEW WOOD POLE FOR STREETLIGHTG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/29/1969	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PARK DEPARTMENT	DEWITT DR	12571	NEW WOOD POLE FOR STREETLIGHTG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	5/29/1969	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PARK DEPARTMENT	DEWITT DR	12573	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/29/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PARK DEPARTMENT	PAGE PARK RD	12587	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/29/1969	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PARK DEPARTMENT	PAGE PARK RD	12588	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	5/29/1969	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PARK DEPARTMENT	WESTMINSTER RD	12563	NEW WOOD POLE FOR STREETLIGHTG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/29/1969	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PARK DEPARTMENT	WESTMINSTER RD	12564	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/29/1969	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CANDLEWOOD DR	12106	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/9/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CANDLEWOOD DR	12211	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/9/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FIRESIDE LN	12108	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/9/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HULL ST	1522	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/9/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PARK DEPARTMENT	STEELE RD	12560	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/24/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PARK DEPARTMENT	STEELE RD	12561	NEW WOOD POLE FOR STREETLIGHTG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/24/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SKYVIEW TER	5180	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/25/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WESTWOOD RD	5084	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/25/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WESTWOOD RD	5174	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/25/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PARK DEPARTMENT	ROCKWELL PARK RD	9401	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/27/1969	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PARK DEPARTMENT	ROCKWELL PARK RD	12529	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/27/1969	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PARK DEPARTMENT	ROCKWELL PARK RD	12530	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/27/1969	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PARK DEPARTMENT	ROCKWELL PARK RD	12531	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/27/1969	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PARK DEPARTMENT	ROCKWELL PARK RD	12532	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/27/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PARK DEPARTMENT	ROCKWELL PARK RD	12533	NEW WOOD POLE FOR STREETLIGHTG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/27/1969	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PARK DEPARTMENT	ROCKWELL PARK RD	12534	NEW WOOD POLE FOR STREETLIGHTG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/27/1969	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PARK DEPARTMENT	ROCKWELL PARK RD	12536	NEW WOOD POLE FOR STREETLIGHTG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/27/1969	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PARK DEPARTMENT	TULIP ST	12522	NEW WOOD POLE FOR STREETLIGHTG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/27/1969	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PARK DEPARTMENT	TULIP ST	12523	NEW WOOD POLE FOR STREETLIGHTG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/27/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PARK DEPARTMENT	TULIP ST	12524	NEW WOOD POLE FOR STREETLIGHTG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/27/1969	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	12773	NEW WOOD POLE FOR STREETLIGHTG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/28/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHEFFIELD LN	12258	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/1/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHEFFIELD LN	12260	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/1/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHEFFIELD LN	12364	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/1/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LANTERN HILL RD	12103	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/9/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LANTERN HILL RD	12105	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/9/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GRACE AVE	10237	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/15/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	LACAVA RD	11664	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/15/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LACAVA RD	12206	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/15/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MICHIGAN AVE	12202	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/15/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	INDIAN TRL	4562	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/16/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PECK LN	3832	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/16/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PECK LN	4110	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/16/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SENECA RD	5130	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/16/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SENECA RD	5132	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/16/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	4760	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/26/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HART ST	635	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/28/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	IROQUOIS RD	4876	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/28/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LEOMINSTER RD	6755	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/9/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LEOMINSTER RD	6757	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/9/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LEOMINSTER RD	8742	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/9/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARSH RD	4727	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/12/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARSH RD	6360	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/12/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TUTTLE ST	4497	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/12/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOLCOTT RD	4742	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/12/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOLCOTT RD	5226	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/12/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOLCOTT RD	5237	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/12/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CRONIN ST	9439	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/26/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DALEY ST	9518	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/26/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LEON RD	9158	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/26/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DALEY ST	9510	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/17/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	YARDE DR	12632	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/17/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	12784	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/23/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	12786	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/23/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARSH RD	2859	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/1/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARSH RD	4300	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/1/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARSH RD	4304	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/1/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARSH RD	4649	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/1/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CROWN ST	4624	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/29/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DEL PRADO DR	5234	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/29/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MISSETT ST	12878	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/29/1969	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CONSTANCE LN	12768	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/17/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CONSTANCE LN	12770	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/17/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CONSTANCE LN	12772	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/17/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CONSTANCE LN	12868	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/17/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOOSTER CT	12512	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/16/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOOSTER CT	12514	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/16/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOOSTER CT	12516	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/16/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KING ST	8502	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	2/18/1970	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	KING ST	12817	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/18/1970	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	KING ST	12872	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	2/18/1970	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	KING ST	12879	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	2/18/1970	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	MIDDLE ST	2852	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	2/18/1970	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	MIDDLE ST	2854	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	2/18/1970	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	MIDDLE ST	2856	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	2/18/1970	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	MIDDLE ST	12880	NEW WOOD POLE FOR STREETLIGHTG	1	27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	2/18/1970	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	MIDDLE ST	12894	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	2/18/1970	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	AVON LN	12185	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/12/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DEL PRADO DR	5228	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/12/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EL TORO DR	5039	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/12/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MUZZY ST	3708	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/12/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NEWELL AVE	4185	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/12/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NEWELL AVE	4186	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/12/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PECK LN	3830	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/12/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RHODA LN	12754	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/12/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROUND HILL RD	12752	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/12/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WINDSOR LN	12287	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/12/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	10520	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	3/14/1970	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	BENHAM ST	2542	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/28/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EAST RD	7217	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/28/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GREYSTONE AVE	4683	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/28/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2216	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	5/5/1970	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	6061	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	5/5/1970	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	7642	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	5/5/1970	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	MAPLE ST	4398	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	5/5/1970	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MAPLE ST	4399	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/5/1970	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MAPLE ST	8948	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/5/1970	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	NORTH ST	3734	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	5/5/1970	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	NORTH ST	3735	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	5/5/1970	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	NORTH ST	9005	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	5/5/1970	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	PARK ST	8035	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/16/1970	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CLARK AVE	12049	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/30/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLARK AVE	12053	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/30/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLARK AVE	12057	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1970	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CLARK AVE	12820	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/30/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLARK AVE	12824	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/30/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLARK AVE	12828	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/30/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CENTRAL ST	1269	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	7/20/1970	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	CENTRAL ST	3761	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/20/1970	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CENTRAL ST	3762	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	7/20/1970	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CENTRAL ST	3763	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	7/20/1970	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	CENTRAL ST	3766	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	7/20/1970	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	CENTRAL ST	3767	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	7/20/1970	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	CENTRAL ST	3770	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	7/20/1970	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	CENTRAL ST	9927	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	7/20/1970	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	CENTRAL ST	12483	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	7/20/1970	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	CHURCH AVE	9351	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	7/20/1970	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	BETHS AVE	10363	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/23/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	VINCENT P KELLY RD	8737	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/31/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROAD PL	6717	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/21/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JUDSON AVE	4197	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/21/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RUSTIC TER	186	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/21/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ARCADIA RD	3039	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/28/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BEACON ST	5078	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/28/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BEACON ST	5080	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/28/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BEACON ST	5084	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/28/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RHODA LN	12758	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/7/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COZY LN	14051	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/20/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHAPEL ST	346	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/29/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHAPEL ST	351	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/29/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHAPEL ST	355	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/29/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHAPEL ST	360	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/29/1970	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FAIRWAY VIEW DR	11888	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	1/6/1971	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PARK ST	8015	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	1/7/1971	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	PARK ST	8017	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/7/1971	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CHAPEL ST	353	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/20/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CARRIAGE RD	12961	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/25/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DANIEL RD	9028	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/25/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LACAVA RD	11890	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/25/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHRUB RD	7390	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/4/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FARRELL AVE	9063	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/20/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOIS ST	6911	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/20/1971	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LOIS ST	6914	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/20/1971	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	RHODA LN	12760	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/20/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAUREL ST	1355	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/21/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STEVENS ST	7432	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/6/1971	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	NICHOLAS DR	12897	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/14/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NICHOLAS DR	12898	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/14/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NICHOLAS DR	12899	HI MNT CTR BORED WD/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/14/1971	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	NICHOLAS DR	12900	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/14/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NICHOLAS DR	12901	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/14/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NICHOLAS DR	12902	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/14/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NICHOLAS DR	12903	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/14/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROBERTSON ST	12904	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/14/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROBERTSON ST	12905	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/14/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STEVENS ST	12933	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	9/29/1971	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	HOLLEY RD	12840	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/1/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARGERIE ST	6252	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/1/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RHODA LN	12762	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/1/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RUSS LN	1412	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/1/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VANCE RD	12141	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/1/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	421	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/13/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	4767	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/13/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	4971	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/13/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	4972	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/13/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	4973	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/13/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	4975	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/13/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	4976	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/13/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	4978	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/13/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	5148	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/13/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	5150	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/13/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JEROME AVE	2094	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/13/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ADNA RD	11715	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/18/1971	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	ADNA RD	11717	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/18/1971	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CLAIRE ST	5285	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/18/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARLENE ST	5300	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/18/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARLENE ST	5302	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/18/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROBIN ST	5291	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/18/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROBIN ST	5297	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/18/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHAWN DR	11536	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/18/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHAWN DR	13213	NEW WOOD POLE FOR STREETLIGHTG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/18/1971	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SHAWN DR	13215	NEW WOOD POLE FOR STREETLIGHTG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/18/1971	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CREST DR	13039	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/21/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	POITRAS RD	13137	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/21/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIDGECREST LN	5284	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/21/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIDGECREST LN	13034	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/21/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIDGECREST LN	13036	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/21/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIDGECREST LN	13038	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/21/1971	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LITCHFIELD LN	12660	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/1/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAROLINA RD	11545	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/8/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAROLINA RD	11547	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/8/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAROLINA RD	11549	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/8/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GEORGETOWN RD	12273	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/8/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GEORGETOWN RD	12275	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/8/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GEORGETOWN RD	12277	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/8/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GEORGETOWN RD	12279	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/8/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GEORGETOWN RD	12355	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/8/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DANBURY LN	11918	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/10/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LITCHFIELD LN	12780	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/10/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAUREEN DR	5136	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/10/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAUREEN DR	5138	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/10/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAUREEN DR	5248	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/10/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BUCKLEY AVE	13140	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GENOVESE DR	13142	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GENOVESE DR	13144	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROBERTSON ST	11538	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROBERTSON ST	11541	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROBERTSON ST	11543	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROBERTSON ST	12191	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	PINE BROOK TER	13208	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/24/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PINE BROOK TER	13209	HI MNT CTR BORED WD/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/24/1972	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE BROOK TER	13210	HI MNT CTR BORED WD/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/24/1972	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE BROOK TER	13211	HI MNT CTR BORED WD/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/24/1972	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE BROOK TER	13212	HI MNT CTR BORED WD/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/24/1972	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MYRTLE ST	3711	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/31/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WESTWOODS TER	11537	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/31/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILTBRAND RD	12550	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/1/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILTBRAND RD	12959	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/1/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILTBRAND RD	12648-S	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/1/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PLEASANT AVE	2667	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/2/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WALNUT ST	3701	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/2/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DIVISION ST	5290	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/12/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SKYRIDGE RD	5169	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/12/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOLCOTT RD	5321	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/12/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GAYLE DR	12981	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/10/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GAYLE DR	12983	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/10/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MADISON DR	12985	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/10/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MADISON DR	12987	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/10/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MADISON DR	12989	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/10/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MADISON DR	12991	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/10/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STONECREST DR	12975	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/10/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STONECREST DR	12977	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/10/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STONECREST DR	12980	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/10/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MERRILL CT	3770	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/14/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CONCORD ST	4732	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/27/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CONCORD ST	5071	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/27/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PINE ST	388.5	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	FLOOD LIGHT (FULL) 27500	3/28/1972	$2.87	$34	1,278	$32	$108	144	$1.50	598	$15	$50	680
BRISTOL PWD STREET LIGHTING	TUTTLE RD	5268	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/28/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FERN HILL RD	13320	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRADITIONL(POST TOP)	5/10/1972	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	FERN HILL RD	13321	STD TRAD/CNTMP WD/MTL/GLS UG	1	6300 LUMEN HP SODIUM	84	STD DECOR-TRADITIONL(POST TOP)	5/10/1972	$1.02	$12	345	$9	$29	55	$0.78	228	$6	$19	117
BRISTOL PWD STREET LIGHTING	FERN HILL RD	13322	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRAD(POST TOP) FULL	5/10/1972	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	MARSH RD	4302	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/24/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LEON RD	10855	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/12/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FIRESIDE LN	12109	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/17/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EBERT DR	13253	NEW WOOD POLE FOR STREETLIGHTG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/18/1972	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	EBERT DR	13254	HI MNT CTR BORED WD/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/18/1972	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LAKESIDE DR	12192	NEW WOOD POLE FOR STREETLIGHTG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/18/1972	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LAKESIDE DR	13248	HI MNT CTR BORED WD/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/18/1972	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LAKESIDE DR	13249	NEW WOOD POLE FOR STREETLIGHTG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/18/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAKESIDE DR	13250	NEW WOOD POLE FOR STREETLIGHTG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/18/1972	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LAKESIDE DR	13251	HI MNT CTR BORED WD/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/18/1972	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	NEWELL AVE	5349	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/19/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODLAND ST	6955	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/19/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OXBOW DR	13373	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRADITIONL(POST TOP)	9/12/1972	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	SOUTH ST	12459	HI MNT CTR BORED MT/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	9/20/1972	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	ILLINOIS AVE	13301	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/21/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ILLINOIS AVE	13303	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/21/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ILLINOIS AVE	13304	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/21/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BOIVIN ST	5320	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	11/24/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BOIVIN ST	5333	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/24/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLAIRE ST	5329	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/24/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLAIRE ST	5331	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/24/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAPLE CT	3216	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/24/1972	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BARLOW ST	5358	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/24/1973	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GOSHEN CT	12945	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/24/1973	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SANDY DR	7208	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/24/1973	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BETHS AVE	13147	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/29/1973	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FAIR ST	9235	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1973	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ALOHA LN	13176	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/16/1973	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FIRESIDE LN	13348	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/16/1973	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HARMONY RD	13174	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/16/1973	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HARMONY RD	13350	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/14/1973	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HARMONY RD	13352	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/14/1973	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOVERS LN	13355	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/14/1973	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NATALIE CT	5338	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/6/1973	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NATALIE CT	5340	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/6/1973	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SKYRIDGE RD	5171	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/6/1973	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CRESCENT DR	4709	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/20/1973	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	13088	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/20/1973	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ASHLEY RD	13337	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/17/1973	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ASHLEY RD	13381	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/17/1973	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CANDLEWOOD DR	13359	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/17/1973	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SPERRY RD	13331	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/17/1973	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GOSHEN CT	12947	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/11/1973	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LANDRY ST	11912	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/12/1973	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	QUEEN ST	3609	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/8/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BETHS AVE	12524	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BETHS AVE	12525	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RICHARD CT	13517	NEW WOOD POLE FOR STREETLIGHTG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/14/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RICHARD CT	13518	NEW WOOD POLE FOR STREETLIGHTG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/14/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RICHARD CT	13519	NEW WOOD POLE FOR STREETLIGHTG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/14/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RICHARD CT	13520	NEW WOOD POLE FOR STREETLIGHTG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/14/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HARPER CT	9220	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/16/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COVENTRY RD	6725	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/23/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAHEU ST	5295	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/23/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAHEU ST	5396	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/23/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FIRESIDE LN	13349	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/24/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BIRCHWOOD DR	13367	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/27/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BIRCHWOOD DR	13369	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/27/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BIRCHWOOD DR	13504	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/27/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	ROBERTSON ST	13314	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/18/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROBERTSON ST	13315	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/18/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROBERTSON ST	13316	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/18/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LONG LN	13172	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/20/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ALEXANDER ST	9148	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/3/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAKESIDE DR	13515	HI MNT CTR BORED WD/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/3/1974	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	GREYSTONE AVE	3575	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/4/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHERBROOKE ST	4366	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/4/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WATERBURY RD	3153	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/26/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOBSON AVE	2696	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/20/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAUREEN DR	5354	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/20/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROUND HILL RD	13382	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/20/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PINE ST	366	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/25/1974	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LONG LN	13344	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/26/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LONG LN	13345	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/26/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LONG LN	13346	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/26/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JEROME AVE	2073	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	10/2/1974	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	OWSIANKO LN	13572	HI MNT CTR BORED WD/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	10/22/1974	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	OWSIANKO LN	13573	HI MNT CTR BORED WD/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	10/22/1974	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	OWSIANKO LN	13574	HI MNT CTR BORED WD/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	10/22/1974	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FRANK ST	4899	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/23/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NORWALK AVE	5240	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/23/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GRIDLEY ST	3594	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/18/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	4765	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/18/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FOX DEN RD	9823	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/26/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HIGH ST	13512	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/10/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VINCENT P KELLY RD	8738	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	12/11/1974	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	VINCENT P KELLY RD	8739	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/11/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MASSACHUSETTS DR	13463	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/18/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MASSACHUSETTS DR	13465	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/18/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SIMPKINS DR	13479	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/18/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SIMPKINS DR	13481	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/18/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SIMPKINS DR	13483	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/18/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GARDEN TER	10893	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/19/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HIDDEN BROOK DR	13553	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/20/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HIDDEN BROOK DR	13554	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/20/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WINDING BROOK RD	13555	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/20/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WINDING BROOK RD	13556	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/20/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WINDING BROOK RD	13557	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/20/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WINDING BROOK RD	13558	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/20/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WINDING BROOK RD	13559	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/20/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WINDING BROOK RD	13560	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/20/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SIMPKINS DR	13485	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/26/1974	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHURCH AVE	2382	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/2/1975	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MATTATUCK RD	5068	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/29/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	INDIANA ST	13466	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/6/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	INDIANA ST	13509	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/6/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VERMONT DR	13598	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/6/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VERMONT DR	13600	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/6/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VERMONT DR	13601	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/6/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHAGBARK DR	13614	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/17/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLOOS RD	13561	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/23/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLOOS RD	13562	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/23/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOTCHKISS DR	13456	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/23/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOTCHKISS DR	13458	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/23/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOTCHKISS DR	13460	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/23/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOOMIS LN	13435	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/23/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOOMIS LN	13437	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/23/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOVERS LN	13356	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/23/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SEMINARY ST	13443	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/23/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SEMINARY ST	13446	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/23/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SEMINARY ST	13452	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/23/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WESTWOODS TER	13441	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/23/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WESTWOODS TER	13442	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/23/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	9902	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/5/1975	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	13102	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/19/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MCKINLEY AVE	4794	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/19/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD TURNPIKE RD	12140	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/19/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VINE RD	7968	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/19/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOCHAVEN RD	13603	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/21/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODYBROOK RD	13605	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/21/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODYBROOK RD	13607	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/21/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GLEN EAGLE DR	12262	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/10/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GLEN EAGLE DR	12263	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/10/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GLEN EAGLE DR	12265	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/10/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GLEN EAGLE DR	12267	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/10/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROBERTSON ST	13654	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/10/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROBERTSON ST	13655	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/10/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PETERS CT	3858	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/30/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOPMEADOW RD	13662	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/20/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOPMEADOW RD	13663	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/20/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOPMEADOW RD	13664	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/20/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PINNACLE RD	13661	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/20/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PINNACLE RD	335S	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/20/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DANBURY LN	11917	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/29/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SMITH ST	5406	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/1/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAUREEN DR	5137	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/8/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	METRO ST	8695	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/28/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SOUTH ST	14593	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	10/28/1975	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SAND HILL RD	13514	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/12/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SAND HILL RD	13593	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/12/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	SAND HILL RD	13595	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/12/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SAND HILL RD	13596	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/12/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SAND HILL RD	13597	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/12/1975	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HAROLD ST	3525	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PINE ST	340	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	FLOOD LIGHT (FULL) 27500	1/22/1976	$2.87	$34	1,278	$32	$108	144	$1.50	598	$15	$50	680
BRISTOL PWD STREET LIGHTING	WEST ST	4005	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	1/22/1976	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	NEW HAMPSHIRE DR	13629	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/19/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NEW HAMPSHIRE DR	13630	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/19/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NEW HAMPSHIRE DR	13631	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/19/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NEW HAMPSHIRE DR	13633	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/19/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2294	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	3/11/1976	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FAIRFIELD ST	10571	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/15/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	5449	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/23/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BUCKBOARD LN	13674	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRAD(POST TOP) FULL	4/30/1976	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	BUCKBOARD LN	13676	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRAD(POST TOP) FULL	4/30/1976	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	BUCKBOARD LN	13682	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRAD(POST TOP) FULL	5/5/1976	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12381	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/17/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12381	HI MNT CTR BORED MT/GLASS UG		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/17/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DONOVAN CT	2857	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/18/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DONOVAN CT	2874	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/18/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARSH RD	4655	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/24/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARSH RD	5250	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/24/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARSH RD	5450	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/24/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARSH RD	5452	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/24/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARSH RD	5454	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/24/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARSH RD	5456	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/24/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAESAR DR	13055	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/28/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAESAR DR	13056	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/28/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAESAR DR	13058	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/28/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAIRD DR	13061	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/28/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAIRD DR	13062	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/28/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAIRD DR	13064	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/28/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAIRD DR	13065	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/28/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DRAYLA DR	13695	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRADITIONL(POST TOP)	6/15/1976	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	DRAYLA DR	13696	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRADITIONL(POST TOP)	6/15/1976	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	RIDGEWOOD ST	4860	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/17/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SEMINARY ST	13448	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/17/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOLLEY RD	13396	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/16/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	AMY LN	5318	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/28/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LONGVIEW AVE	5278	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/28/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LONGVIEW AVE	5279	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/28/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LONGVIEW AVE	5312	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/28/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LONGVIEW AVE	5314	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/28/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LONGVIEW AVE	5316	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/28/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PARK DEPARTMENT	DEWITT DR	12574	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/16/1976	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PARK DEPARTMENT	PAGE PARK RD	12586	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/16/1976	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	OVERLOOK AVE	1350	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/19/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MCINTOSH DR	5461	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/28/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MCINTOSH DR	5466	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/28/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CARRIAGE RD	12962	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/4/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CARRIAGE RD	13699	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/4/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DIVINITY ST	3435	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	11/4/1976	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2271	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	11/18/1976	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2308	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	11/18/1976	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	ELBERTA ST	5164	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/15/1976	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2243	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/21/1977	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	PROSPECT PL	13712	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/1/1977	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILLSIDE PL	1475	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/5/1977	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SOUTH ST	14609	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/17/1977	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	DOLPHIN RD	13494	HI MNT CTR BORED WD/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/11/1977	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	DOLPHIN RD	13496	HI MNT CTR BORED WD/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/11/1977	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	HILLSIDE PL	3545	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/20/1977	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BALDWIN DR	5464	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/15/1977	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FOX DEN RD	9827	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/15/1977	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FOX DEN RD	9829	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/15/1977	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIDGEWOOD ST	4393	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/27/1977	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TREBLE RD	5499	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/5/1977	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TREBLE RD	5500	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/5/1977	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	YORK ST	5498	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/5/1977	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ALOHA LN	13175	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/1/1977	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HARMONY RD	13347	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/1/1977	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ALDBOURNE DR	5508	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/28/1977	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ALDBOURNE DR	5509	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/28/1977	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TREBLE RD	5502	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/28/1977	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TREBLE RD	5504	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/28/1977	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TREBLE RD	5507	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/28/1977	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ELBERTA ST	5489	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/29/1977	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MCINTOSH DR	5485	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	11/29/1977	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MCINTOSH DR	5487	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/29/1977	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2313	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/29/1977	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2314	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/29/1977	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2315	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	12/29/1977	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2289	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	12/30/1977	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2307	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	12/30/1977	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	3201	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	12/30/1977	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	11234	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/30/1977	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SOUTH ST	2901	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/3/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SOUTH ST	3726	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/3/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SOUTH ST	4557	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	1/3/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SOUTH ST	14584	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/3/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SOUTH ST	14606	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	1/3/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2268	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/4/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2292	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/4/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2296	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	1/4/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2298	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	1/4/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	10518	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/4/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2245	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/5/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2247	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/5/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2249	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/5/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2251	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/5/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2252	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/5/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2256	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/5/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2259	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	1/5/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2262	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/5/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2265	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	1/5/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12385	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/5/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12385	HI MNT CTR BORED MT/GLASS UG		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/5/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12389	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/5/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12389	HI MNT CTR BORED MT/GLASS UG		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/5/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12391	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/5/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12391	HI MNT CTR BORED MT/GLASS UG		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/5/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12393	HI MNT CTR BORED MT/GLASS UG		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/5/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12395	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/5/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12395	HI MNT CTR BORED MT/GLASS UG		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/5/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12397	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/5/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12397	HI MNT CTR BORED MT/GLASS UG		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/5/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12398	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/5/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12398	HI MNT CTR BORED MT/GLASS UG		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/5/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12399	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/5/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12399	HI MNT CTR BORED MT/GLASS UG		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/5/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2222	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/6/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2224	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	1/6/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2227	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/6/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2229	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	1/6/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2231	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/6/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2233	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/6/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2235	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/6/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2237	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/6/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2239	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/6/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	195	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/12/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2218	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/12/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2232	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	1/12/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2241	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	1/12/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2267	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/12/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2270	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/12/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2274	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/12/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2275	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/12/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2276	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	1/12/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2278	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/12/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2279	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/12/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2280	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/12/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2282	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/12/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2283	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/12/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2285	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/12/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2288	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/12/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	7418	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/12/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	12938	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/12/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12371	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/12/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12371	HI MNT CTR BORED MT/GLASS UG		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12372	HI MNT CTR BORED MT/GLASS UG		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12374	HI MNT CTR BORED MT/GLASS UG		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12375	HI MNT CTR BORED MT/GLASS UG		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12377	HI MNT CTR BORED MT/GLASS UG		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/12/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12378	HI MNT CTR BORED MT/GLASS UG		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12379	HI MNT CTR BORED MT/GLASS UG		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/12/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12382	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/12/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12382	HI MNT CTR BORED MT/GLASS UG		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/12/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12383	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/12/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12383	HI MNT CTR BORED MT/GLASS UG		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/12/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12384	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/12/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12384	HI MNT CTR BORED MT/GLASS UG		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/12/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12390	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12390	HI MNT CTR BORED MT/GLASS UG		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12394	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/12/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12394	HI MNT CTR BORED MT/GLASS UG		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	804	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/12/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WEST ST	4012	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/16/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FOREST ST	155	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/25/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KING ST	8554	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/30/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	KING ST	12858	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/30/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIDDLE ST	2855	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/30/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	MIDDLE ST	9274	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/30/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	KING ST	8559	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/31/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	KING ST	8561	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/31/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	301	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/31/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	313	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	1/31/1978	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	PINE ST	315	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	1/31/1978	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	PINE ST	317	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	1/31/1978	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	PINE ST	354	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/31/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	356	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/31/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	12336	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/1/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	12348	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/1/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	PINE ST	323	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/1/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	368	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/1/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MAPLE ST	4400	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	2/10/1978	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	CLARK AVE	12181	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/13/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SOUTH ST	14598	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	2/14/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	12332	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/15/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	12320	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/16/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GRIDLEY ST	3602	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/28/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12380	HI MNT CTR BORED MT/GLASS UG		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRADLEY ST	13718	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/25/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHERBROOKE ST	5166	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/25/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	12328	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/6/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	AMY LN	5319	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/10/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MIX ST	2826	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/17/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIX ST	2827	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/17/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIX ST	9089	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/17/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIX ST	9090	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/17/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIX ST	9091	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/17/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIX ST	9735	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/17/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MIX ST	9738	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/17/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIX ST	9739	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/17/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIX ST	9740	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/17/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIX ST	9741	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/17/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIX ST	9742	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/17/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIX ST	9743	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/17/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIX ST	9744	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/17/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIX ST	9745	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/17/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIX ST	9747	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/17/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIX ST	9751	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/17/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIX ST	9754	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/17/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIX ST	9755	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/17/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIX ST	9756	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/17/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIX ST	10618	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/17/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIX ST	1094-S	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/17/1978	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	GLENVIEW DR	4570	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/18/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILLSIDE PL	3548	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/18/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLIS ST	12804	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/3/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLIS ST	12805	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/3/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLIS ST	13831	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/3/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLIS ST	13832	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/3/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLIS ST	13834	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/3/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLIS ST	13836	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/3/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLIS ST	13837	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/3/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	AMY LN	5317	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/9/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CENTER ST	13749	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	12/11/1978	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	N MAIN ST	13751	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	12/11/1978	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	N MAIN ST	13752	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	12/11/1978	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	N MAIN ST	13753	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	12/11/1978	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	N MAIN ST	13756	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	12/11/1978	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	N MAIN ST	13757	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	12/11/1978	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	N MAIN ST	13759	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	12/11/1978	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	N MAIN ST	13760	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	12/11/1978	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	N MAIN ST	13761	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	12/11/1978	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	N MAIN ST	13763	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	12/11/1978	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	N MAIN ST	13765	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	12/11/1978	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	N MAIN ST	13766	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	12/11/1978	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	N MAIN ST	13767	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	12/11/1978	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	N MAIN ST	13768	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	12/11/1978	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	N MAIN ST	13769	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	12/11/1978	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	N MAIN ST	13770	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	12/11/1978	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	N MAIN ST	13771	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	12/11/1978	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	RACE ST	13779	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/11/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RACE ST	13780	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/11/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RACE ST	13781	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/11/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ASHLEY RD	13706	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/18/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ASHLEY RD	13708	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/18/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FIFTH ST	13700	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/18/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JOSEPHINE TER	4391	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/18/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LESLIE CT	4394	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/18/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SIMPKINS DR	13723	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/18/1978	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ORLEANS DR	13725	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/3/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ORLEANS DR	13727	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/3/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ORLEANS DR	13729	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/3/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAIN ST	12421	HI MNT CTR BORED MT/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	1/11/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	MAIN ST	12447	HI MNT CTR BORED MT/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	1/11/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	MAIN ST	12449	HI MNT CTR BORED MT/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	1/11/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	MAIN ST	12450	HI MNT CTR BORED MT/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	1/11/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	MAIN ST	12451	HI MNT CTR BORED MT/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	1/11/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	MAIN ST	12453	HI MNT CTR BORED MT/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	1/11/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	MAIN ST	12456	HI MNT CTR BORED MT/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	1/11/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	MAIN ST	12457	HI MNT CTR BORED MT/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	1/11/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	MAIN ST	12461	HI MNT CTR BORED MT/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	1/11/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	MAIN ST	12462	HI MNT CTR BORED MT/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	1/11/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	MAIN ST	12463	HI MNT CTR BORED MT/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	1/11/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	MAIN ST	12467	HI MNT CTR BORED MT/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	1/11/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	MAIN ST	12469	HI MNT CTR BORED MT/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	1/11/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	MAIN ST	12473	HI MNT CTR BORED MT/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	1/11/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	MAIN ST	12476	HI MNT CTR BORED MT/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	1/11/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	12443	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	1/16/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	13360	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	1/16/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	13361	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	1/16/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	13363	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	1/16/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	13364	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	1/16/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12437	HI MNT CTR BORED MT/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	1/18/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12438	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	1/18/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12440	HI MNT CTR BORED MT/GLASS UG	1	27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/18/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12441	HI MNT CTR BORED MT/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	1/18/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12442	HI MNT CTR BORED MT/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	1/18/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	DIVINITY ST	8014	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	1/19/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	WEST ST	1335	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/19/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	WEST ST	1336	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	1/19/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	WEST ST	1337	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/19/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	WEST ST	1338	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/19/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	WEST ST	1339	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/19/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	WEST ST	1374	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	1/19/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	WEST ST	1376	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/19/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	WEST ST	2152	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/19/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	WEST ST	4019	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	1/19/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	WEST ST	4020	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/19/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	WEST ST	4021	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/19/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	WEST ST	4022	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/19/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	WEST ST	4023	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/19/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	WEST ST	4024	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/19/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	WEST ST	4027	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	1/19/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	WEST ST	4029	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/19/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	WEST ST	4030	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	1/19/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	WEST ST	4031	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/19/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	WEST ST	4033	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	1/19/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	WEST ST	4034	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/19/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	WEST ST	7719	NEW WOOD POLE FOR STREETLIGHTG	1	27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/19/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	WEST ST	9041	NEW WOOD POLE FOR STREETLIGHTG	1	27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/19/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	WEST ST	9538	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	1/19/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	PROSPECT ST	3865	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/22/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PROSPECT ST	3866	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/22/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PROSPECT ST	3868	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/22/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PROSPECT ST	14054	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/22/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUMMER ST	1301	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/22/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUMMER ST	2927	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/22/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUMMER ST	3950	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/22/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUMMER ST	3953	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/22/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUMMER ST	3955	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/22/1979	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SUMMER ST	3957	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/22/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WEST ST	4018	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	1/24/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	SCHOOL ST	4375	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	1/30/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	SCHOOL ST	4377	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	1/30/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	SCHOOL ST	5050	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	1/30/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	SCHOOL ST	8001	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	1/30/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	SCHOOL ST	8005	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	1/30/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	SCHOOL ST	8007	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	1/30/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	SCHOOL ST	8012	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	1/30/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	SCHOOL ST	8013	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	1/30/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	SCHOOL ST	13312	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	1/30/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	CENTER ST	3021	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	2/1/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	CENTER ST	3358	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	2/1/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	CENTER ST	3359	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	2/1/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	CENTER ST	3360	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	2/1/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	CENTER ST	3362	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	2/1/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	CENTER ST	3364	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	2/1/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	CENTER ST	3366	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	2/1/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	CENTER ST	3368	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	2/1/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	CENTER ST	3369	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	2/1/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	CENTER ST	3370	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/1/1979	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CENTER ST	3507	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	2/1/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	CENTER ST	4550	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	2/1/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	CENTER ST	4551	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	2/1/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	SUMMER ST	3959	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/1/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODFIELD RD	11576	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/6/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARLENE ST	5336	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/15/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROCKWELL AVE	4337	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/15/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DIVINITY ST	3436	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/19/1979	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	N MAIN ST	12414	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	2/27/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	N MAIN ST	12415	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	2/27/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	N MAIN ST	12416	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	2/27/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	N MAIN ST	12418	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	2/27/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	N MAIN ST	12422	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	2/27/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	N MAIN ST	12423	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	2/27/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	N MAIN ST	12424	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	2/27/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	N MAIN ST	12425	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	2/27/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	N MAIN ST	12427	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	2/27/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	N MAIN ST	12428	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	2/27/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	N MAIN ST	12430	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	2/27/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	N MAIN ST	12432	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	2/27/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	N MAIN ST	12433	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	2/27/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	N MAIN ST	12434	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	2/27/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	N MAIN ST	12435	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	2/27/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	VALLEY ST	5534	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/1/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VALLEY ST	5535	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/1/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VALLEY ST	7956	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/1/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VALLEY ST	7963	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/1/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHURCH ST	1364	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	3/7/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	CHURCH ST	1365	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	3/7/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	CHURCH ST	1366	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	3/7/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	CHURCH ST	1368	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	3/7/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	CHURCH ST	1369	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	3/7/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	CHURCH ST	2251	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	3/7/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	CHURCH ST	12867	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	3/7/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	PARK ST	8016	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	3/7/1979	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINNACLE RD	13894	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	4/17/1979	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	PINNACLE RD	13895	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/17/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAIN ST	1225	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	5/4/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	MAIN ST	1227	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	5/4/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	MAIN ST	1229	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	5/4/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	MAIN ST	1231	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	5/4/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	MAIN ST	3667	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	5/4/1979	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	N MAIN ST	12429	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	5/10/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	NORTH ST	9047	NEW WOOD POLE FOR STREETLIGHTG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	5/13/1979	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	MCINTOSH DR	5486	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/17/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MCINTOSH DR	5488	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/17/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARCIA DR	13686	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/27/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARCIA DR	13690	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/27/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LITCHFIELD LN	12504	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/29/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MALTBY ST	11562	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/18/1979	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MALTBY ST	11563	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/18/1979	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MALTBY ST	11564	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/18/1979	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MAPLE AVE	13989	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/6/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD TURNPIKE RD	12138	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/6/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DONNA LN	13958	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/16/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EDROW RD	13990	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/18/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EATON RD	3166	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/30/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VANCE DR	11026	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/14/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VANCE DR	11028	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	11/14/1979	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	VANCE DR	11029	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	11/14/1979	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	VANCE DR	11030	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/14/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VANCE DR	11031	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	11/14/1979	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	VANCE DR	11032	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	11/14/1979	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	VANCE DR	11034	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	11/14/1979	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	VANCE DR	11035	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	11/14/1979	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	VANCE DR	11036	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	11/14/1979	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	DIVINITY ST	3429	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	11/21/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	DIVINITY ST	8934	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	11/21/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	DIVINITY ST	14546	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	11/21/1979	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	IRVING ST	3605	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/28/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	IRVING ST	3606	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	11/28/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	IRVING ST	3608	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/28/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	N MAIN ST	3755	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/28/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ORLEANS DR	13731	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/28/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	13568	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/7/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ZACK LN	13570	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/7/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ZACK LN	13571	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/7/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SEYMOUR ST	3722	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/21/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	13106	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/22/1979	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ALDBOURNE DR	5554	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/7/1980	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ALDBOURNE DR	5556	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/7/1980	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	3839	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/7/1980	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VIEW ST	1459	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/7/1980	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROSSI DR	13962	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/8/1980	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROSSI DR	13963	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/8/1980	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROUND HILL RD	13959	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/8/1980	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HENRY ST	3369	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/14/1980	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROYAL DR	5541	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/14/1980	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BALDWIN DR	5463	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/21/1980	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BALDWIN DR	5570	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/21/1980	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	AVON LN	12184	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/4/1980	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VANCE DR	11027	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/5/1980	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	VANCE DR	11033	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/5/1980	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	VANCE DR	12073	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/5/1980	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	VANCE DR	12151	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/5/1980	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	VANCE DR	12152	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	FLOOD LIGHT (FULL) 27500	2/5/1980	$2.87	$34	1,278	$32	$108	144	$1.50	598	$15	$50	680
BRISTOL PWD STREET LIGHTING	VANCE DR	12152	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/5/1980	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	VANCE DR	12153	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/5/1980	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SOUTH ST	2888	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/19/1980	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	N MAIN ST	443	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	3/12/1980	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	N MAIN ST	3750	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	3/12/1980	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	N MAIN ST	3752	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/12/1980	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VANCE DR	12158	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	3/17/1980	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	NATALIE CT	5339	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/11/1980	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STEVENS ST	12929	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	5/2/1980	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STEVENS ST	13410	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/2/1980	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STRAWBERRY HILL RD	13923	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/2/1980	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STRAWBERRY HILL RD	13925	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/2/1980	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STRAWBERRY HILL RD	13926	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/2/1980	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STRAWBERRY HILL RD	13994	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/2/1980	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WANDA DR	13939	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1980	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WANDA DR	13940	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1980	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WANDA DR	13941	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1980	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WANDA DR	13942	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/16/1980	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROYAL DR	5542	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/19/1980	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORNINGSIDE DR E	7019	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/29/1980	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VANCE RD	9493	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/29/1980	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BALDWIN DR	5574	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/16/1980	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BARNUM RD	4257	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/20/1980	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BARNUM RD	4346	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/20/1980	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BUTTERNUT LN	13887	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/20/1980	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	COZY LN	14050	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/20/1980	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MUIR AVE	3706	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/20/1980	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MUIR AVE	5520	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/20/1980	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	5152	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/13/1980	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DIPIETRO LN	14017	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/21/1981	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DIPIETRO LN	14019	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/21/1981	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DIPIETRO LN	14020	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/21/1981	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DIPIETRO LN	14021	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/21/1981	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DIPIETRO LN	14022	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/21/1981	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DIPIETRO LN	14024	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/21/1981	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROBERGE RD	7003	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/21/1981	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COOLIDGE AVE	11104	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/29/1981	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRODERICK RD	13934	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/5/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BRODERICK RD	13936	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/5/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	DELL MANOR DR	13905	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/5/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	1876	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/7/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	1877	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	5/7/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	1878	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/7/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	1879	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/7/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	1881	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/7/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	1882	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/7/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	1883	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/7/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	1884	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/7/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	1885	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/7/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	5817	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/7/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	5818	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/7/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	5819	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/7/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	5820	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/7/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	5821	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/7/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	5822	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	5/7/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	5823	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/7/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	5826	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/7/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	5827	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/7/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	5828	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/7/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	5829	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/7/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	11680-S	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/7/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	KING ST	8557	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/14/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	N MAIN ST	441	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	5/14/1981	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	N MAIN ST	13901	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	5/14/1981	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	NORTH ST	3134	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	5/14/1981	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	NORTH ST	3136	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	5/14/1981	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	NORTH ST	3139	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	5/14/1981	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	NORTH ST	3140	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	5/14/1981	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	NORTH ST	3723	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	5/14/1981	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	NORTH ST	3724	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	5/14/1981	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	NORTH ST	3725	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	5/14/1981	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	NORTH ST	3726	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	5/14/1981	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	NORTH ST	9046	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	5/14/1981	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	WOLCOTT RD	132	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/19/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT RD	134	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/19/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT RD	137	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/19/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT RD	139	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/19/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT RD	143	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/19/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT RD	144	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/19/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT RD	150	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/19/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT RD	153	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/19/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT RD	156	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/19/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT RD	160	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/19/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT RD	163	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/19/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT RD	165	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/19/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT RD	167	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/19/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT RD	172	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/19/1981	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOLCOTT RD	173	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/19/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT RD	175	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/19/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	1888	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/19/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	2412	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/19/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	2413	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/19/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	2414	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	6/19/1981	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	2415	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/19/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	2419	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/19/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	2421	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/19/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3193	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3195	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3197	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3198	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3199	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3201	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/30/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3202	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3204	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3205	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3206	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3208	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/30/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3210	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3212	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3214	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3218	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3221	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3223	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/30/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3226	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3228	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3232	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3235	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	5259	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	4062	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/1/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	4064	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/1/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	4065	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/1/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	4066	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/1/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	4068	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/1/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	4070	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/1/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	4071	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	7/1/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	4072	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/1/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3172	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/13/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3177	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	7/13/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3179	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	7/13/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3183	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	7/13/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3185	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/13/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3187	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	7/13/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3189	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/13/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3191	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/13/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	4056	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	7/13/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	4075	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/13/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	4077	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	7/13/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	4078	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/13/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	4079	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	7/13/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	4080	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/13/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	4081	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/13/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	4083	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/13/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	4085	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/13/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	4087	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/13/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	4089	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/13/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	4090	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	7/13/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	1394	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/15/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	1395	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	7/15/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	1400	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/15/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	1402	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/15/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	1404	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/15/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	1406	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/15/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	2390	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/15/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	2392	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/15/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	2394	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/15/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	2396	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/15/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	2398	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/15/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	2399	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	7/15/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	2400	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/15/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	2401	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/15/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	2407	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	7/15/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	2409	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/15/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	2411	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/15/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	6391	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/15/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	9142	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/15/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MINOR ST	5592	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/27/1981	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROAD ST	5830	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/24/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	5831	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/24/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	5832	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	9/24/1981	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	BROAD ST	5834	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	9/24/1981	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	BROAD ST	5835	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	9/24/1981	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	BROAD ST	5836	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	9/24/1981	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	BROAD ST	5838	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/24/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	8641	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/24/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	8643	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/24/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	8644	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/24/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	8645	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/24/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	8646	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/24/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	8647	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/24/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	8649	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/24/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	8650	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	9/24/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	8651	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/24/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	8652	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/24/1981	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROAD ST	8654	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/24/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	8655	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	9/24/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	15389	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	9/24/1981	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12387	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/22/1981	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12387	HI MNT CTR BORED MT/GLASS UG		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/22/1981	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	N MAIN ST	12417	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	10/30/1981	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	3942	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	11/4/1981	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MELVILLE ST	3695	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/23/1981	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ELBERTA ST	5163	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/23/1981	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARSH RD	4651	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/23/1981	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARLENE ST	5298	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/24/1981	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HAIG AVE	6484	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/28/1981	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JOSEPHINE TER	4388	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/28/1981	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MITCHELL ST	2550	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/30/1981	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ELBERTA ST	5578	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/7/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WITCHES ROCK RD	2020	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/7/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WITCHES ROCK RD	2022	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/7/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ASHLEY RD	13709	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/13/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMMETT ST	13931	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/14/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	256	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/14/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JULIA RD	14128	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/15/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JULIA RD	14129	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/15/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JULIA RD	14130	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/15/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PLANK HILL RD	14114	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/15/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	RITA DR	13943	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/20/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RITA DR	13944	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/20/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RITA DR	13946	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/20/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VILLAGE ST	14138	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/20/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VILLAGE ST	14140	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/20/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BALDWIN DR	5566	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/25/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BALDWIN DR	5568	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/25/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	1850	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/25/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CHAPEL ST	344	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/26/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KNOLLWOOD DR	10973	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/26/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VILLAGE ST	14134	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/27/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VILLAGE ST	14136	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/27/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROAD ST	8668	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	1/29/1982	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	FREDERICK ST	1255	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/29/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2258	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	2/1/1982	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	MIX ST	10633	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	2/1/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2264	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	2/4/1982	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	MIDDLE ST	14002	HI MNT CTR BORED WD/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/4/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIDDLE ST	14148	HI MNT CTR BORED WD/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/4/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIDDLE ST	14149	HI MNT CTR BORED WD/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/4/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WEEPING HILL RD	14113	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/4/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	9844	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	2/5/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	9846	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/5/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	9847	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/5/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	9848	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/5/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	9849	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/5/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	9851	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/5/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	9852	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	2/5/1982	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	9854	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	2/5/1982	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	9856	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/5/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	9858	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	2/5/1982	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	9860	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	2/5/1982	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	9862	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	2/5/1982	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	9865	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	2/5/1982	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	1856	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	2/5/1982	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	1857	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	2/5/1982	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	10519	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/5/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	12882	NEW WOOD POLE FOR STREETLIGHTG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	2/5/1982	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	12883	NEW WOOD POLE FOR STREETLIGHTG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	2/5/1982	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	12884	NEW WOOD POLE FOR STREETLIGHTG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	2/5/1982	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	12885	NEW WOOD POLE FOR STREETLIGHTG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	2/5/1982	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	12886	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	2/5/1982	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	MIDDLE ST	9272	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	2/10/1982	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	CHURCH AVE	11	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/12/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CHURCH AVE	2390	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/12/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CHURCH AVE	2391	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	2/12/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MAXINE RD	4466	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/22/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SIMPKINS DR	13722	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/22/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODARD DR	4250	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/27/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BIRCHWOOD DR	13372	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/3/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	N MAIN ST	13762	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	3/3/1982	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	1853S	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	3/3/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	N MAIN ST	13758	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	3/5/1982	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	WOODRIDGE RD	5081	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12386	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/25/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12386	HI MNT CTR BORED MT/GLASS UG		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/25/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOPMEADOW RD	14170	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/5/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOPMEADOW RD	14171	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/5/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOPMEADOW RD	14172	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/5/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOPMEADOW RD	14173	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/5/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MANO LN	14174	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/5/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MANO LN	14175	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/5/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PINNACLE RD	14176	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/5/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROAD ST	8656	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	4/12/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	8657	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	4/12/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	8658	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	4/12/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	8659	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	4/12/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	8660	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	4/12/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	8662	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	4/12/1982	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	BROAD ST	8664	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	4/12/1982	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	BROAD ST	8666	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	4/12/1982	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	BROAD ST	8678	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	4/12/1982	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	E MAIN ST	8674	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	4/12/1982	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	E MAIN ST	10048	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	4/12/1982	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	E MAIN ST	10050	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	4/12/1982	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	E MAIN ST	10052	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	4/12/1982	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	E MAIN ST	10054	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	4/12/1982	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	E MAIN ST	10058	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	4/12/1982	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	E MAIN ST	10062	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	4/12/1982	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	E MAIN ST	10064	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/12/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2263	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	4/14/1982	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	JEROME AVE	9993	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	4/14/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WILLIS ST	4229	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/14/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMORY CT	3476	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/3/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MORRIS AVE	9660	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/6/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JEROME AVE	2067	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/26/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PARK DEPT	PAGE AVE	11751	NEW WOOD POLE FOR STREETLIGHTG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/27/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	161	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/29/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLARK AVE	12182	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PINE ST	348	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/2/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2284	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	6/4/1982	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2305	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/4/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIDDLE ST	9277	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	6/4/1982	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2225	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	6/17/1982	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	BROAD ST	8667	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	6/22/1982	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	BROAD ST	9917	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	FLOOD LIGHT (FULL) 50000	6/22/1982	$4.18	$50	1,939	$48	$163	144	$1.50	598	$15	$50	1,342
BRISTOL PWD STREET LIGHTING	CENTRAL ST	9483	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	6/22/1982	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	CENTRAL ST	9918	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	6/22/1982	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	E MAIN ST	8671	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	6/22/1982	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	E MAIN ST	8672	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	6/22/1982	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	HAWTHORNE ST	1297	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JEANNETTE ST	152	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JEANNETTE ST	4900	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JEANNETTE ST	6952	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JEANNETTE ST	7768	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LINWOOD ST	150	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TODD ST	5378	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/22/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TODD ST	5379	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TODD ST	5380	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TODD ST	9950	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/22/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ASHOVER LN	5565	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/24/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMMETT ST	3789	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/25/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMMETT ST	3791	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/25/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMMETT ST	4813	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/25/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMMETT ST	7796	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/25/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMMETT ST	7797	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/25/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMMETT ST	7799	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/25/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMMETT ST	11800	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/25/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMMETT ST	11895	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/25/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMMETT ST	12007	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/25/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMMETT ST	12008	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/25/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMMETT ST	12010	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/25/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMMETT ST	12011	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/25/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMMETT ST	12012	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/25/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMMETT ST	12014	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/25/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMMETT ST	12015	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	6/25/1982	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	EMMETT ST	12017	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/25/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMMETT ST	12019	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/25/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMMETT ST	12021	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/25/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMMETT ST	12022	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/25/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMMETT ST	12023	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	6/25/1982	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	EMMETT ST	12024	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/25/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMMETT ST	12026	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/25/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMMETT ST	12027	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/25/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMMETT ST	12028	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/25/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMMETT ST	12029	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/25/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMMETT ST	12030	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/25/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PARK HILL RD	3826	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/25/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PARK HILL RD	3828	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/25/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PARK HILL RD	4277	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/25/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FEDERAL ST	13775	HI MNT CTR BORED WD/GLASS UG	1	27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	6/30/1982	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FEDERAL ST	13776	HI MNT CTR BORED WD/GLASS UG	1	27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	6/30/1982	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FEDERAL ST	13777	HI MNT CTR BORED WD/GLASS UG	1	27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	6/30/1982	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FEDERAL ST	13778	HI MNT CTR BORED WD/GLASS UG	1	27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	6/30/1982	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	MECHANIC ST	1766	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/14/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	13104	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/19/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MADISON DR	14127	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/19/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PLANK HILL RD	14118	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/19/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SOUTH ST	14591	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/19/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	1889	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/4/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	1891	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/4/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	1893	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/4/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	1895	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/4/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	1897	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/4/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	1898	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/4/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	1899	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/4/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	1900	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/4/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	1901	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/4/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	1903	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/4/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	1904	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/4/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	1905	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/4/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	1906	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/4/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	1907	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/4/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	1908	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/4/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	1909	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/4/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	1910	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/4/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	1911	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/4/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	2024	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/4/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FALL MOUNTAIN RD	1956	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/19/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FALL MOUNTAIN RD	1957	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/19/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FALL MOUNTAIN RD	1958	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/19/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FALL MOUNTAIN RD	1960	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/19/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FALL MOUNTAIN RD	1962	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/19/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FALL MOUNTAIN RD	1964	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/19/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FALL MOUNTAIN RD	1966	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/19/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FALL MOUNTAIN RD	1968	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/19/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FALL MOUNTAIN RD	1970	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/19/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FALL MOUNTAIN RD	1972	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/19/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FALL MOUNTAIN RD	3482	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/19/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FALL MOUNTAIN RD	3486	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/19/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FALL MOUNTAIN RD	3488	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/19/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FALL MOUNTAIN RD	3492	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/19/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	FALL MOUNTAIN RD	3493	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/19/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FALL MOUNTAIN RD	3496	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/19/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FALL MOUNTAIN RD	3497	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/19/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FALL MOUNTAIN RD	3499	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/19/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FALL MOUNTAIN RD	3500	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/19/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FALL MOUNTAIN RD	4216	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/19/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	UNION ST	2744	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/20/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	UNION ST	2746	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/20/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	UNION ST	2747	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/20/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	UNION ST	2748	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/20/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	UNION ST	2749	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/20/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	UNION ST	2751	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/20/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	UNION ST	2753	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/20/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	UNION ST	2755	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/20/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	UNION ST	2761	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/20/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	EMMETT ST	12006	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/26/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WITCHES ROCK RD	1973	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/27/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WITCHES ROCK RD	1974	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/27/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WITCHES ROCK RD	1979	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/27/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WITCHES ROCK RD	1985	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/27/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WITCHES ROCK RD	1988	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/27/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WITCHES ROCK RD	1990	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/27/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WITCHES ROCK RD	1993	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/27/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WITCHES ROCK RD	1996	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/27/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WITCHES ROCK RD	1999	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/27/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WITCHES ROCK RD	2002	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/27/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WITCHES ROCK RD	2005	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/27/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WITCHES ROCK RD	2008	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/27/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WITCHES ROCK RD	2010	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/27/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WITCHES ROCK RD	2011	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/27/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WITCHES ROCK RD	2014	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/27/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WITCHES ROCK RD	2015	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/27/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WITCHES ROCK RD	2017	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/27/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ALLENTOWN RD	1913	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/2/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ALLENTOWN RD	1915	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/2/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ALLENTOWN RD	1917	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/2/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ALLENTOWN RD	1920	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/2/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ALLENTOWN RD	1922	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/2/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ALLENTOWN RD	1926	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/2/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ALLENTOWN RD	1941	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/2/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ALLENTOWN RD	1943	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/2/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	285	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/2/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MIDDLE ST	8829	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	9/2/1982	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	CHARLES ST	10147	NEW WOOD POLE FOR STREETLIGHTG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/3/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MECHANIC ST	8322	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/15/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COUNTRY LN	11417	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/20/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SENECA RD	5120	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/12/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STRAWBERRY HILL RD	14075	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/8/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STRAWBERRY HILL RD	14076	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/8/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ALBA DR	12213	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/16/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COVE RD	4534	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/17/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COVE RD	4536	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/17/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COVE RD	4539	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/17/1982	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	COVE RD	4541	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/17/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REDSTONE ST	7397	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/28/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GEORGETOWN RD	14082	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/30/1982	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHERRY HILL DR	13919	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1983	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHERRY HILL DR	13921	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1983	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHERRY HILL DR	14102	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1983	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CRANBERRY LN	14080	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1983	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHERRY HILL DR	14100	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/26/1983	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROOK ST	1374	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/4/1983	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EARL ST	1	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/31/1983	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VILLAGE ST	14139	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/31/1983	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	11394	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	4/15/1983	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	LAKE AVE	3875	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/17/1983	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROBERTSON ST	12906	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/26/1983	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WASHINGTON ST	3935	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/26/1983	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	COLUMBUS AVE	8913	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/25/1983	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CANDLEWOOD DR	14259	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/6/1983	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CANDLEWOOD DR	14260	HI MNT CTR BORED WD/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/6/1983	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CANDLEWOOD DR	14261	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/6/1983	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DAISY CIR	14263	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/6/1983	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DAISY CIR	14264	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/6/1983	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DAISY CIR	14265	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/6/1983	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DAISY CIR	14266	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/6/1983	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DAISY CIR	14267	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/6/1983	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VIOLET DR	14268	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/6/1983	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VIOLET DR	14269	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/6/1983	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLOW BROOK RD	9622	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/1/1983	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLOW BROOK RD	9624	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/1/1983	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOOVER AVE	7714	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/28/1983	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JOSEPHINE TER	4389	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/28/1983	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MOODY ST	8229	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/28/1983	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PURDUE RD	11608	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/28/1983	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RAMBLER ST	11815	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/28/1983	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SONSTROM RD	12199	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/28/1983	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ALDBOURNE DR	5557	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/3/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ALDBOURNE DR	5559	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/3/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ASHOVER LN	5563	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/3/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PINE CT	7009	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/3/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	PREDEM RD	7128	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/3/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORNINGSIDE DR E	7115	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/11/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRENTWOOD DR	14106	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FERRARO DR	13972	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MACARTHUR CT	5731	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NUTMEG RD	14247	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NUTMEG RD	14249	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PATTON DR	5727	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PATTON DR	5729	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROSSI DR	13960	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROSSI DR	14242	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROSSI DR	14244	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROSSI DR	14246	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SILO RD	14144	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SILO RD	14272	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SILO RD	14275	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BIRCHWOOD DR	13370	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/27/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BUTTERNUT LN	14322	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/1/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SONSTROM RD	12202	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/2/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORRIS AVE	13001	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/27/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORRIS AVE	14238	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/27/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MECHANIC ST	10029	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/4/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PEPPERMINT LN	5747	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/4/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PEPPERMINT LN	5749	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/4/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PEPPERMINT LN	5751	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/4/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SIMS RD	13027	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/4/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NEWELL AVE	5587	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/13/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NEWELL AVE	5589	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/13/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHRUB RD	7391	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/13/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHRUB RD	9269	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/13/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	POITRAS RD	14303	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/21/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	POITRAS RD	14304	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/21/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SILO RD	14298	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/21/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAPLE AVE	6839	NEW WOOD POLE FOR STREETLIGHTG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/28/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAKRIDGE RD	13576	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/16/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BALDWIN DR	5576	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/16/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROSEMARY LN	9650	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/16/1984	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RACE ST	13899	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/3/1985	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CHERRY HILL DR	14098	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/23/1985	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LUFKIN LN	14108	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/23/1985	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LUFKIN LN	14110	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/23/1985	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NUTMEG RD	14310	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/23/1985	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PLANK HILL RD	14116	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/23/1985	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STEVENS ST	10576	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/23/1985	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	327	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/7/1985	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WATERBURY RD	3150	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/7/1985	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DIANE LN	14488	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/25/1985	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DIANE LN	14489	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/25/1985	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DIANE LN	14490	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/25/1985	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DIANE LN	14491	HI MNT CTR BORED WD/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	2/25/1985	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	DIANE LN	14492	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/25/1985	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VIOLET DR	14493	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/25/1985	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VIOLET DR	14494	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/25/1985	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CENTER ST	14178	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/27/1985	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MAPLE ST	4384	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	2/27/1985	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JEROME AVE	2101	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/15/1985	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHRUB RD	7839	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/15/1985	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	N MAIN ST	3751	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/22/1985	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NORTH ST	13772	HI MNT CTR BORED MT/GLASS UG	1	27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	3/22/1985	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FERN HILL RD	7614	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/14/1985	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EAST RD	8447	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/14/1985	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PEPPERMINT LN	5771	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/14/1985	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PEPPERMINT LN	5773	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/14/1985	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PEPPERMINT LN	5775	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/14/1985	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHIPPANEE DR	5535	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/24/1985	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROYAL DR	5538	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/24/1985	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROYAL DR	5540	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/24/1985	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WINSTON CT	14465	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/24/1985	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DIVINITY ST	3444	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/15/1985	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	DIPIETRO LN	14016	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/27/1985	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MELROSE ST	14502	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/27/1985	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOLCOTT RD	162	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/10/1986	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOLCOTT RD	164	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	1/10/1986	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CENTURY DR	14418	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	1/20/1986	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	CENTURY DR	14420	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	1/20/1986	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	CRYSTAL POND PL	14425	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	1/20/1986	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	CRYSTAL POND PL	14426	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	1/20/1986	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	CRYSTAL POND PL	14427	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	1/20/1986	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	CRYSTAL POND PL	14428	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	1/20/1986	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	ENTERPRISE DR	14431	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	1/20/1986	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	ENTERPRISE DR	14433	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	1/20/1986	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	ENTERPRISE DR	14434	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	1/20/1986	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	ENTERPRISE DR	14435	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	1/20/1986	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	ENTERPRISE DR	14436	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	1/20/1986	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	ENTERPRISE DR	14437	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	1/20/1986	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	ENTERPRISE DR	14439	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	1/20/1986	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	ENTERPRISE DR	14441	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	1/20/1986	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	ENTERPRISE DR	14442	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	1/20/1986	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	ENTERPRISE DR	14443	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	1/20/1986	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	ENTERPRISE DR	14445	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	1/20/1986	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	HORIZON DR	14450	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	1/20/1986	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	HORIZON DR	14451	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	1/20/1986	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	LAWSON RD	5474	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/1/1986	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOLCOTT RD	147	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/7/1986	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	13004	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/18/1986	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	13006	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/18/1986	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	13008	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/18/1986	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	377	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/23/1986	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAMP ST	4919	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/8/1986	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CAMP ST	7381	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/8/1986	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	ELM ST	3375	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/17/1986	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ACORN LN	14521	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KOZANI ST	14703	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PHEASANT RUN RD	14505	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PHEASANT RUN RD	14507	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PHEASANT RUN RD	14509	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PHEASANT RUN RD	14511	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PHEASANT RUN RD	14514	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PHEASANT RUN RD	14516	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	QUAIL HOLLOW LN	14503	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SOUCY DR	14517	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SOUCY DR	14519	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SOUCY DR	14520	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WINTERGREEN RD	5816	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WINTERGREEN RD	5818	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WINTERGREEN RD	5820	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/9/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RITA DR	14687	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/17/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RITA DR	14689	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/17/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHEILA CT	14320	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/28/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHEILA CT	14321	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/28/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HENRY PL	9795	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/20/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HENRY PL	9796	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/20/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HENRY PL	9797	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/20/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HENRY PL	9798	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/20/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HENRY PL	9800	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/20/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HENRY PL	9801	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/20/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HENRY PL	9802	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/20/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HENRY PL	9803	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/20/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HENRY PL	9804	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/20/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HENRY ST	9794	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/20/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	244	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DUNCAN ST	5803	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/1/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VINE RD	10262	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/1/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ANDREWS ST	12304	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/9/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	287	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/30/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ALICE TER	13688	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BELEDEN GARDENS DR	6589	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COUNCIL RING DR	10824	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COUNCIL RING DR	10828	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COUNCIL RING DR	11182	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COUNCIL RING DR	11227	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COUTURE DR	13874	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COUTURE DR	13876	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COUTURE DR	13877	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COUTURE DR	13878	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EAST RD	5225	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	ENTERPRISE DR	14835	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	ENTERPRISE DR	14836	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	HEFBERN RD	8306	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	HEFBERN RD	8849	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/2/1987	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	HEFBERN RD	9392	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/2/1987	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	HEFBERN RD	9393	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/2/1987	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	IVY DR	10120	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	IVY DR	10918	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	IVY DR	10967	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	IVY DR	11229	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	IVY DR	11686	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	IVY DR	11687	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	IVY DR	11688	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	IVY DR	12288	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	IVY DR	12608	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	IVY DR	12610	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KIMBERLY LN	11947	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KIMBERLY LN	11949	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KIMBERLY LN	11950	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARCIA DR	12358	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARCIA DR	13684	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARCIA DR	13685	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARCIA DR	13691	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARCIA DR	13692	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OEHLER DR	4895	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OEHLER DR	4897	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OEHLER DR	4899	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PURDUE RD	11570	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RAMBLER ST	11070	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RAMBLER ST	11072	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RAMBLER ST	11194	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RAMBLER ST	11224	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RAMBLER ST	11226	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RAMBLER ST	11646	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RAMBLER ST	11814	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RAMBLER ST	11816	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	ROOT AVE	9225	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHINGLE MILL RD	14308	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SILO RD	14271	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SILO RD	14299	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SIMS RD	12797	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SIMS RD	12799	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SIMS RD	12806	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SIMS RD	13028	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SIMS RD	13030	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SOUTH ST EXT	1873	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	6/2/1987	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	811	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/2/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CASTLE RD	14761	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/8/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CASTLE RD	14762	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/8/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CASTLE RD	14763	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/8/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CONCETTA LN	14769	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	6/8/1987	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	DAMATO LN	14755	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/8/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DAMATO LN	14756	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/8/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JENNIFER RD	14758	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/8/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JENNIFER RD	14759	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/8/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JENNIFER RD	14760	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/8/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PATRICIA DR	14764	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/8/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PATRICIA DR	14765	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/8/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PATRICIA DR	14766	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/8/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CENTURY DR	14718	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	7/15/1987	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	CENTURY DR	14720	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	7/15/1987	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	CENTURY DR	14721	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	7/15/1987	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	CENTURY DR	14722	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	7/15/1987	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	CENTURY DR	14723	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	7/15/1987	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	CENTURY DR	14724	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	7/15/1987	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	HALCYON DR	14725	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	7/15/1987	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	HALCYON DR	14726	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	7/15/1987	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	HALCYON DR	14728	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	7/15/1987	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	HALCYON DR	14730	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	7/15/1987	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	HALCYON DR	14731	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	7/15/1987	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	HALCYON DR	14733	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	7/15/1987	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	JOSEPH ST	6976	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/15/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MECHANIC ST	5047	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/15/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	N POND ST	5412	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/15/1987	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIDDLE ST	14402	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/31/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMPIRE WAY	14848	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/29/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMPIRE WAY	14849	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/29/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMPIRE WAY	14850	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/29/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMPIRE WAY	14851	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/29/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHAPEL ST	347	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/31/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HARVARD PL	14797	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/31/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HARVARD PL	14798	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/31/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HARVARD PL	14799	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/31/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HARVARD PL	14800	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/31/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HARVARD PL	14801	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/31/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PRINCETON DR	5206	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/31/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	UCONN DR	14802	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/31/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	UCONN DR	14804	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/31/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	UCONN DR	14805	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/31/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	YALE ST	14796	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/31/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BATTLE ST	2905	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/6/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COBBLE HILL DR	14086	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	11/6/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARILYN DR	10204	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/6/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NORWALK AVE	4332	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/6/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TRELLI LN	14571	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/21/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TRELLI LN	14572	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/21/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TRELLI LN	14573	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/21/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TRELLI LN	14574	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/21/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TRELLI LN	14575	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/21/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MELINDA LN	14776	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/22/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MELINDA LN	14777	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/22/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MELINDA LN	14778	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/22/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MELINDA LN	14779	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/22/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MELINDA LN	14780	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/22/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MELINDA LN	14781	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/22/1987	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAWLEY ST	14809	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/5/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MANDY LN	14888	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/13/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MANDY LN	14889	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/13/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MANDY LN	14891	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/13/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BURTON ST	14839	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/16/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BURTON ST	14840	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/16/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BURTON ST	14842	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/16/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BURTON ST	14843	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/16/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	INWOOD LN	14853	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/30/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	INWOOD LN	14854	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/30/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	INWOOD LN	14856	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/30/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	INWOOD LN	14857	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/30/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	INWOOD LN	14858	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/30/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARCIA DR	14855	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/30/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MINNESOTA LN	14859	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/30/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MINNESOTA LN	14860	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/30/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MINNESOTA LN	14867	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/30/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MINNESOTA LN	14869	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/30/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MINNESOTA LN	14899	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/30/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PEACEDALE ST	610	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/3/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PINE MEADOW DR	14845	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/3/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PINE MEADOW DR	14846	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/3/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	PINE MEADOW DR	14847	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/3/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	13107	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/24/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NANCY RD	10616	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/24/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FOXWOOD RD	14861	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/14/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FOXWOOD RD	14862	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/14/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FOXWOOD RD	14863	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/14/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FOXWOOD RD	14864	HI MNT CTR BORED WD/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	3/14/1988	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FOXWOOD RD	14865	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/14/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FOXWOOD RD	14866	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/14/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD TURNPIKE RD	14868	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/14/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD TURNPIKE RD	14870	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/14/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD TURNPIKE RD	14871	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/14/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD TURNPIKE RD	14872	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/14/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD TURNPIKE RD	14954	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/14/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MILLER RD	5877	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SWANSON DR	10485	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/17/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD CIDER MILL RD	1	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/20/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD CIDER MILL RD	2	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/20/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD CIDER MILL RD	3	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/20/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD CIDER MILL RD	4	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/20/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD CIDER MILL RD	5	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/20/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD CIDER MILL RD	6	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/20/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BOULDER DR	1	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/21/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BOULDER DR	2	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/21/1988	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VANDERBILT RD	14928	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/7/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BATTLE ST	5824	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/9/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BATTLE ST	5826	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/9/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BATTLE ST	5914	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/9/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEDFORD ST	14710	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/6/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEDFORD ST	15016	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/6/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	291	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/8/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	293	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	3/8/1989	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	HILL ST	295	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/8/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	301	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/8/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PRINCETON DR	1669	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/8/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ASHLEY RD	13335	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/10/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ASHLEY RD	14738	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/10/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAKEN RD	14886	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/10/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KNOB HILL LN	1	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/20/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KNOB HILL LN	2	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/20/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DINO RD	1	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/22/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DINO RD	2	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/22/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DINO RD	3	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/22/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DINO RD	4	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/22/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DINO RD	9	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/22/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DINO RD	10	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/22/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DINO RD	11	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/22/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LUCIEN RD	7	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/22/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LUCIEN RD	8	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/22/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NOEL LN	5	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/22/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NOEL LN	6	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/22/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	POSA DR	2	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/25/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	POSA DR	3	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/25/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	POSA DR	4	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/25/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	15006	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	5/12/1989	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	LONG LN	15021	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/30/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LONG LN	15022	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/30/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VINCENT P KELLY RD	10731	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/23/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VINCENT P KELLY RD	10732	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/23/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHERBROOKE ST	4593	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/7/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SCHOOL ST	14671	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	8/1/1989	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	ALLEN ST	5795	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/25/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAY LN	5	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/11/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAY LN	6	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/11/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAWRENCE LN	1	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/11/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAWRENCE LN	2	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/11/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAWRENCE LN	3	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/11/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAWRENCE LN	4	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/11/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAWRENCE LN	7	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/11/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PONDVIEW LN	1	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/30/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PONDVIEW LN	2	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/30/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PONDVIEW LN	3	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/30/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PONDVIEW LN	4	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/30/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PONDVIEW LN	5	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/30/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PONDVIEW LN	6	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/30/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PONDVIEW LN	7	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/30/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PONDVIEW LN	14	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/30/1989	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILLSIDE PL	3547	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/1/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STEVENS ST	5172	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/2/1990	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	DUTTON AVE	3461	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MUZZY ST	3709	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STEVENS ST	10822	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	FLOOD LIGHT (FULL) 27500	1/12/1990	$2.87	$34	1,278	$32	$108	144	$1.50	598	$15	$50	680
BRISTOL PWD STREET LIGHTING	SUMMER ST	3952	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/12/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EARL ST	5804	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/21/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MILLER RD	5876	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/21/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TERRYVILLE RD	8070	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	2/23/1990	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	STERLING WAY	15059	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STERLING WAY	15060	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STERLING WAY	15061	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STERLING WAY	15062	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STERLING WAY	15063	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/16/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	HART ST	5905	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/21/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HART ST	5907	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/21/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HART ST	5948	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/21/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HART ST	5949	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/21/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HART ST	5951	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/21/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LARKSPUR LN	5910	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/21/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LARKSPUR LN	5913	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/21/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KORY LN	15036	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/23/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KORY LN	15037	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/23/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MANO LN	15067	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/30/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PALMORR PL	7	STD TRAD/CNTMP WD/MTL/GLS UG	1	16000 LUMEN HP SODIUM	172	STD DECOR-TRADITIONL(POST TOP)	6/7/1990	$1.73	$21	707	$18	$60	55	$0.78	228	$6	$19	478
BRISTOL PWD STREET LIGHTING	PALMORR PL	3 PAL	STD TRAD/CNTMP WD/MTL/GLS UG	1	16000 LUMEN HP SODIUM	172	STD DECOR-TRADITIONL(POST TOP)	6/7/1990	$1.73	$21	707	$18	$60	55	$0.78	228	$6	$19	478
BRISTOL PARK DEPARTMENT	DALEY ST	14959	NEW WOOD POLE FOR STREETLIGHTG	1	27500 LUMEN HP SODIUM	311	FLOOD LIGHT (FULL) 27500	6/19/1990	$2.87	$34	1,278	$32	$108	144	$1.50	598	$15	$50	680
BRISTOL PWD STREET LIGHTING	NELSON FARM RD	15069	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/20/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NELSON FARM RD	15070	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/20/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODSIDE WAY	15068	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/20/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOLLYBERRY RD	15040	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOLLYBERRY RD	15041	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOLLYBERRY RD	15042	NEW WOOD POLE FOR STREETLIGHTG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOLLYBERRY RD	15043	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOLLYBERRY RD	15044	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOLLYBERRY RD	15047	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOLLYBERRY RD	15048	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOLLYBERRY RD	15049	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOLLYBERRY RD	15053	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOLLYBERRY RD	15054	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOLLYBERRY RD	15055	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NURSERY CIR	50056	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NURSERY CIR	50057	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUMMERBERRY CIR	15050	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUMMERBERRY CIR	15051	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUMMERBERRY CIR	15052	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WINTERBERRY CIR	15046	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WINTERBERRY CIR	15645	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/22/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD TURNPIKE RD	12136	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/20/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GINA ST	15116	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/1/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILDERNESS WAY	15077	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/24/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WARNER ST	14896	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/7/1990	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEDFORD ST	14974	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1991	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEDFORD ST	15031	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1991	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEDFORD ST	15033	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/4/1991	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMESDREW LN	15026	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/22/1991	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMESDREW LN	15028	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/22/1991	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HARDWICK RD	9583	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/6/1991	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAPLE AVE	15012	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/6/1991	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CONSTANCE LN	12769	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/27/1991	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUMMER GLN	15129	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/8/1991	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUMMER GLN	15130	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/8/1991	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BUTTERNUT LN	15131	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/19/1991	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAKE AVE	4653	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/19/1991	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	HILL ST	319	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/10/1991	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SYLVIA LN	7178	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/24/1991	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ASHLEY RD	13707	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/5/1991	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PLEASANT VIEW AVE	5182	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/5/1991	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PLEASANT VIEW AVE	5987	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/5/1991	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DEER PARK RD	15096	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	12/9/1991	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	DEER PARK RD	15098	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	12/9/1991	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	DEER PARK RD	15101	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/9/1991	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DEER PARK RD	15104	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	12/9/1991	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	OHIO DR	14479	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	12/9/1991	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	SHAGBARK DR	15091	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	12/9/1991	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	SHAGBARK DR	15093	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	12/9/1991	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	COZY LN	14052	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/30/1991	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAKWOOD CIR	15154	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/8/1992	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODSIDE WAY	15153	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/8/1992	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LEON RD	10312	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/29/1992	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PRESTIGE LN	14551	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/29/1992	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ABBEY LN	12764	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/31/1992	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CANDLEWOOD DR	14119	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/25/1993	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAHEU ST	5392	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/25/1993	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NORTHMONT ROAD EXT	5994	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/25/1993	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NORTHMONT ROAD EXT	5998	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/25/1993	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NORTHMONT ROAD EXT	6000	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/25/1993	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NORTHMONT ROAD EXT	6002	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/25/1993	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BEACON ST	11170	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/27/1993	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHEFFIELD LN	12365	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/25/1993	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FERN HILL RD	15192	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/20/1993	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FERN HILL RD	15193	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/20/1993	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FERN HILL RD	15194	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/20/1993	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HAWTHORNE ST	8683	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/31/1993	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ARMAND RD	8629	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	11/3/1993	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	ARMAND RD	8630	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	11/3/1993	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BERNIE AVE	8767	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	11/3/1993	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LAKE AVE	6042	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	11/3/1993	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LILLIAN RD	5963	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	11/3/1993	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LILLIAN RD	8611	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	11/3/1993	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LILLIAN RD	8613	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	11/3/1993	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LILLIAN RD	8614	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	11/3/1993	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LILLIAN RD	8615	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	11/3/1993	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LILLIAN RD	8616	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	11/3/1993	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LILLIAN RD	8617	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	11/3/1993	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	LILLIAN RD	8618	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	11/3/1993	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LILLIAN RD	8619	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	11/3/1993	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LILLIAN RD	8620	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	11/3/1993	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LILLIAN RD	8621	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	11/3/1993	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LILLIAN RD	8622	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	11/3/1993	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	ROLLINSON RD	8624	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	11/3/1993	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	ROLLINSON RD	8628	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	11/3/1993	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	ROLLINSON RD	8631	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	11/3/1993	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SALLADIN RD	8625	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	11/3/1993	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SALLADIN RD	8626	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	11/3/1993	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	15209	NEW WOOD POLE FOR STREETLIGHTG	1	27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	11/23/1993	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	15210	NEW WOOD POLE FOR STREETLIGHTG	1	27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	11/23/1993	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	LARKSPUR LN	6072	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1994	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LARKSPUR LN	6074	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1994	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LARKSPUR LN	6077	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1994	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LARKSPUR LN	6079	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1994	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BARLOW ST	5119	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/5/1994	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PAYTON TER	15201	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRADITIONL(POST TOP)	4/5/1994	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	PAYTON TER	15202	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRADITIONL(POST TOP)	4/5/1994	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	TIFFANY LN	15195	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRADITIONL(POST TOP)	4/5/1994	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	TIFFANY LN	15197	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRADITIONL(POST TOP)	4/5/1994	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	TIFFANY LN	15199	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRAD(POST TOP) FULL	4/5/1994	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	TIFFANY LN	15203	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRADITIONL(POST TOP)	4/5/1994	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	CINDY LN	15239	HI MNT CTR BORED WD/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/2/1994	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CINDY LN	15240	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/2/1994	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHAGBARK DR	15089	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/11/1994	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAN RD	13499	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/23/1994	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FERN HILL RD	15252	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/25/1994	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NELSON FARM RD	15687	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/25/1994	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DEERING LN	7315	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/1/1994	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	13077	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/14/1994	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	15274	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	11/5/1994	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAKLAND ST	15275	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/5/1994	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HULL ST	6083	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/9/1994	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PORTER CT	6085	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/9/1994	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PORTER CT	6087	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/9/1994	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BOLDEN HILL CT	15281	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/21/1994	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CRICKET HILL RD	15255	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/13/1995	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CRICKET HILL RD	15256	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/13/1995	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CRICKET HILL RD	15257	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/13/1995	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FARRELL AVE	2552	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/13/1995	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	INTERVALE RD	15258	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/13/1995	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	INTERVALE RD	15259	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/13/1995	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	DORSET HORN LN	15216	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/17/1995	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DORSET HORN LN	15217	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/17/1995	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GREAT PYRENEES WAY	15218	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/17/1995	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GREAT PYRENEES WAY	15219	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/17/1995	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SOUTHDOWN DR	15220	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/17/1995	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SOUTHDOWN DR	15221	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/17/1995	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SOUTHDOWN DR	15222	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/17/1995	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SOUTHDOWN DR	15223	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/17/1995	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRANDON RUN	15245	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRADITIONL(POST TOP)	1/31/1995	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	BRANDON RUN	15246	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRAD(POST TOP) FULL	1/31/1995	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	CAMERON DR	15261	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRADITIONL(POST TOP)	1/31/1995	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	CAMERON DR	15263	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRADITIONL(POST TOP)	1/31/1995	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	CAMERON DR	15264	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRADITIONL(POST TOP)	1/31/1995	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	CAMERON DR	15265	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRADITIONL(POST TOP)	1/31/1995	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	CAMERON DR	15266	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRAD(POST TOP) FULL	1/31/1995	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	CAMERON DR	15267	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRAD(POST TOP) FULL	1/31/1995	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	CORBIN RIDGE	15242	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRADITIONL(POST TOP)	1/31/1995	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	CORBIN RIDGE	15243	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRADITIONL(POST TOP)	1/31/1995	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	TYLER WAY	15247	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRADITIONL(POST TOP)	1/31/1995	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	NELSON FARM RD	15291	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1995	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NELSON FARM RD	15294	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/23/1995	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DEER PARK RD	292	EXISTING WD DIST POLE-SRVED OH		4000 LUMEN HP SODIUM	59	CONVENTIONAL COBRA HD (SEMI)	4/4/1995	$0.81	$10	242	$6	$20	27	$0.55	112	$3	$9	130
BRISTOL PWD STREET LIGHTING	SOUTHDOWN DR	15285	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/6/1995	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SOUTHDOWN DR	15286	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/6/1995	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3226	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/13/1995	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LEWIS RD	1138	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	FLOOD LIGHT (FULL) 27500	8/30/1995	$2.87	$34	1,278	$32	$108	144	$1.50	598	$15	$50	680
BRISTOL PWD STREET LIGHTING	LEWIS RD	4727	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	27500 LUMEN HP SODIUM FLOOD	8/30/1995	$2.87	$34	1,278	$32	$108	144	$1.50	598	$15	$50	680
BRISTOL PWD STREET LIGHTING	LEWIS ST	1139	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	FLOOD LIGHT (FULL) 27500	8/30/1995	$2.87	$34	1,278	$32	$108	144	$1.50	598	$15	$50	680
BRISTOL PWD STREET LIGHTING	PEACEDALE ST	4931	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/22/1995	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PEACEDALE ST	4932	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/22/1995	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PEACEDALE ST	4933	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/22/1995	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PEACEDALE ST	4934	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	9/22/1995	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PEACEDALE ST	10554	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/22/1995	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PEACEDALE ST	10556	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/22/1995	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PEACEDALE ST	10558	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/22/1995	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PEACEDALE ST	4623	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/3/1995	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STEVENS ST	12934	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/13/1996	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	HILL ST	296	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/19/1996	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	297	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/19/1996	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	552	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	FLOOD LIGHT (FULL) 27500	1/26/1996	$2.87	$34	1,278	$32	$108	144	$1.50	598	$15	$50	680
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	553	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	FLOOD LIGHT (FULL) 27500	1/26/1996	$2.87	$34	1,278	$32	$108	144	$1.50	598	$15	$50	680
BRISTOL PWD STREET LIGHTING	MEDFORD ST	14975	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/26/1996	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BERNIE AVE	8780	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/3/1996	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROLLINSON RD	8627	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	4/3/1996	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3176	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/3/1996	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CAWLEY ST	13040	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/15/1996	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	INTERVALE RD	5075	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/20/1996	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	INTERVALE RD	15388	NEW WOOD POLE FOR STREETLIGHTG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/20/1996	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	EMMETT ST	12018	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	10/18/1996	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIX ST	9757	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	FLOOD LIGHT (FULL) 50000	10/30/1996	$4.18	$50	1,939	$48	$163	144	$1.50	598	$15	$50	1,342
BRISTOL PWD STREET LIGHTING	MIX ST	10150	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	FLOOD LIGHT (FULL) 50000	10/30/1996	$4.18	$50	1,939	$48	$163	144	$1.50	598	$15	$50	1,342
BRISTOL PWD STREET LIGHTING	MIX ST	10151	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	FLOOD LIGHT (FULL) 50000	10/30/1996	$4.18	$50	1,939	$48	$163	144	$1.50	598	$15	$50	1,342
BRISTOL PWD STREET LIGHTING	WILDERNESS WAY	15419	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/18/1996	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILDERNESS WAY	15420	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/18/1996	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILDERNESS WAY	15421	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	11/18/1996	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MALTBY ST	14325	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/6/1996	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MALTBY ST	15426	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/6/1996	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MALTBY ST	15427	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/6/1996	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MALTBY ST	15428	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/6/1996	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MILLER RD	6122	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/19/1996	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PONDVIEW LN	8	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/11/1997	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PONDVIEW LN	9	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/11/1997	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PONDVIEW LN	10	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/11/1997	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PONDVIEW LN	11	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/11/1997	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PONDVIEW LN	12	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/11/1997	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PONDVIEW LN	13	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/11/1997	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BETHS AVE	6994	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/23/1997	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROOK ST	1391	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/23/1997	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHAPEL ST	350	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/23/1997	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	310	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/23/1997	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BITTERSWEET LN	13886	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/2/1997	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BUTTERNUT LN	13888	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/2/1997	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DIPIETRO LN	14023	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/2/1997	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	13080	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/12/1997	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	13084	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/12/1997	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	13086	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/12/1997	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	13091	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/12/1997	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	13093	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/12/1997	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	13095	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/12/1997	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	13097	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/12/1997	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BENTLEY RD	1	NEW WOOD POLE FOR STREETLIGHTG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/31/1997	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BENTLEY RD	2	NEW WOOD POLE FOR STREETLIGHTG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/31/1997	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WHIPPOORWILL LN	6125	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/6/1997	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WHIPPOORWILL LN	6128	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/6/1997	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HICKORY ST	15434	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/8/1997	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUFFOLK PL	417	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/31/1997	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WESTWOOD RD	15412	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/31/1997	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WESTWOOD RD	15413	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/31/1997	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WESTWOOD RD	15416	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/31/1997	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAMERON DR	15327	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRADITIONL(POST TOP)	12/1/1997	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	CAMERON DR	15328	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRADITIONL(POST TOP)	12/1/1997	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	TYLER WAY	15330	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRADITIONL(POST TOP)	12/1/1997	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	TYLER WAY	15331	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRADITIONL(POST TOP)	12/1/1997	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	SOUTH ST	14582	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	12/5/1997	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LAUREL ST	15449	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	FLOOD LIGHT (FULL) 50000	1/27/1998	$4.18	$50	1,939	$48	$163	144	$1.50	598	$15	$50	1,342
BRISTOL PWD STREET LIGHTING	UPSON ST	3989	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	4/8/1998	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STEVENS ST	13326	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	4/13/1998	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FARRELL AVE	6287	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/11/1998	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODLAND ST	11338	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/28/1998	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DALLAS AVE	15423	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	5/29/1998	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	12317	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/31/1998	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	12321	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/31/1998	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	12325	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/31/1998	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	12329	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/31/1998	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	12333	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/31/1998	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	12337	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/31/1998	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	12341	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/31/1998	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	12345	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/31/1998	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	12349	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/31/1998	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RONZO RD EXT	15473	HI MNT CTR BORED MT/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/11/1998	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	RONZO RD EXT	15474	HI MNT CTR BORED MT/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/11/1998	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FERN HILL RD	15401	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/31/1998	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FERN HILL RD	15402	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/31/1998	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FERN HILL RD	15403	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/31/1998	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FERN HILL RD	15404	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/31/1998	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FERN HILL RD	15405	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/31/1998	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FERN HILL RD	15406	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/31/1998	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FERN HILL RD	15407	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/31/1998	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NELSON FARM RD	15411	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/31/1998	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAKWOOD CIR	15408	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/31/1998	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILDERNESS WAY	15410	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/31/1998	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JACOBS ST	3625	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/11/1999	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VINCENT P KELLY RD	15385	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	2/11/1999	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	APPLE RD	5058	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/5/1999	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	UNION ST	2758	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/15/1999	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PARK DEPARTMENT	DEWITT DR	12565	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1999	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PARK DEPARTMENT	DEWITT DR	12566	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1999	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PARK DEPARTMENT	DEWITT DR	12587	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1999	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	EMMETT ST	12020	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/30/1999	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	12646	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	6/30/1999	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	HAIG AVE	14462	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/30/1999	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	POITRAS RD	15902	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1999	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	REDSTONE ST	3530	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/30/1999	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	10337	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/30/1999	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SUFFOLK PL	15415	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/30/1999	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SURREY DR	11363	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/30/1999	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3173	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1999	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3174	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/30/1999	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3175	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/30/1999	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	TERRYVILLE RD	8063	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	6/30/1999	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	TIFFANY LN	2	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRADITIONL(POST TOP)	6/30/1999	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	TIFFANY LN	4	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRADITIONL(POST TOP)	6/30/1999	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	TIFFANY LN	5	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRADITIONL(POST TOP)	6/30/1999	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	TIFFANY LN	6	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRADITIONL(POST TOP)	6/30/1999	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	TYLER WAY	15351	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRAD(POST TOP) FULL	6/30/1999	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	TYLER WAY	15352	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRAD(POST TOP) FULL	6/30/1999	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	BOIVIN ST	5310	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/31/1999	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WESTWOODS TER	11539	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/31/1999	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DANIEL RD	13380	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/2/1999	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUFFOLK PL	15418	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/31/1999	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WESTWOOD RD	15414	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/31/1999	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ALDBOURNE DR	5555	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	1/22/2000	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COLD SPRINGS RD	2	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/1/2000	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COLD SPRINGS RD	3	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/1/2000	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PINEHURST RD	393	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/1/2000	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RONZO ST EXT	90	HI MNT CTR BORED MT/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	3/1/2000	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	RONZO ST EXT	15189	HI MNT CTR BORED MT/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	3/1/2000	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	THISTLE LN	5	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/1/2000	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VILLAGE ST	1	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/1/2000	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VILLAGE ST	6	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/1/2000	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VILLAGE ST	7	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/1/2000	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CEDAR RIDGE	15166	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/30/2000	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CEDAR RIDGE	15167	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/30/2000	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CEDAR RIDGE	15168	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/30/2000	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DEER PARK RD	15102	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (SEMI)	3/30/2000	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	DORIS RD	6115	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/30/2000	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EDROW RD	11212	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/30/2000	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMMETT ST	54	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/30/2000	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAKE AVE	6031	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (SEMI)	3/30/2000	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	LAKE AVE	7769S	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	3/30/2000	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	LAKEWOOD CIR	15172	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	STD DECOR-TRAD(POST TOP) FULL	3/30/2000	$1.02	$12	345	$9	$29	55	$0.78	228	$6	$19	117
BRISTOL PWD STREET LIGHTING	LAKEWOOD CIR	15173	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/30/2000	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAIN ST	12471	HI MNT CTR BORED MT/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	3/30/2000	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	MAPLE ST	4402	NEW WOOD POLE FOR STREETLIGHTG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/30/2000	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAPLE ST	4406	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	3/30/2000	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MOUNTAIN RD	15697	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	3/30/2000	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PRIMROSE LN	13611	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/30/2000	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	QUEEN ST	3020	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/30/2000	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	9859	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	3/30/2000	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	9861	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	3/30/2000	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	TYLER WAY	9	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRADITIONL(POST TOP)	3/30/2000	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	TYLER WAY	15356	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRAD(POST TOP) FULL	3/30/2000	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	UNION ST	2752	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/30/2000	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VANCE DR	12154	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	3/30/2000	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	VERA RD	11985	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	3/30/2000	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	AVON LN	15546	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/2/2000	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LUFKIN LN	15544	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/2/2000	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LUFKIN LN	15546	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/2/2000	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PLANK HILL RD	15549	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/2/2000	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PLANK HILL RD	15551	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/2/2000	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PLANK HILL RD	15553	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/2/2000	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROSE ST	10188	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/22/2001	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL BD OF ED BRISTOL EASTERN HS	WOLCOTT ST	15504	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	FLOOD LIGHT (FULL) 50000	3/7/2001	$4.18	$50	1,939	$48	$163	144	$1.50	598	$15	$50	1,342
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	1818	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	4/9/2001	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	1820	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	4/9/2001	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PENNWOOD PL	15584	HI MNT CTR BORED WD/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/7/2001	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PENNWOOD PL	15585	HI MNT CTR BORED WD/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/7/2001	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PENNWOOD PL	15586	HI MNT CTR BORED WD/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/7/2001	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PENNWOOD PL	15587	HI MNT CTR BORED WD/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/7/2001	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PENNWOOD PL	15588	HI MNT CTR BORED WD/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/7/2001	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PENNWOOD PL	15589	HI MNT CTR BORED WD/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	6/7/2001	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WILDERNESS WAY	15668	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/21/2001	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILDERNESS WAY	15669	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/21/2001	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILDERNESS WAY	15670	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/21/2001	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAKE AVE	3879	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/13/2001	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUNNYDALE AVE	15628	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/13/2001	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUNNYDALE AVE	15630	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/13/2001	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUNNYDALE AVE	15631	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/13/2001	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUNNYDALE AVE	15632	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/13/2001	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUNNYDALE AVE	15633	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/13/2001	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUNNYDALE AVE	15634	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/13/2001	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUNNYDALE AVE	15635	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/13/2001	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUNNYDALE AVE	15636	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	8/13/2001	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LARDNER RD	3648	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	12/18/2001	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BREWSTER RD	12212	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/25/2002	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DOWNS ST	3784	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	3/15/2002	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WASHINGTON ST	3107	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	5/3/2002	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BALDWIN DR	5569	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/11/2002	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OWENS WAY	15679	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/11/2002	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OWENS WAY	15680	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/11/2002	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OWENS WAY	15682	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/11/2002	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OWENS WAY	15683	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/11/2002	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OWENS WAY	15684	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/11/2002	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OWENS WAY	15685	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/11/2002	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OWENS WAY	15690	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/11/2002	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RACHEL CT	5	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/11/2002	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEADOW ST	3686	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	7/16/2002	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FISHER RIDGE	15700	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/5/2002	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FOX HOLLOW LN	1	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/5/2002	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FOX HOLLOW LN	2	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/5/2002	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	FOX HOLLOW LN	3	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/5/2002	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FOX HOLLOW LN	4	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/5/2002	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FOX HOLLOW LN	5	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/5/2002	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FOX HOLLOW LN	8	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/5/2002	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HART ST	631	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/5/2002	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PARTRIDGE RUN	15692	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/5/2002	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PARTRIDGE RUN	15693	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/5/2002	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PARTRIDGE RUN	15694	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/5/2002	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLARK AVE	12050	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	11/25/2002	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	592	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/22/2003	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAKE AVE	4610	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/22/2003	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROSEMONT AVE	10841	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/9/2003	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BARBER ST	1294	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/31/2003	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BATTISTO RD	8269	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/31/2003	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHIPPENWOOD LN	15672	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/31/2003	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHIPPENWOOD LN	15673	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/31/2003	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHIPPENWOOD LN	15674	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/31/2003	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHIPPENWOOD LN	15675	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/31/2003	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COMMERCE DR	15455	HI MNT CTR BORED WD/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/31/2003	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	COMMERCE DR	15456	HI MNT CTR BORED WD/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/31/2003	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	GRANGER RD	7085	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/31/2003	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LILLIAN RD	6044	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/31/2003	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MELLEN ST	11392	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	FLOOD LIGHT (FULL) 27500	7/31/2003	$2.87	$34	1,278	$32	$108	144	$1.50	598	$15	$50	680
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12388	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/31/2003	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12388	HI MNT CTR BORED MT/GLASS UG		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/31/2003	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NELSON FARM RD	15686	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/31/2003	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAKLAND ST	15276	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/31/2003	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PETERS CT	3857	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	7/31/2003	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	15381	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	7/31/2003	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	SCHOOL ST	13311	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (SEMI)	7/31/2003	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	SMITH ST	5386	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	7/31/2003	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TRACY CT	6041	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/31/2003	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VANCE DR	9495	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/31/2003	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DINO RD	9713	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/15/2003	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD ORCHARD RD	15776	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/21/2003	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD ORCHARD RD	15777	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/21/2003	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD ORCHARD RD	15779	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/21/2003	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD ORCHARD RD	15780	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/21/2003	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WITCHES ROCK RD	1975	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/21/2003	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PROSPECT ST	9803	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/17/2003	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HIGH RIDGE RD	15785	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/31/2004	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HIGH RIDGE RD	15786	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/31/2004	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD ORCHARD RD	15781	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/31/2004	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	N POND ST	6399	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/11/2004	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	N POND ST	6400	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/11/2004	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HAWTHORNE ST	1295	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/30/2004	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BONNIE CT	15787	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/22/2004	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BONNIE CT	15788	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/22/2004	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD ORCHARD RD	15782	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/7/2004	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD ORCHARD RD	15783	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/7/2004	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMPIRE WAY	15761	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/14/2005	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMPIRE WAY	15762	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/14/2005	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MERRILL CT	3773	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/4/2005	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FIRESIDE LN	15842	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/20/2005	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	INDIANA ST	15839	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/1/2005	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	9863	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	FLOOD LIGHT (FULL) 50000	12/30/2005	$4.18	$50	1,939	$48	$163	144	$1.50	598	$15	$50	1,342
BRISTOL PWD STREET LIGHTING	LEXI LN	15896	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/26/2006	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LEXI LN	15897	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/26/2006	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KING ST	12895	NEW WOOD POLE FOR STREETLIGHTG	1	27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	1/30/2006	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12376	HI MNT CTR BORED MT/GLASS UG		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	1/30/2006	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	HIGH MEADOW LN	15904	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/11/2006	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HIGH MEADOW LN	15905	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/11/2006	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLAREMONT ST	6338	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/12/2006	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARGARET WAY	15894	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/12/2006	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CURTISS ST	3080	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	5/15/2006	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RITA DR	14189	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/1/2006	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VILLAGE ST	15871	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/12/2006	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VILLAGE ST	15872	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/12/2006	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VILLAGE ST	15873	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/12/2006	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VILLAGE ST	15874	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	9/12/2006	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VILLAGE ST	15875	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/12/2006	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VILLAGE ST	15876	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/12/2006	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VILLAGE ST	15881	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/12/2006	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VILLAGE ST	15884	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/12/2006	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VILLAGE ST	15885	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/12/2006	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BELGIAN CIR	15908	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	11/29/2006	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BELGIAN CIR	15909	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	11/29/2006	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BELGIAN CIR	15910	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	11/29/2006	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	246	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	12/4/2006	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MILL POND RD	15886	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/30/2007	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MILL POND RD	15887	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/30/2007	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VILLAGE ST	15882	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/30/2007	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VILLAGE ST	15883	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/30/2007	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WINDHAM RD	10590	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/21/2008	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CONLON ST	3389	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/24/2008	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12379	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/28/2008	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12392	HI MNT CTR BORED MT/GLASS UG		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/31/2008	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD WOLCOTT RD	2443	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	11/7/2008	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAUREEN DR	5133	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	11/18/2008	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MINE RD	4531	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	11/24/2008	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	POSA DR	1	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	11/24/2008	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	KENNEY ST	3827	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	11/25/2008	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	IVY DR	11945	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/11/2008	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PALMORR PL	4 PAL	STD TRAD/CNTMP WD/MTL/GLS UG	1	16000 LUMEN HP SODIUM	172	STD DECOR-TRAD(POST TOP) FULL	12/16/2008	$1.73	$21	707	$18	$60	55	$0.78	228	$6	$19	478
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	544	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	1/6/2009	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JACOBS ST	1330	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/6/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	12324	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/6/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OXBOW DR	13374	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRAD(POST TOP) FULL	1/6/2009	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	SUMMER ST	3954	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/6/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WEST ST	2376	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	1/6/2009	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	NORTH ST	8925	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	1/20/2009	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	FARRELL AVE	6312	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/21/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WEST ST	9040	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	2/5/2009	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	PINE ST	345	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	2/11/2009	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MARCIA DR	11818	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/12/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JEROME AVE	1639	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/13/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SONSTROM RD	9708	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/13/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAPLE AVE	11767	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/19/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PILGRIM RD	6741	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/20/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOLT ST	9160	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/25/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BOARDMAN RD	4525	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/4/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JEROME AVE	2041	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	3/4/2009	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	5154	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	3/4/2009	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2331	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	3/5/2009	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PARK ST	8018	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	3/9/2009	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12380	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/12/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BALDWIN DR	5572	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/17/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BUSINESS PARK RD	16029	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/1/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BUSINESS PARK RD	16030	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/1/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BUSINESS PARK RD	16031	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/1/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BUSINESS PARK RD	16032	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/1/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BUSINESS PARK RD	16033	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/1/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BUSINESS PARK RD	16034	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/1/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BUSINESS PARK RD	16035	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/1/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROAD ST	8653	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	4/6/2009	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BUSINESS PARK RD	16036	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/8/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BUSINESS PARK RD	16037	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/8/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BUSINESS PARK RD	16038	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/8/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BUSINESS PARK RD	16039	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/8/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BUSINESS PARK RD	16040	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/8/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BUSINESS PARK RD	16041	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/8/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ILLINOIS AVE	11506	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/17/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DIVINITY ST	4141	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	4/21/2009	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOODCHUCK LN	14254	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/23/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PECK LN	2120	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/24/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KING ST	8560	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	4/30/2009	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BUTTERNUT LN	14323	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/4/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12392	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/4/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SEMINARY ST	13450	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/8/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HORIZON DR	14449	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	5/12/2009	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	RAMBLER ST	10606	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/12/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BELEDEN GARDENS DR	6588	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/15/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DIVINITY ST	3437	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	5/18/2009	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	2371	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	5/18/2009	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIDDLE ST	141	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	5/21/2009	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIDDLE ST	2859	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	5/21/2009	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIDDLE ST	2853	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	5/22/2009	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	CENTRAL ST	3765	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	5/26/2009	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2310	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	5/26/2009	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MARK ST	9361	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/26/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAK HILL DR	9590	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/26/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MIX ST	9029	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/2/2009	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PRIMROSE LN	11455	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/8/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CRANBERRY LN	14079	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/24/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VIOLET DR	14495	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/5/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	1396	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/13/2009	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CASTLE RD	10031	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/24/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12439	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	9/2/2009	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	NORTH ST	3730	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	9/9/2009	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	FEDERAL ST	13773	HI MNT CTR BORED WD/GLASS UG	1	27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	9/21/2009	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	PAGE AVE	4473	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/21/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PAGE AVE	6617	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/21/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORRIS AVE	9661	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/5/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REGENCY CT	14771	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	10/5/2009	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	533	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	10/6/2009	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TIFFANY LN	3	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRAD(POST TOP) FULL	10/6/2009	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	CAMP ST	4921	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/7/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NORWOOD RD	4922	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/8/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	12344	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	10/13/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VALMORE RD	15969	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/14/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VALMORE RD	16098	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/14/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VALMORE RD	16100	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/14/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD ORCHARD RD	15778	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/22/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TIFFANY LN	7	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRAD(POST TOP) FULL	11/10/2009	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	TIFFANY LN	15198	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRAD(POST TOP) FULL	11/10/2009	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	WILDEWOOD RUN	8	STD TRAD/CNTMP WD/MTL/GLS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	12/14/2009	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	WILDEWOOD RUN	9	STD TRAD/CNTMP WD/MTL/GLS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	12/14/2009	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	WILDEWOOD RUN	11	STD TRAD/CNTMP WD/MTL/GLS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	12/14/2009	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	HART ST	625	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/22/2009	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	508	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	1/5/2010	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CLARK AVE	12183	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/5/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HEMLOCK ST	7476	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/5/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	HEMLOCK ST	9065	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/5/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	2902	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/5/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHRUB RD	7389	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/5/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	5174	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	1/5/2010	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3230	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	1/5/2010	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WINDSOR LN	12285	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/5/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	2391	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	1/5/2010	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CAMERON DR	15326	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRAD(POST TOP) FULL	1/11/2010	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	BATTLE ST	5917	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/12/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRAEBURN RD	10574	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/18/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CROWN ST	3397	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/22/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CANDLEWOOD DR	13357	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/3/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DRAYLA DR	13694	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRAD(POST TOP) FULL	3/3/2010	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	ROBERTSON ST	13653	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/3/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHAWN DR	13214	NEW WOOD POLE FOR STREETLIGHTG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	3/3/2010	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TIFFANY LN	15200	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRAD(POST TOP) FULL	3/8/2010	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	BOLDEN HILL CT	15282	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/24/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PARK ST	8046	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	3/24/2010	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	DEBRA LN	11160	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/1/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LUDLOW CT	14313	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/5/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GARDEN ST	3798	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/15/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MOUNTAIN RD	13678	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	4/20/2010	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FERN HILL RD	7615	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/21/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HART ST	5950	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/21/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LANCASTER RD	6055	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/21/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ENTERPRISE DR	14447	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	4/28/2010	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	TRELLI LN	14577	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/3/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MOUNTAIN RD	375	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	5/13/2010	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WESTCHESTER DR	7212	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/13/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SIXTH ST	10224	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/26/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LACAVA RD	11661	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/28/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PINEHURST RD	406	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/28/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CENTURY DR	14419	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	6/16/2010	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2320	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/16/2010	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	GRACE AVE	7715	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/16/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HIGH ST	2551	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/16/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PALMORR PL	2 PAL	STD TRAD/CNTMP WD/MTL/GLS UG	1	16000 LUMEN HP SODIUM	172	STD DECOR-TRAD(POST TOP) FULL	6/16/2010	$1.73	$21	707	$18	$60	55	$0.78	228	$6	$19	478
BRISTOL PWD STREET LIGHTING	PALMORR PL	1 PAL	STD TRAD/CNTMP WD/MTL/GLS UG	1	16000 LUMEN HP SODIUM	172	STD DECOR-TRAD(POST TOP) FULL	6/22/2010	$1.73	$21	707	$18	$60	55	$0.78	228	$6	$19	478
BRISTOL PWD STREET LIGHTING	PERKINS ST	4764	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/22/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROUND HILL RD	6734	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/2/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EAST RD	15806	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/6/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EAST RD	15807	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/6/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DRIFTWOOD RD	10844	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/14/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	UNION ST	2759	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	7/14/2010	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SANDRA ST	8749	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/16/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MERRIMAN ST	4440	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/23/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAKE AVE	6045	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/3/2010	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WILDEWOOD RUN	13	STD TRAD/CNTMP WD/MTL/GLS UG	1	16000 LUMEN HP SODIUM	172	STD DECOR-TRAD(POST TOP) FULL	8/3/2010	$1.73	$21	707	$18	$60	55	$0.78	228	$6	$19	478
BRISTOL PWD STREET LIGHTING	IPSWITCH RD	4954	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/6/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12373	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/11/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12373	HI MNT CTR BORED MT/GLASS UG		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/11/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BLAKESLEE ST	2473	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/13/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CONSOLATION ST	2961	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/16/2010	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	RAMBLER ST	12250	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/18/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODING ST	3704	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/19/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DWIGHT ST	655	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/27/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NORTHMONT ROAD EXT	5996	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/27/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	12881	NEW WOOD POLE FOR STREETLIGHTG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	9/2/2010	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	MIDDLE ST	143	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	9/15/2010	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PARK DEPARTMENT	STEELE RD	12558	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/16/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WITCHES ROCK RD	1977	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/17/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DIVINITY ST	1430	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	10/7/2010	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	HILL ST	289	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/7/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIDGE RD	9224	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/7/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROBERTSON ST	11544	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/18/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	571	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	10/21/2010	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PECK LN	3068	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/21/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	N MAIN ST	13754	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	11/3/2010	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	PROSPECT PL	8292	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	11/8/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JEROME AVE	2085	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	11/18/2010	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MALTBY ST	11561	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	11/18/2010	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	3945	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	11/18/2010	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	9004	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	11/18/2010	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FOX HOLLOW LN	7	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/9/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LONG LN	13343	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/9/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	N MAIN ST	3758	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/9/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	590	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	12/10/2010	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BLAKESLEE ST	2477	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/14/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROAD ST	8640	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	12/14/2010	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	8642	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	12/14/2010	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CHRISTINE RD	10241	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/14/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	IVY DR	11683	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/14/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LINCOLN AVE	3838	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	12/14/2010	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINE ST	338	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/14/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RAMBLER ST	11153	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/14/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VINCENT RD	4517	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/14/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHURCH AVE	2389	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	12/16/2010	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	E MAIN ST	8670	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	12/16/2010	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	12464	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	12/16/2010	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	GARDEN ST	3799	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/21/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MELLEN ST	12593	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/21/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	SHRUB RD	6490	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/21/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COUNTRY LN	11721	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/29/2010	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LEXINGTON ST	1140	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/4/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	205	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/5/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DALEY ST	9525	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	1/10/2011	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CAMP ST	4931	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/17/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BELRIDGE RD	5274	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/19/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MINE RD	4534	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/20/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAPLE AVE	6831	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/27/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	UCONN DR	14803	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/2/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LEXINGTON ST	1110	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/3/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BERKSHIRE DR	5010	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/11/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	W WASHINGTON ST	3926	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	2/11/2011	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SHRUB RD	10245	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/2/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NORWOOD RD	4841	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/8/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HULL ST	1524	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/23/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JENNINGS PL	3115	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/23/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HIGHLAND ST	3529	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/29/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BRANDON RUN	15248	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRAD(POST TOP) FULL	4/7/2011	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	BROAD PL	3746	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/7/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CORBIN RIDGE	15244	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRAD(POST TOP) FULL	4/7/2011	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	IVY DR	11943	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/7/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BOY ST	4751	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/11/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DEERFIELD RD	10257	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/11/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FRENCH ST	9169	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/11/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	9845	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	4/11/2011	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	ARROWHEAD DR	10446	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/20/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLAREMONT ST	8867	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/25/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RHODA LN	12756	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/25/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	UNION ST	2757	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	4/25/2011	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LACAVA RD	11663	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/10/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BUCKBOARD LN	13673	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRAD(POST TOP) FULL	5/24/2011	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	VILLAGE ST	14142	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/25/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	314	CENTER BORED WOOD PL SERVED OH	1	4000 LUMEN HP SODIUM	59	CONVENTIONAL COBRA HD (FULL)	6/2/2011	$0.81	$10	242	$6	$20	27	$0.55	112	$3	$9	130
BRISTOL PWD STREET LIGHTING	KING ST	8535	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/6/2011	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	COLLIER AVE	4503	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/7/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAWLEY ST	8732	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/9/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	COUNCIL RING DR	10826	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/9/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MOUNTAIN VIEW AVE	7095	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/16/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHARLES ST	10148	NEW WOOD POLE FOR STREETLIGHTG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/21/2011	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	HENDERSON ST	15682	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/21/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	2367	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/21/2011	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CLOVER RD	4730	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/5/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHARLES ST	10146	NEW WOOD POLE FOR STREETLIGHTG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/7/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHARLES ST	10149	NEW WOOD POLE FOR STREETLIGHTG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/7/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MERCIER AVE	5673	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/13/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MURRAY RD	2988	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/22/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MURRAY RD	3247	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/22/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HART ST	621	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/4/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	5169	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/4/2011	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FAIRLAWN ST	6689	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/11/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GARFIELD RD	7271	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/11/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KING ST	8529	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/11/2011	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TYLER WAY	15355	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRAD(POST TOP) FULL	8/16/2011	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	WATERBURY RD	3151	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/16/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROAD ST	5824	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/19/2011	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WINDHAM RD	12781	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/26/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODLAND ST	5761	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	9/19/2011	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	OWENS WAY	15678	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/4/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WARD ST	3998	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/17/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CIRCLE ST	5635	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/20/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DOUGLAS RD	3780	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/25/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	W WASHINGTON ST	1873	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	10/26/2011	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BREWSTER RD	968	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/27/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ACORN LN	14549	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/2/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ANTHONY DR	10364	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/2/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHRISTINE RD	10239	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/2/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GEORGE ST	2212	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/2/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HEPWORTH ST	7967	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/2/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	POITRAS RD	14301	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/2/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STEVENS ST	10819	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	12/2/2011	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	1398	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	12/2/2011	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	COUNTRY LN	11472	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/12/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EL TORO DR	5019	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/12/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KENNEY ST	3835	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/12/2011	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CANDLEWOOD DR	14258	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/4/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAPLE AVE	5956	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/4/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIDGE RD	9254	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/12/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIDGE RD	9369	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/12/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BETHS AVE	10362	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/17/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GARFIELD RD	7279	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/17/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FALL MOUNTAIN RD	3484	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/18/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SOUTH ST EXT	4363	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/18/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	N POND ST	2949	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/20/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CARPENTER AVE	10159	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/23/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MERCIER AVE	1361	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/23/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MIX ST	6080	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	1/24/2012	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MAIN ST	12452	HI MNT CTR BORED MT/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	1/25/2012	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2234	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	1/26/2012	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	SCHOOL ST	3918	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/26/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SCHOOL ST	8010	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	1/26/2012	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	CLARK AVE	12210	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/30/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ANDREWS ST	12034	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/1/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CANDLEWOOD DR	14262	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/1/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARCONI AVE	4618	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/1/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STEVENS ST	5607	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	2/1/2012	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WILLIAMS ST	472	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/1/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PARK DEPT	PAGE AVE	11583	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	2/6/2012	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BROAD ST	8648	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	2/14/2012	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	DOLPHIN RD	13493	HI MNT CTR BORED WD/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	2/14/2012	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2261	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	2/14/2012	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	557	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	2/16/2012	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	OAKEN RD	14884	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/16/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BIRCH ST	8404	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/24/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2254	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	2/27/2012	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	CAMERON DR	15262	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRAD(POST TOP) FULL	2/28/2012	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	BOARDMAN RD	7137	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/1/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CENTER ST	13750	HI MNT CTR BORED WD/GLASS UG	1	27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	3/1/2012	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	ENTERPRISE DR	14444	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	3/1/2012	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	ENTERPRISE DR	14446	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	3/1/2012	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	FEDERAL ST	13774	HI MNT CTR BORED WD/GLASS UG	1	27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	3/1/2012	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	KING ST	8533	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	3/1/2012	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MALTBY ST	10812	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	3/1/2012	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MAPLE AVE	1102	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/1/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MELINDA LN	14775	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/1/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12374	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/1/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12378	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/1/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12393	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/1/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	N MAIN ST	12426	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	3/1/2012	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	N MAIN ST	13755	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	3/1/2012	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	OAKRIDGE RD	10926	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/1/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PATRICIA DR	14768	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/1/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PINE ST	336	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/1/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PARK DEPARTMENT	ROCKWELL PARK RD	12527	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	3/1/2012	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PARK DEPARTMENT	ROCKWELL PARK RD	12528	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	3/1/2012	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SMITH ST	3928	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/1/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TODD ST	6409	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/1/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GLENDALE DR	4644	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/5/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GREGORY RD	11314	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/5/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAESAR DR	13059	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/6/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHARLES ST	9112	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/6/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CONCORD ST	4734	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/6/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GLENDALE DR	4556	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/6/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JOHN AVE	11195	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/6/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAUREEN DR	5139	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/6/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WASHINGTON ST	7557	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	3/6/2012	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WILLIS ST	12803	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/6/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOLCOTT ST	1887	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	3/8/2012	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MAPLE AVE	6826	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/22/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BALDWIN DR	5460	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/2/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BOY ST	4430	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/2/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROADVIEW ST	3309	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/2/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	E MAIN ST	8673	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	4/2/2012	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	JEROME AVE	2096	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	4/2/2012	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	195	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/2/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIDGE RD	9906	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/2/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLARK AVE	12045	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/4/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	N POND ST	4329	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/5/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PINE ST	319	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	4/5/2012	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	WOODRIDGE RD	7188	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/5/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BINGHAM ST	2529	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/18/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BINGHAM ST	7887	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/18/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FERRARO DR	10699	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/18/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KING ST	8503	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	4/18/2012	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TODD ST	5376	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/18/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PROSPECT ST	6853	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/19/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KING ST	8515	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	4/20/2012	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BREWSTER RD	11881	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/23/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DALEY ST	9512	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/25/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HEPWORTH ST	8473	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/25/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KING ST	8549	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	4/25/2012	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LEWIS RD	9432	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/25/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VINCENT P KELLY RD	8740	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	4/25/2012	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	VINCENT P KELLY RD	10490	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/25/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CENTURY DR	14717	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	5/2/2012	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	NORTH ST	13902	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	5/2/2012	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	WILDEWOOD RUN	12	STD TRAD/CNTMP WD/MTL/GLS UG	1	16000 LUMEN HP SODIUM	172	STD DECOR-TRAD(POST TOP) FULL	5/2/2012	$1.73	$21	707	$18	$60	55	$0.78	228	$6	$19	478
BRISTOL PWD STREET LIGHTING	E MAIN ST	10060	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	5/3/2012	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FERN HILL RD	8231	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/3/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROAD ST	9917	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	5/7/2012	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PARK DEPT	PAGE AVE	11742	NEW WOOD POLE FOR STREETLIGHTG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	5/7/2012	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	ARLENE DR	10457	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/10/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EUGENE AVE	2964	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/10/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	510	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	5/11/2012	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WILLIS ST	13835	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/11/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAIN ST	12448	HI MNT CTR BORED MT/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	5/14/2012	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12401	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/14/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JACQUELINE DR	11345	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/17/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CARMELO RD	10713	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/25/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAPLE AVE	6840	NEW WOOD POLE FOR STREETLIGHTG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/1/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PARK DEPARTMENT	DEWITT DR	12572	NEW WOOD POLE FOR STREETLIGHTG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/4/2012	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	KING ST	8537	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/7/2012	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	DANBURY LN	11916	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/15/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JEFFERSON AVE	13166	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/22/2012	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JEROME AVE	2037	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	7/5/2012	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	KING ST	8543	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	7/5/2012	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MAIN ST	12455	HI MNT CTR BORED MT/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	7/12/2012	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	12446	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	7/12/2012	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	SONSTROM RD	10140	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/12/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JEANNETTE ST	154	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/13/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DALEY ST	9514	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/17/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KING ST	8545	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	7/17/2012	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SHEERAN RD	10249	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/3/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	7287	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	8/6/2012	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	GARDEN ST	3800	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/14/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JACOBS ST	7914	NEW WOOD POLE FOR STREETLIGHTG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/20/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JACOBS ST	7915	NEW WOOD POLE FOR STREETLIGHTG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/20/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROAD ST	5837	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/21/2012	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	LAIRD DR	13063	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/21/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODMERE RD	7179	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/21/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EDROW RD	11111	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/27/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EMMETT ST	12009	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/27/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FEDERAL ST	4407	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/27/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAIN ST	12472	HI MNT CTR BORED MT/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	8/27/2012	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	PERRY RD	10749	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/29/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PINNACLE RD	13660	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/7/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	308	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/10/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LOCUST ST	2979	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/11/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DEL PRADO DR	5232	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/12/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GEORGE ST	2169	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/12/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CIRCLE ST	4840	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/14/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DELL MANOR DR	13809	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	9/14/2012	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FALL MOUNTAIN RD	3494	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/14/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLAREMONT ST	1395	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/26/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SPRUCE ST	5021	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	9/27/2012	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BARLOW ST	3302	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/18/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHARLES ST	9114	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/24/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROSEWOOD DR	11320	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/24/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TYLER WAY	8	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRAD(POST TOP) FULL	10/25/2012	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	JEROME AVE	2062	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	11/14/2012	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	VIEW ST	1456	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	11/14/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILLOW BROOK RD	9620	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	11/14/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CIRCLE ST	8312	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	11/28/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DOLPHIN RD	13495	HI MNT CTR BORED WD/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	11/28/2012	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	OLD WOLCOTT RD	2454	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	11/28/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EASTWOOD RD	4586	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/3/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KING ST	8501	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	12/3/2012	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	KING ST	12871	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	12/3/2012	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	CEDAR RIDGE	15169	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/10/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAKEWOOD CIR	15170	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/10/2012	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WEST ST	3169	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	12/19/2012	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	BEN ST	8934	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/2/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BEN ST	8936	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/2/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GOODWIN ST	2443	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/2/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KING ST	8556	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	1/2/2013	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MAIN ST	12477	HI MNT CTR BORED MT/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	1/2/2013	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	MARCONI AVE	4155	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/2/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MICHIGAN AVE	12204	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/2/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	QUINCE CT	5465	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/2/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SENECA RD	5123	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/2/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	807	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	1/2/2013	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TERRYVILLE RD	7985	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	1/2/2013	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SPRUCE ST	5021	EXISTING WD DIST POLE-SRVED OH		36000 LUMEN METAL HALIDE	451	FLOOD LIGHT (FULL) 36000	1/14/2013	$4.01	$48	1,853	$46	$156	144	$1.50	598	$15	$50	1,255
BRISTOL PWD STREET LIGHTING	ARROWHEAD DR	10447	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/15/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DINO RD	14898	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/25/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ACADEMY ST	2524	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/1/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	E MAIN ST	10056	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	2/1/2013	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	JEFFERSON AVE	10544	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/1/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VILLAGE ST	14131	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/1/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WESTWOOD RD	5172	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/1/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BIRCH ST	4685	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/4/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	537	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	2/4/2013	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	EMMETT ST	12082	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/4/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BEECHWOOD LN	11139	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/5/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HILL ST	283	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/5/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CONCETTA LN	14770	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	2/6/2013	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	MARCIA DR	11883	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	2/6/2013	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	GRACE AVE	8334	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/13/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEIKLEM ST	6524	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/13/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DINO RD	10551	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/1/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HARDWICK RD	9585	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/1/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	N MAIN ST	12420	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	3/1/2013	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	N MAIN ST	12431	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	3/7/2013	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	SYLVESTER ST	10138	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/13/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BUCKBOARD LN	13675	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRAD(POST TOP) FULL	3/14/2013	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	N MAIN ST	13764	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	3/20/2013	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	BROOKSIDE DR	9006	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/21/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAKLAND ST	3533	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/21/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROWE PL	5141	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/21/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BETHS AVE	13146	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/1/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	545	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	4/1/2013	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	CLARK AVE	12168	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/1/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	4980	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/1/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	TERRYVILLE AVE	3181	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	4/1/2013	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CENTURY DR	14417	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	4/3/2013	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	NORWOOD RD	5277	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/4/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	361	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/4/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ROSEMONT ST	3096	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/4/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	14213	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	4/5/2013	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JEROME AVE	2058	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	4/5/2013	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	12465	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	4/5/2013	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	WILLIS ST	13833	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/15/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JACQUELINE DR	11317	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/23/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	12340	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/1/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PINE ST	321	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	5/1/2013	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	BIANCA RD	11690	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/3/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MIDDLE ST	14146	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	5/3/2013	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WESTCHESTER DR	7161	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/3/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FIFTH ST	4568	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/9/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2258	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	5/14/2013	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	GREYSTONE AVE	3580	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/16/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PERKINS ST	3838	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/23/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HORIZON DR	14448	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	6/3/2013	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	MAPLE AVE	6838	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/4/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BELLEVUE AVE	4939	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/5/2013	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2248	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	6/5/2013	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2277	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	6/5/2013	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	LAKE AVE	10803	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/26/2013	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	SCHOOL ST	8003	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	6/26/2013	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	CEMETERY AVE	10958	NEW WOOD POLE FOR STREETLIGHTG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	7/1/2013	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	GLENCOVE ST	4599	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/1/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PINNACLE RD	14177	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/1/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MIX ST	9743	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	FLOOD LIGHT (FULL) 27500	7/22/2013	$2.87	$34	1,278	$32	$108	144	$1.50	598	$15	$50	680
BRISTOL PWD STREET LIGHTING	MIX ST	9743	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	FLOOD LIGHT (FULL) 27500	7/22/2013	$2.87	$34	1,278	$32	$108	144	$1.50	598	$15	$50	680
BRISTOL PWD STREET LIGHTING	BERNSIDE DR	8922	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/3/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BREWSTER RD	8953	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/5/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JEROME AVE	9627	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/14/2013	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PINEHURST RD	395	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/14/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ALBA DR	12214	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/15/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DOROTHY RD	41	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/15/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PAUL ST	9672	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/15/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHINGLE MILL RD	14307	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/15/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SOUTH ST	14589	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/15/2013	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WESTWOODS TER	13439	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/15/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAMP ST	10500	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/29/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EAST RD	3956	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/29/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NORWALK AVE	3160	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/29/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VIOLET DR	14270	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/29/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ANDERSON AVE	5574	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/3/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BREWSTER RD	8862	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/3/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EBERT DR	13255	HI MNT CTR BORED WD/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	9/3/2013	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2281	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	9/3/2013	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	HILL ST	340	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/3/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MANO LN	15066	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/3/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	9850	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	9/3/2013	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	TANGLEWOOD RD	4771	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/3/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LEON RD	3345	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/16/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MINE RD	204	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	9/16/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ANTHONY DR	10289	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/1/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BIRCHWOOD DR	13371	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/1/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CONDON RD	1117	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	10/1/2013	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CRESTWOOD DR	4717	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/1/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ENTERPRISE DR	14440	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	10/1/2013	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	MORNINGSIDE DR W	7119	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/1/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAK HILL DR	9592	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/1/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SMITH ST	3170	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/1/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STRAWBERRY HILL RD	13924	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/1/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	W WASHINGTON ST	1808	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	10/1/2013	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2329	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	10/2/2013	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MELINDA LN	14782	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/2/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	13365	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	10/2/2013	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	SPELMAN ST	7345	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/2/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CURREY CT	7014	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/7/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TIFFANY LN	15196	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRAD(POST TOP) FULL	10/7/2013	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	EMMETT ST	6980	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/18/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ISAMAY DR	5098	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/18/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SALEM LN	5087	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/18/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SPERRY RD	13333	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/18/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KNOLL ST	9207	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/21/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SEYMOUR ST	14222	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	10/21/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CENTRAL ST	3768	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	10/24/2013	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	GREGORY RD	10191	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	11/1/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODLAND ST	4426	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	11/1/2013	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BIRCH ST	9457	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	11/4/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HOLLEY RD	9009	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	11/8/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ASHLEY RD	13334	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	11/14/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CENTRAL ST	3758	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	11/21/2013	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	2334	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	11/22/2013	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BIRCHWOOD DR	13368	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/2/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LADY SLIPPER LN	11350	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/2/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FOREST ST	3792	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/23/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	VERA RD	6595	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	12/23/2013	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL BD OF ED BRISTOL EASTERN HS	WOLCOTT ST	15504	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	FLOOD LIGHT (FULL) 50000	1/2/2014	$4.18	$50	1,939	$48	$163	144	$1.50	598	$15	$50	1,342
BRISTOL PWD STREET LIGHTING	CRYSTAL POND PL	14429	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	1/16/2014	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	OLD TERRYVILLE RD	8090	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/16/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FIFTH ST	4569	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	1/18/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12396	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/3/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12396	HI MNT CTR BORED MT/GLASS UG		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/3/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILDEWOOD RUN	10	STD TRAD/CNTMP WD/MTL/GLS UG	1	16000 LUMEN HP SODIUM	172	STD DECOR-TRAD(POST TOP) FULL	2/3/2014	$1.73	$21	707	$18	$60	55	$0.78	228	$6	$19	478
BRISTOL PWD STREET LIGHTING	CAMP ST	4918	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/4/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MICHAEL ST	9362	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/12/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MINE RD	4542	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/17/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OAKRIDGE RD	13575	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	2/24/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CENTURY DR	14421	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	2/28/2014	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	CENTURY DR	14423	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	2/28/2014	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	CENTURY DR	14424	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	2/28/2014	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	CENTURY DR	14716	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	2/28/2014	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	CENTURY DR	14719	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	2/28/2014	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	HALCYON DR	14729	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	2/28/2014	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	HALCYON DR	14732	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	2/28/2014	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	ALICE TER	13687	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/3/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ARLINGTON ST	9644	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/3/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BIRCH ST	4682	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/3/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BIRCH ST	9843	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/3/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BUTTERNUT LN	13889	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/3/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LILLIAN RD	7619	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/3/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MATTHEWS ST	170	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/3/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12375	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/3/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MIX ST	9752	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	3/3/2014	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PURITAN RD	11172	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/3/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WALNUT ST	3703	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/3/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WILDERNESS WAY	15409	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/3/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOODFIELD RD	11573	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/3/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	YARDE DR	9374	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/3/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FARMSTEAD RD	4669	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/4/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REGENCY CT	14772	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	3/4/2014	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	SCHOOL ST	13313	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	3/4/2014	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	TYLER WAY	15357	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRAD(POST TOP) FULL	3/4/2014	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	UNION ST	2745	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	3/4/2014	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	APPLE RD	4930	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/18/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CANDY LN	12253	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/18/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CHIPPANEE DR	5536	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/18/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DEWITT DR	9226	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/18/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	EAST RD	2618	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/18/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2316	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	3/18/2014	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	HALCYON DR	14727	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	3/18/2014	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	HART ST	5947	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/18/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAKESIDE DR	13252	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/18/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARCONI AVE	3896	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/18/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARTIN RD	4416	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/18/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAXINE RD	4465	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/18/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MORNINGSIDE DR E	7159	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/18/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHEFFIELD LN	10615	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/18/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SUNNYDALE AVE	15629	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/18/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CARLETON PL	4452	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/19/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CLARK AVE	12174	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/19/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FALL MOUNTAIN RD	3481	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/19/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2219	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	3/19/2014	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	INGRAHAM PL	657	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/19/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MAHEU ST	5394	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/19/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARSH RD	4653	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/19/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MILTON RD	9334	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/19/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	NEWELL AVE	3717	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/19/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PARK DEPARTMENT	PAGE PARK RD	12575	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	3/19/2014	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PECK LN	4109	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/19/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PLEASANT VIEW AVE	2150	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/19/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIDGECREST LN	13035	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/19/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	12444	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	3/19/2014	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	BUFF RD	5334	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	3/27/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BECKWITH DR	7357	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/2/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROAD ST	1886	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	4/2/2014	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	DIANE LN	13956	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/2/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HEPWORTH ST	9709	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/2/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JUDD ST	6883	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/2/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAKEWOOD CIR	15171	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/2/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEIKLEM ST	3820	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/2/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12372	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/2/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12376	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/2/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	N MAIN ST	2952	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	4/2/2014	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	PALMORR PL	6 PAL	STD TRAD/CNTMP WD/MTL/GLS UG	1	16000 LUMEN HP SODIUM	172	STD DECOR-TRAD(POST TOP) FULL	4/2/2014	$1.73	$21	707	$18	$60	55	$0.78	228	$6	$19	478
BRISTOL PWD STREET LIGHTING	PARK ST	8026	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	4/2/2014	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	PATRICIA DR	14767	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	4/2/2014	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	PINE ST	316	EXISTING WD DIST POLE-SRVED OH		16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	4/2/2014	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	PLEASANT VIEW AVE	6059	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/2/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	794	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	4/2/2014	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	817	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	4/2/2014	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	STEVENS ST	13327	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	4/2/2014	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WOODLAND ST	10586	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	4/2/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROAD ST	9916	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	5/1/2014	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2299	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	5/1/2014	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	FALL MOUNTAIN RD	1965	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/2/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	OLD FARM RD	11286	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/2/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MELROSE ST	2124	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/3/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MT PLEASANT ST	3076	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/3/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PEACEDALE ST	4936	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/3/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225

City of Bristol

									Existing Costs After Purchase					Proposed LED Costs					
Cnsmr Nm	Rcdd Str Nme	Pole No	Pole Cmpnt Dsc	Pole Purchase	Lamp Cmpnt Dsc	Wattage	Fix Cmpnt Dsc	Fix Instl Dt	2015 Revised Lamp Charge	Annual Distribution Charge	Existing Annual kWh	Annual Delivery Costs	Annual Supply Costs	Retrofit LED Watts	Retrofit Annual Distribution Charge	Proposed Annual kWh	Annual Delivery Costs	Annual Supply Costs	Annual kWh Savings
BRISTOL PWD STREET LIGHTING	PERKINS ST	3844	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/3/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PRESTIGE LN	14552	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/3/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	PROSPECT ST	6652	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/3/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FARMINGTON AVE	2257	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	5/6/2014	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	ROCKWELL PARK RD	10054	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	5/7/2014	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PARK DEPARTMENT	ROCKWELL PARK RD	12535	NEW WOOD POLE FOR STREETLIGHTG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/7/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HARMONY RD	13353	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/8/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MT PLEASANT ST	4260	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/8/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	1323	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/8/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	1325	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/8/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ALDBOURNE DR	5562	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/12/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JAMES P CASEY RD	13082	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/12/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MARCONI AVE	2980	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/12/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RUSTIC TER	5470	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/12/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHERMAN ST	8454	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/12/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	SHRUB RD	11835	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/12/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ENTERPRISE DR	14432	HI MNT CTR BORED WD/GLASS UG	1	16000 LUMEN HP SODIUM	172	CONVENTIONAL COBRA HD (FULL)	5/13/2014	$1.73	$21	707	$18	$60	68	$0.88	282	$7	$24	424
BRISTOL PWD STREET LIGHTING	GROVE ST	2425	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/13/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HENRY ST	3370	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	5/13/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WOLCOTT RD	171	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	5/13/2014	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	ANDREWS ST	12033	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/1/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	E MAIN ST	8669	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	6/1/2014	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	7228	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/1/2014	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	VANTANA DR	11414	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/1/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BROOK ST	2356	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	6/2/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CROWN ST	4627	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/2/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	DINO RD	9715	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/2/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	GREENE ST	9484	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/2/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LADY SLIPPER LN	11351	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/2/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	LAKE AVE	4607	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/2/2014	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIX ST	10152	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	FLOOD LIGHT (FULL) 50000	6/2/2014	$4.18	$50	1,939	$48	$163	144	$1.50	598	$15	$50	1,342
BRISTOL PWD STREET LIGHTING	SHERMAN ST	9296	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/2/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PARK DEPARTMENT	STEELE RD	12599	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/2/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	WEST ST	4032	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	6/2/2014	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	5177	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/4/2014	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	TYLER WAY	15329	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRAD(POST TOP) FULL	6/10/2014	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	HART ST	633	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/16/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	JEROME AVE	10414	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/16/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MIDDLE ST	8828	EXISTING WD DIST POLE-SRVED OH		27500 LUMEN HP SODIUM	311	CONVENTIONAL COBRA HD (FULL)	6/16/2014	$2.87	$34	1,278	$32	$108	113	$1.25	469	$12	$40	809
BRISTOL PARK DEPT	PAGE AVE	11745	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/16/2014	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PARK DEPARTMENT	SHRUB RD	7839	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	FLOOD LIGHT (FULL) 50000	6/16/2014	$4.18	$50	1,939	$48	$163	144	$1.50	598	$15	$50	1,342
BRISTOL PWD STREET LIGHTING	STAFFORD AVE	10436	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/16/2014	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	GOODWIN ST	2444	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	6/17/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	KING ST	8555	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/17/2014	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	WASHINGTON ST	7555	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	6/17/2014	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	DAMATO LN	14757	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (SEMI)	7/1/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	TYLER WAY	15353	STD TRAD/CNTMP WD/MTL/GLS UG	1	9500 LUMEN HP SODIUM	118	STD DECOR-TRAD(POST TOP) FULL	7/1/2014	$1.29	$15	485	$12	$41	55	$0.78	228	$6	$19	257
BRISTOL PWD STREET LIGHTING	WILLIS ST	5212	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/1/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	FERRARO DR	10698	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/10/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	W WASHINGTON ST	3933	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	7/10/2014	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	HILL ST	298	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	7/11/2014	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MAIN ST	12454	HI MNT CTR BORED MT/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	7/11/2014	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	REDSTONE HILL RD	9863	EXISTING WD DIST POLE-SRVED OH		50000 LUMEN HP SODIUM	472	FLOOD LIGHT (FULL) 50000	7/11/2014	$4.18	$50	1,939	$48	$163	144	$1.50	598	$15	$50	1,342
BRISTOL PWD STREET LIGHTING	KING ST	8513	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	7/17/2014	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	JEROME AVE	2045	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	7/22/2014	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	BETHS AVE	12526	HI MNT CTR BORED WD/GLASS UG	1	6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/26/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	ELAINE DR	4429	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/26/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	CAMP ST	4920	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/31/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	HIGH ST	3531	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	7/31/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	RIVERSIDE AVE	12460	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472	CONVENTIONAL COBRA HD (FULL)	7/31/2014	$4.18	$50	1,939	$48	$163	139	$1.46	577	$14	$49	1,362
BRISTOL PWD STREET LIGHTING	EMMETT ST	16098	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/1/2014	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	KENNEY ST	3829	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/1/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MOUNTAIN RD	377	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (SEMI)	8/1/2014	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MECHANIC ST	10030	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/15/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	BURLINGTON AVE	524	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/20/2014	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	CONCORD ST	4729	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84	CONVENTIONAL COBRA HD (FULL)	8/20/2014	$1.02	$12	345	$9	$29	29	$0.57	120	$3	$10	225
BRISTOL PWD STREET LIGHTING	MIX ST	9737	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/20/2014	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MIX ST	9746	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/20/2014	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	PALMORR PL	5 PAL	STD TRAD/CNTMP WD/MTL/GLS UG	1	16000 LUMEN HP SODIUM	172	STD DECOR-TRAD(POST TOP) FULL	8/20/2014	$1.73	$21	707	$18	$60	55	$0.78	228	$6	$19	478
BRISTOL PWD STREET LIGHTING	VANCE DR	12161	EXISTING WD DIST POLE-SRVED OH		9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/20/2014	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	VILLA COURT	15843	HI MNT CTR BORED WD/GLASS UG	1	9500 LUMEN HP SODIUM	118	CONVENTIONAL COBRA HD (FULL)	8/20/2014	$1.29	$15	485	$12	$41	43	$0.68	178	$4	$15	306
BRISTOL PWD STREET LIGHTING	MEMORIAL BLVD	12377	HI MNT CTR BORED MT/GLASS UG	1	6300 LUMEN HP SODIUM	84			$1.02	$12	345	$9	$29	55	$0.78	228	$6	$19	117
BRISTOL PWD STREET LIGHTING	N MAIN ST	12419	HI MNT CTR BORED WD/GLASS UG	1	50000 LUMEN HP SODIUM	472			$4.18	$50	1,939	$48	$163	55	$0.78	228	$6	$19	1,711
BRISTOL PWD STREET LIGHTING	N POND ST	3636	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84			$1.02	$12	345	$9	$29	55	$0.78	228	$6	$19	117
BRISTOL PWD STREET LIGHTING	OAK BLUFFS RD	11904	EXISTING WD DIST POLE-SRVED OH		6300 LUMEN HP SODIUM	84			$1.02	$12	345	$9	$29	55	$0.78	228	$6	$19	117
										$82,574	2,537,578	$62,957	$213,842		$3,588	896,686	$22,121	$75,564	1,640,892

Appendix for ESM 38: Street Lighting

II. Manufacturer Specification Sheets

"Page content is subject to Confidentiality Restrictions"

This page intentionally left blank.

The Result:

The Best Alternative to Traditional Street Lighting

The XSP Series is made possible by innovation in every aspect of the product to deliver outstanding illumination, lasting performance and optimum energy efficiency.



NANOOPTIC PRECISION DELIVERY GRID OPTIC

Efficiently deliver light where you need it.

A NanoOptic Precision Delivery Grid optic efficiently delivers light where you need it, not where you don't. Innovation in LED and optical technologies allows the XSP Series to deliver unmatched target efficacy, and the lowest total cost of ownership compared to previous generations of Cree LED street lights.

HEAT SINK TECHNOLOGY

Maximize LED lifetime.

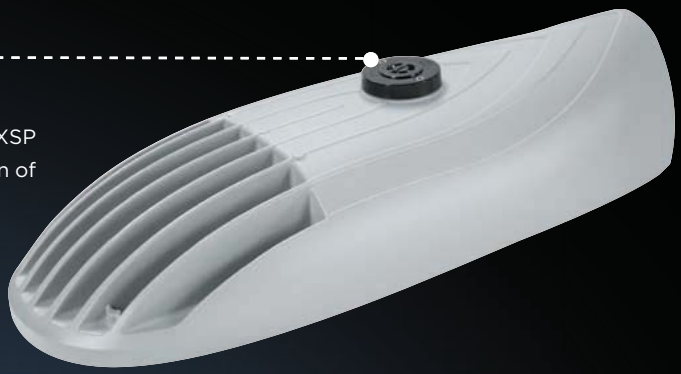
Passive thermal management approach utilizes a flow through heat sink to efficiently draw heat away from the LED chip package, maximizing performance and reliability.



OCCUPANCY SENSOR

Save more energy when not in use.

Optional occupancy sensor decreases light levels when no traffic is present saving more energy while providing an immediate light increase when traffic is detected.



NEMA RECEPTACLE

Code compliant control.

A NEMA receptacle can be added to the XSP Series Street Light to allow the installation of a photocell control in the field.



RUGGED DELTAGUARD® FINISH

Long lasting protection.

The finest industrial-grade finish available with an industry-leading 10-year warranty, the XSP Series housing includes six cleaning stages, eight pretreatment stages and an epoxy e-coat before the baked on, ultra-durable powder topcoat is applied.

DIMMING

Add light level flexibility.

Standard dimming driver offers compatibility between the XSP Series and many third-party control and monitoring systems.

Additional Options

BACKLIGHT SHIELD

Factory-installed or added in the field, municipalities can meet strict cut-off requirements or address back lighting concerns of residents by utilizing the backlight shield.

BIRD DETERRENT

Birds are prevented from perching on street lights by incorporating spikes on the top of the luminaire.

FIELD ADJUSTABLE OUTPUT

Tune the XSP Series Street Light to the exact needs of a particular location after it's been installed. Plus, a single stocked replacement street light can be adjusted to a variety of outputs used throughout the city.

REMOTE MONITORING COMPATIBILITY

A perfect addition to a city-wide upgrade that includes central monitoring and control, the XSP Series street light was designed to integrate with other control modules.

Pays for Itself, Then Pays You!

Designed from the bottom up as a totally optimized LED street light system, the XSP Series delivers incredible efficiency of up to 100 lumens per watt and up to double the lumens per dollar of previous generations of LED street lights without sacrificing application performance. Beyond substantial energy savings and reduced maintenance, Cree achieved better optical control with our NanoOptic® Precision Delivery Grid™ optic than a traditional cobra head luminaire.

Better payback. Better performance. Better price. While other communities are still paying for costly re-lamping of their legacy systems, the Cree® XSP Series will have returned your investment in lower operating expenses. The best alternative to traditional street lighting that pays for itself, then starts paying you.

PERFORMANCE SUMMARY
Utilizes BetaLED® Technology
NanoOptic Precision Delivery Grid optic
CRI: Minimum 70 CRI
CCT: 4000K (+/- 300K) Standard, 5700K (+/- 500K)
WARRANTY: 10 year limited on luminaire / 10 years on finish†
EPA AND FIXTURE WEIGHT: Reference XSP Series spec sheets
Made in the U.S.A. of U.S. and imported parts

†See www.cree.com/lighting for warranty terms.
Product specifications subject to change at any time.
Visit www.cree.com/lighting to find the most up-to-date information.

XSP Series

LED STREET LIGHT



XSP1™ LED STREET LIGHT

Standard Module:

3500 Lumens 53 Watts at 4000K
3850 Lumens 53 Watts at 5700K

High Efficacy Module:

4806 Lumens 53 Watts at 4000K
5340 Lumens 53 Watts at 5700K



XSP2™ LED STREET LIGHT

Standard Module:

7000 Lumens 101 Watts at 4000K
7700 Lumens 101 Watts at 5700K

High Efficacy Module:

9612 Lumens 101 Watts at 4000K
10680 Lumens 101 Watts at 5700K

XSP2L™ LED STREET LIGHT

13,428 Lumens 168 Watts at 4000K
14,535 Lumens 168 Watts at 5700K







NANOOPTIC PRECISION DELIVERY GRID OPTICS

A NanoOptic Precision Delivery Grid optic efficiently delivers light where you need it, not where you don't. Cree innovation in LED and optic technologies created multiple efficiency improvements over previous generations of Cree LED street lights. The XSP Series delivers up to double the lumens per dollar of previous generations of street lights without sacrificing performance. Plus, communities can appear cleaner and safer with uniform, white light.

RUGGED DELTAGUARD® FINISH

The die-cast aluminum housing is protected with DeltaGuard®, the finest industrial grade finish available. Exclusive to all Cree products, the XSP Series finish carries an industry-leading ten-year warranty. Each product follows an immersion process that includes six cleaning stage, eight pre-treatment stages, and an epoxy e-coat before the topcoat is applied. The baked-on, ultra-durable powder topcoat is the last stop to a truly outstanding finish to match a long-lasting LED street light.

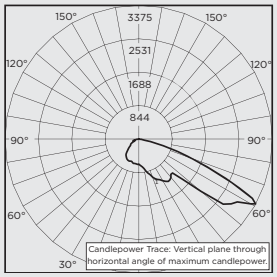
CREE INTEGRATED TECHNOLOGY

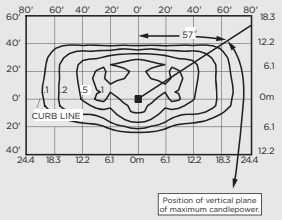
A giant leap forward, the XSP Series is only made possible by innovation in every aspect of the product. Capitalizing on innovations in Cree LED chips and components, optic technology and design, and overall luminaire design, the XSP Series street light exemplifies the best of Cree Integrated Technology. The result is the best alternative to traditional street lighting.

PHOTOMETRY

XSP1™

Type II

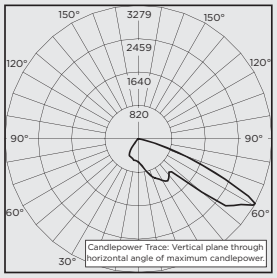


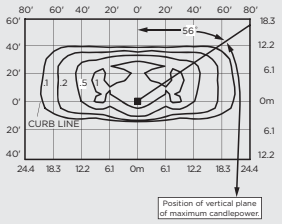


ITL Test Report #: 72723
BXSPA*21A-U
Initial Delivered Lumens: 3,954

BXSPA*2GA-U
Mounting Height: 25' (7.6m)
Initial Delivered Lumens: 4,806
Initial FC at grade

Type II w/Backlight Shield





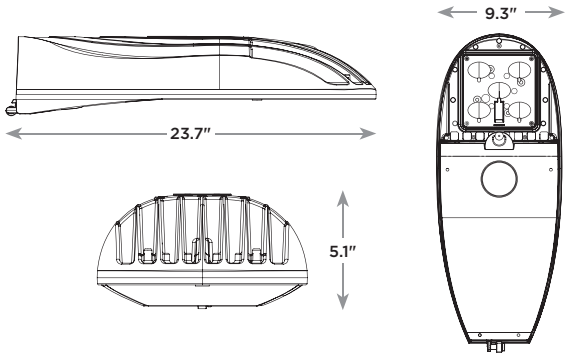
ITL Test Report #: 72722
BXSPA*G1A-U
Initial Delivered Lumens: 3,427

BXSPA*GGA-U
Mounting Height: 25' (7.6m)
Initial Delivered Lumens: 4,209
Initial FC at grade

All published luminaire photometric testing performed to IESNA LM-79-08 standards by a NVLAP certified laboratory.

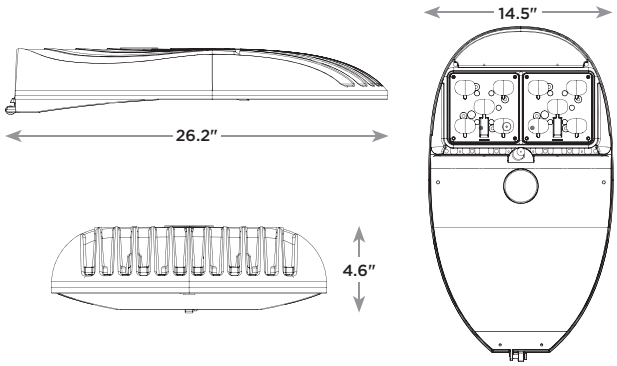
XSP1™ LED STREET LIGHT

Dimensions: L 23.7" x W 9.3" x H 5.1"



XSP2™ / XSP2L™ LED STREET LIGHTS

Dimensions: L 26.2" x W 14.5" x H 4.6"



Section 4:
Financial Results/ Recommendations

Project Specifics

Ameresco initially completed a preliminary site assessment (PSA) and provided the City of Bristol with an interactive cost and savings spreadsheet to assist in selecting a final project scope of work. Based on the City's requested selection, Ameresco has further developed a subset of the ESMs as described in Section 3 of this Preliminary Investment Grade Energy Audit (IGEA). These ESMs represent all refined opportunities, a financeable subset of which will need to be selected to incorporate into an Energy Services Agreement.

Ameresco has preliminarily made a selection base on including the LED lighting option and the steam to hot water conversion for the Police Building. The economics of these selections are shown in this section. A selection sheet with all ESMs developed for this IGEA is included at the end of this section. The specific subset of Section 3 included in this workable project is detailed on the attached ESM matrix and summarized below:

Table 4.1

Financing Term (after construction)	15 years
Estimated Tax-exempt Interest Rate	2.85%
Capital Cost	$12,604,546
Estimated Rebates	$1,613,866
Capital Contribution	$0
Net Assumed Capital Cost	$10,990,680
Guaranteed Cost Savings / Year 1	$864,586
Assumed Utility Escalation Rate	3.00%
Net Excess Cumulative Cash Flow	$53,977

The following table summarizes the ESMs referenced in Section 3 and included in the recommended project scope.

"Page content is subject to Confidentiality Restrictions"

Table 4.2: Measures to be Installed by Building

The following ESM Matrix shows the subset of ESMs as preliminarily selected by Ameresco.

City of Bristol Energy Savings Measures (ESMs)	Lighting System Improvements - Interior	Lighting System Improvements - Interior - LED	Lighting System Improvements - Exterior	Lighting Controls	Lighting Controls - LED	Energy Management System Upgrade/Expansion	Demand Control Ventilation	Variable Frequency Drives	Transformer Replacement	Steam Trap Replacement	Pipe & Jacket Insulation	Window Replacements	Boiler Replacement	Steam to Hot Water Conversion	Condensing Unit Replacement	AHU Replacement	Induction Unit Replacement	Induction Unit Refurbishment	WPCP - Aeration Control Improvement	WPCP - Install High Speed Turbo Blower	Street Lighting	
Facility	**1**	**1A**	**2**	**3**	**3A**	**4**	**6**	**12**	**13**	**14**	**15**	**18**	**21**	**23**	**26**	**27**	**28**	**28A**	**33**	**34**	**38**	
Bristol Central High School		X	X		X		X		X	X	X											
Bristol Eastern High School		X	X		X		X		X	X	X											
Chippens Hill Middle School		X	X		X		X	X			X											
Northeast Middle School		X	X																			
West Bristol K8 School		X																				
Green-Hills K8 School		X																				
Ellen P. Hubbell Elementary School		X	X																			
Stafford Elementary School		X	X																			
Ivy Drive Elementary School		X	X																			
Edgewood Elementary School		X	X																			
Mountain View Elementary School		X	X																			
South Side Elementary School		X	X		X		X															
Board of Education Administration Building & Warehouse		X	X																			
City Hall & Annex		X	X			X	X	X	X			X		X			X					
Water Main Office & Garage		X	X																			
Water Filtration Plant & High Service Pump Station		X	X																			
#1 Well House		X	X																			
#2 Well House		X	X																			
Chemical Control, Generator & #3-5 Well Houses		X	X																			
Chemical Control - Mechanic St		X	X																			
Pump Control - Peck Lane		X	X																			
Pump Control & Generator - Hill St.		X																				
Pump and Control - Wolcott St		X	X																			
Police Court & Parking Garage		X	X			X	X		X					X								
Rockwell Park & Pavilion		X																				
Bathhouse			X																			
Muzzy Field		X	X																			
Ski Lodge		X	X																			
Page Park Pavilion		X	X																			
Dennis Malone Aquatic Center		X	X			X																
Fire Head Quarters		X	X										X									
Engine 2		X	X																			
Engine 3		X	X																			
Engine 5		X	X																			
Beals Senior Center		X	X		X	X																
Main Library		X	X		X	X			X													
Manross Library		X	X			X									X	X						
Youth Services Building		X	X			X																
Animal Control		X	X																			
Hill Street			X																			
City Yard		X	X						X													
Transfer Stations - Lake Ave		X	X																			
Water Pollution Control Park		X	X						X										X	X		
Remote Pumping Stations		X	X																			
Street Lighting																					X	
Pool		X	X																			

Contract Cost

Ameresco has budgeted specific costs (and savings) for all measures which can be found at the end of this section. Ameresco believes the City desires an Open Book Pricing method, whereby the City can review in detail the cost for the specified scope, including actual contractor and material quotes (Direct Pricing). The Contract Cost is comprised of the sum of the Direct Pricing, the Audit Fee plus the Indirect Pricing (Ameresco Services).

Direct Pricing

Prior to the implementation of the work, Ameresco will solicit pricing from subcontractors and/or equipment providers for each ESM and to the extent possible shall use the most competitive and qualified subcontractor or equipment provider to implement the work relating to such ESM. The determination of subcontractor qualification shall be in Ameresco's discretion and subject to City's approval. All subcontracted services shall be considered part of the Direct Pricing. For the selected subset of ESMs, Ameresco has identified the following Direct Pricing budgets for the project:

Table 4.3: Direct Pricing Budgets

Direct Project Costs		
1A	Lighting System Improvements - Interior - LED	$ 2,497,699
2	Lighting System Improvements - Exterior	$ 378,058
3A	Lighting Controls - LED	$ 67,558
4	Energy Management System Upgrade/Expansion	$ 428,549
6	Demand Control Ventilation	$ 76,148
12	Variable Frequency Drives	$ 29,777
13	Transformer Replacement	$ 434,455
14	Steam Trap Replacement	$ 262,192
15	Pipe & Jacket Insulation	$ 44,041
18	Window Replacements	$ 677,933
21	Boiler Replacement	$ 84,411
23	Steam to Hot Water Conversion	$ 861,263
26	Condensing Unit Replacement	$ 58,513
27	AHU Replacement	$ 73,561
28	Induction Unit Replacement	$ 950,396
33	WPCP - Aeration Control Improvement	$ 59,194
34	WPCP - Install High Speed Turbo Blower	$ 149,350
38	Street Lighting	$ 1,699,914
Totals		**$ 8,833,011**

As stated above, Ameresco will solicit competitive pricing for each ESM and to the extent the total Direct Pricing comes in below anticipated levels, the benefit will be retained by the City and can be used for additional work in the facilities. The City will be presented the competitive bids for each ESM and will have ultimate approval over the selected contractor (and associated price) for the work.

Indirect Pricing

Investment Grade Energy Audit (IGEA) Upset Fee: The fee for performing the Investment Grade Energy Audit of the requested facilities is per the Investment Grade Energy Audit Agreement. As contracted, this cost will not be paid under that agreement as it is incorporated into the cost of the Performance Contract.

"Page content is subject to Confidentiality Restrictions"

Project Design: Ameresco oversight of ESM design as well as Ameresco staff overseeing subcontracted design professionals. Ameresco currently intends to subcontract all design work to local professionals, with our staff overseeing their efforts to ensure the result is consistent with the audit scope.

Performance and Payment Bonds: Performance and Payment Bonds on the gross project value of the project.

Project Management: Ameresco's management of the project and subcontractors, including management reviews of progress and attending project construction meetings periodically throughout the construction period.

Commissioning: Ameresco staff performing and overseeing commissioning activities required to ensure system is functional and meets the design intent.

Training: Ameresco's training of City personnel at the time of commissioning, prior to turn over of the project to City personnel.

Construction Monitoring and Verification: Measurement and verification activities performed at the commissioning phase, as described in the Section 7 Measurement and Verification Plan.

Permits: Ameresco's will obtain all necessary permits for the ESMs.

Overhead and Profit: Ameresco's recovery of corporate overhead and recognition of profit

Indirect Pricing shall be calculated based upon the estimated Direct Pricing. Indirect Pricing shall equal the product of the Direct Pricing and a multiplier specific to individual ESMs as per the Table 4.4:

Table 4.4: Indirect Pricing

Ameresco Project Services		
	Investment Grade Energy Audit Upset Fee	$ 150,000
	Project Design	$ 576,563
	Performance Bond	$ 105,905
	Project Management	$ 631,312
	Commissioning	$ 181,900
	Training	$ 121,267
	Construction Monitoring and Verification	$ 128,846
	Permits	$ 109,140
	Overhead	$ 883,301
	Profit	$ 883,301
Totals		**$ 3,771,535**

Any cost not specifically included in the Indirect Pricing shall be included in the Direct Pricing, inclusive of all materials, labor, subcontractor bonding, and other services or fees required to successfully implement the Scope of Services.

In the event the Contract Cost is anticipated to exceed the "not to exceed" total stated above, the City and Ameresco will modify the Scope of Services in order to remain within the stated maximum.

Savings Coverage:

It is important to note that revisions to the project scope during the design phase may have an effect on the savings levels and overall project economics. The City and Ameresco need to remain cognizant of the ability to meet the guaranteed savings levels specified in the Contract and aware that changes in project scope may necessitate a modification to Ameresco's guarantee. In the event the proposed design adversely affects the ability to meet these obligations, Ameresco and the City will need to mutually agree upon revisions to the project scope or contract. Ameresco shall provide reasonable efforts to rerun project economics based upon actual costs and savings levels during the design phase, including for the addition of other opportunities, to show the effect of scope/pricing changes on the overall economics.

Rebates / Incentives

Ameresco has estimated rebates available for this project into the net financed cost of the project. These estimates are based on our expectations for incentives available through regular utility programs, but we are unable to guarantee the exact final level of rebates the City will recognize as a result of implementing this project. Any additional rebates will be for the benefit of the City, and the City shall be responsible for addressing any financial shortfalls as a result of fewer than expected rebates. Ameresco's pricing is based on payment of the gross project cost, not the cost net of rebates, based upon a percentage of completion.

Table 4.5: Rebates by Measure

ESM #	ESM Name	Incentive
1A	Lighting System Improvements - Interior - LED	$ 659,972
2	Lighting System Improvements - Exterior	$ 174,319
3A	Lighting Controls - LED	$ 27,030
4	Energy Management System Upgrade/Expansion	$ 51,878
6	Demand Control Ventilation	$ 33,163
12	Variable Frequency Drives	$ 15,530
13	Transformer Replacement	$ 120,090
14	Steam Trap Replacement	$ 14,237
15	Pipe & Jacket Insulation	$ 15,206
18	Window Replacements	$ -
21	Boiler Replacement	$ -
23	Steam to Hot Water Conversion	$ 2,931
26	Condensing Unit Replacement	$ 2,451
27	AHU Replacement	$ 1,498
28	Induction Unit Replacement	$ -
33	WPCP - Aeration Control Improvement	$ 33,211
34	WPCP - Install High Speed Turbo Blower	$ 19,309
38	Street Lighting	$ 443,041
		$ 1,613,866

"Page content is subject to Confidentiality Restrictions"

Structure of Financing Arrangement

Ameresco assumes the City will be issuing financing based on parameters referenced in the attached pro forma cash flow, but Ameresco can work with the City to identify other financing arrangements.

Ameresco included an allowance for construction period interest in the repayment cost as our construction period payments are based upon a percentage of the gross project size completed each month. This allowance, approximately $490,835, is based upon a capitalized interest calculation and may be more or less than that actually structured by the City as part of its financing.

Interest Rate and Financing Term

For the assumed financing, Ameresco estimated the interest rates based upon an estimated third party Tax Exempt Lease Purchase (TELP) financing rate. The ultimate rate may vary based on the City's credit rating or the ultimate financing structure, but Ameresco does not guarantee it will be less than or equal to the assumed 2.85% interest rate used in the pro forma cash flow. Any PURA incentives that may be available have not been included in this estimated rate.

The financing term is based on 15-years of repayment, which is after an assumed 18 months of construction.

Equipment Ownership and Security Interest Required

Title to the equipment installed by Ameresco will be transferred to the City of Bristol upon the City's acceptance of the installation and payment in full.

Energy Savings Guarantee

As an integral part of its contract with the City of Bristol, Ameresco will guarantee energy savings over the full term of the contract. Ameresco's guarantee provides assurance to the City that the cash inflows from the project, which include both energy and operational cost savings and any additional utility rebates, will exceed the City's cash requirements for the project, the loan payments and any on-going payments for the provision of operations and maintenance services as delineated below. The City of Bristol will retain actual annual energy cost savings that exceed Ameresco's guarantee.

At any time during the contract term should there be a shortfall in energy cost savings Ameresco will make a payment to the City of Bristol in the full amount of the shortfall. Payments can be in the form of a check or a credit against future billings from Ameresco, at the City's option.

Construction Financing

Ameresco assumes the financing proceeds will be funded into an escrow or similar account at the inception of the project. Monthly drawings are made against the escrow as the project is implemented, based upon a percentage of work completed for the preceding period.

"Page content is subject to Confidentiality Restrictions"

Project Labor

Ameresco has based its labor costs on current prevailing wage rates for all expected construction disciplines. Ameresco can solicit competitive pricing on various labor components and work with the City to select the ultimate contractor used for installation. Ameresco was not given explicit direction to use union labor and therefore has at a minimum ensured all labor is comparable to current prevailing wage rates. Should the City require union labor or other specific labor agreements other than prevailing wage, the cost to perform the work included in this project may go up at the City's expense.

"Page content is subject to Confidentiality Restrictions"

This page is intentionally left blank.

Table 4.6: Cost and Savings by Measure

The following savings summary shows the subset of ESMs as preliminarily selected by Ameresco.

ESM #	ESM Name	Annual kW	Total kWh	Natural Gas (CCF)	#2 Fuel Oil (Gallons)	Max Daily Demand (Natural Gas) (CCF (Demand))	Energy Savings	O&M Savings	Total Project Savings	Total Project Costs	SPB
1A	Lighting System Improvements - Interior - LED	7,665	1,600,577	(16,681)	(11,636)	-	$ 252,871	$ 31,391	$ 284,263	$ 3,415,928	12.02
2	Lighting System Improvements - Exterior	-	521,666	-	-	-	$ 60,386	$ 380	$ 60,765	$ 517,044	8.51
3A	Lighting Controls - LED	-	75,083	(1,471)	(152)	-	$ 8,501	$ -	$ 8,501	$ 92,395	10.87
4	Energy Management System Upgrade/Expansion	-	108,455	8,735	2,252	8	$ 20,844	$ -	$ 20,844	$ 586,097	28.12
6	Demand Control Ventilation	-	100,672	2,922	2,122	-	$ 22,045	$ -	$ 22,045	$ 104,142	4.72
12	Variable Frequency Drives	-	54,906	-	-	-	$ 5,834	$ -	$ 5,834	$ 40,724	6.98
13	Transformer Replacement	457	333,583	-	-	-	$ 44,465	$ -	$ 44,465	$ 594,173	13.36
14	Steam Trap Replacement	-	-	4,520	4,498	-	$ 14,887	$ -	$ 14,887	$ 358,582	24.09
15	Pipe & Jacket Insulation	-	-	5,540	1,301	-	$ 6,664	$ -	$ 6,664	$ 60,231	9.04
18	Window Replacements	-	639	-	2,800	-	$ 7,770	$ -	$ 7,770	$ 1,055,119	135.79
21	Boiler Replacement	-	-	(6,179)	5,347	(56)	$ 10,273	$ (3,386)	$ 6,887	$ 127,061	18.45
23	Steam to Hot Water Conversion	-	8,143	(59,818)	49,115	(568)	$ 99,097	$ (6,772)	$ 92,325	$ 1,308,149	14.17
26	Condensing Unit Replacement	7	6,809	-	-	-	$ 719	$ -	$ 719	$ 87,351	121.54
27	AHU Replacement	-	620	405	-	-	$ 306	$ -	$ 306	$ 109,897	358.99
28	Induction Unit Replacement	-	-	-	1,014	-	$ 2,789	$ -	$ 2,789	$ 1,368,294	490.67
33	WPCP - Aeration Control Improvement	-	92,252	-	-	-	$ 7,734	$ -	$ 7,734	$ 80,955	10.47
34	WPCP - Install High Speed Turbo Blower	225	53,637	-	-	-	$ 8,289	$ -	$ 8,289	$ 223,549	26.97
38	Street Lighting	-	1,640,892	-	-	-	$ 165,331	$ 78,987	$ 244,317	$ 2,324,854	9.52
	Investment Grade Energy Audit Fee									$ 150,000	
		8,354	**4,597,934**	**(62,028)**	**56,661**	**(615)**	**$ 738,805**	**$ 100,599**	**$ 839,404**	**$ 12,604,546**	**15.02**

"Page content is subject to Confidentiality Restrictions"

Table 4.7: Project Pro-Forma

City of Bristol - Pro-Forma

Initial Project Costs:		
Investment Grade Energy Audit	$	150,000
Implementation costs	$	12,454,546
Total Initial Project Costs	**$**	**12,604,546**
Estimated Incentives	**$**	**1,613,866**
Net Project Costs after rebates	**$**	**10,990,680**

Financial Assumptions	
Term of Project {yrs}	15.0 yrs
Term of Financing {yrs}	15.0 yrs
Estimated Financing Rate	2.85%
Payments per year (frequency)	4
Discount Rate	2.85%
Average Energy escalation rate {annual}	3.00%
Project Simple Payback	13.09

Pro-forma			Year									
		Initial Values	1	2	3	4	5	6	7	8	9	10
1	Annual energy costs without improvements	$ 4,189,070	$ 4,314,742	$ 4,444,184	$ 4,577,510	$ 4,714,835	$ 4,856,280	$ 5,001,969	$ 5,152,028	$ 5,306,588	$ 5,465,786	$ 5,629,760
2	Annual energy costs with improvements	$ 3,450,265	$ 3,553,773	$ 3,660,386	$ 3,770,198	$ 3,883,304	$ 3,999,803	$ 4,119,797	$ 4,243,391	$ 4,370,692	$ 4,501,813	$ 4,636,868
3	Annual energy cost savings (1-2)	$ 738,805	$ 760,969	$ 783,798	$ 807,312	$ 831,531	$ 856,477	$ 882,172	$ 908,637	$ 935,896	$ 963,973	$ 992,892
4	O&M Savings	$ 100,599	$ 103,617	$ 106,726	$ 109,928	$ 113,225	$ 116,622	$ 120,121	$ 123,725	$ 127,436	$ 131,259	$ 135,197
5	Total Project Savings	$ 839,404	$ 864,586	$ 890,524	$ 917,240	$ 944,757	$ 973,100	$ 1,002,293	$ 1,032,361	$ 1,063,332	$ 1,095,232	$ 1,128,089
6	Payments for financing equipment		$ 772,157	$ 795,429	$ 819,400	$ 844,090	$ 869,521	$ 895,714	$ 922,694	$ 950,483	$ 979,105	$ 1,008,586
7	Payments for Ongoing Services	$ 59,363	$ 88,831	$ 91,496	$ 94,241	$ 97,068	$ 99,980	$ 102,980	$ 106,069	$ 109,251	$ 112,529	$ 115,905
8	Net annual benefits		$ 3,598	$ 3,598	$ 3,598	$ 3,598	$ 3,598	$ 3,598	$ 3,598	$ 3,598	$ 3,598	$ 3,598
9	Cumulative cash flow	**$ 53,977**	$ 3,598	$ 7,197	$ 10,795	$ 14,394	$ 17,992	$ 21,591	$ 25,189	$ 28,787	$ 32,386	$ 35,984
10	**Net Present Value of cash flow**	**$ 43,428**										
11	Interest Rate	2.85%										
12	Discount Rate	2.85%										

Line #	11	12	13	14	15	16	17	18	19	20	Totals
1	$ 5,798,652	$ 5,972,612	$ 6,151,790	$ 6,336,344	$ 6,526,434						$ 80,249,515
2	$ 4,775,974	$ 4,919,253	$ 5,066,830	$ 5,218,835	$ 5,375,400						$ 66,096,316
3	$ 1,022,679	$ 1,053,359	$ 1,084,960	$ 1,117,509	$ 1,151,034						$ 14,153,199
4	$ 139,253	$ 143,431	$ 147,734	$ 152,166	$ 156,731						$ 1,927,170
5	$ 1,161,932	$ 1,196,790	$ 1,232,694	$ 1,269,674	$ 1,307,765						$ 16,080,369
6	$ 1,038,952	$ 1,070,228	$ 1,102,443	$ 1,135,624	$ 1,169,801						$ 14,374,227
7	$ 119,382	$ 122,963	$ 126,652	$ 130,452	$ 134,365						$ 1,652,165
8	$ 3,598	$ 3,598	$ 3,598	$ 3,598	$ 3,598						$ 53,977
9	$ 39,583	$ 43,181	$ 46,780	$ 50,378	$ 53,977						
10											
11											
12											

Notes:
1 This Proforma Cash Flow reflects an estimated financing rate of 2.85%. The actual rate will increase or decrease based on market conditions and customer credit rating at the time of funding.
2 Savings are based on current utility rate structures and usage information provided for purposes of this project.

IGEA Selection Sheet

"Page content is subject to Confidentiality Restrictions"

This page is intentionally left blank

AMERESCO
Green • Clean • Sustainable

City of Bristol

Project Selection Sheet

Measure Number	City/ School	Building	ESM Description	Measure Costs	O&M Savings	Guaranteed Savings	Rebates	Simple Payback (years)	Include? (1=yes)
1	C	Animal	Lighting System Improvements - Interior	$ 2,439	$ 41	$ 215	$ -	11.34	
1	C	Aquatic	Lighting System Improvements - Interior	$ 19,985	$ 132	$ 3,442	$ -	5.81	
1	C	Chem_Control	Lighting System Improvements - Interior	$ 1,385	$ 26	$ 199	$ -	6.95	
1	C	Chem_Mech_St	Lighting System Improvements - Interior	$ 301	$ 6	$ 9	$ -	32.18	
1	C	City_Hall	Lighting System Improvements - Interior	$ 101,881	$ 1,421	$ 10,072	$ -	10.11	
1	C	City_Yard	Lighting System Improvements - Interior	$ 72,552	$ 303	$ 4,932	$ -	14.71	
1	C	Engine_2	Lighting System Improvements - Interior	$ 3,208	$ 57	$ 263	$ -	12.18	
1	C	Engine_3	Lighting System Improvements - Interior	$ 1,984	$ 41	$ 220	$ -	9.04	
1	C	Engine_5	Lighting System Improvements - Interior	$ 2,347	$ 45	$ 203	$ -	11.55	
1	C	Filtration	Lighting System Improvements - Interior	$ 31,179	$ 568	$ 2,106	$ -	14.81	
1	C	Fire_HQ	Lighting System Improvements - Interior	$ 18,363	$ 158	$ 1,592	$ -	11.53	
1	C	Main_Library	Lighting System Improvements - Interior	$ 165,064	$ 1,542	$ 15,323	$ -	10.77	
1	C	Manross_Library	Lighting System Improvements - Interior	$ 19,349	$ 250	$ 1,664	$ -	11.63	
1	C	Muzzy	Lighting System Improvements - Interior	$ 11,955	$ 91	$ 698	$ -	17.13	
1	C	P_Control_Hill	Lighting System Improvements - Interior	$ 382	$ 19	$ 553	$ -	0.69	
1	C	P_Control_Wolcott	Lighting System Improvements - Interior	$ 675	$ 14	$ 49	$ -	13.82	
1	C	Page_Park	Lighting System Improvements - Interior	$ 1,793	$ 27	$ 170	$ -	10.52	
1	C	Police	Lighting System Improvements - Interior	$ 109,485	$ 2,341	$ 12,291	$ -	8.91	
1	C	Pool	Lighting System Improvements - Interior	$ 7,846	$ 85	$ 356	$ -	22.03	
1	C	Pump_Peck_Lane	Lighting System Improvements - Interior	$ 600	$ 13	$ 43	$ -	13.82	
1	C	Rockwell_Park	Lighting System Improvements - Interior	$ 1,747	$ 32	$ 189	$ -	9.23	
1	C	Senior	Lighting System Improvements - Interior	$ 75,044	$ 989	$ 5,898	$ -	12.72	
1	C	Ski	Lighting System Improvements - Interior	$ 812	$ 13	$ 80	$ -	10.19	
1	C	Transfer_Lake_Ave	Lighting System Improvements - Interior	$ 4,569	$ 26	$ 633	$ -	7.22	
1	C	Water_Main	Lighting System Improvements - Interior	$ 7,252	$ 116	$ 725	$ -	10.00	
1	C	Well_1	Lighting System Improvements - Interior	$ 301	$ 6	$ 31	$ -	9.62	
1	C	Well_2	Lighting System Improvements - Interior	$ 791	$ 16	$ 45	$ -	17.67	
1	C	Youth	Lighting System Improvements - Interior	$ 19,252	$ 247	$ 1,528	$ -	12.60	
1	S	Admin	Lighting System Improvements - Interior	$ 29,488	$ 474	$ 4,183	$ -	7.05	
1	S	Central_High	Lighting System Improvements - Interior	$ 333,687	$ 3,416	$ 41,918	$ -	7.96	
1	S	Chippens	Lighting System Improvements - Interior	$ 337,246	$ 3,286	$ 25,572	$ -	13.19	
1	S	Eastern_High	Lighting System Improvements - Interior	$ 304,732	$ 3,371	$ 25,473	$ -	11.96	
1	S	Edgewood	Lighting System Improvements - Interior	$ 57,252	$ 888	$ 5,439	$ -	10.53	
1	S	Green-Hills	Lighting System Improvements - Interior	$ 106,145	$ 1,738	$ 8,130	$ -	13.06	
1	S	Hubbell	Lighting System Improvements - Interior	$ 112,711	$ 1,403	$ 6,863	$ -	16.42	
1	S	Ivy_Drive	Lighting System Improvements - Interior	$ 73,472	$ 949	$ 4,914	$ -	14.95	
1	S	Mt_View	Lighting System Improvements - Interior	$ 64,635	$ 939	$ 4,050	$ -	15.96	
1	S	NE_Middle	Lighting System Improvements - Interior	$ 103,968	$ 1,233	$ 6,997	$ -	14.86	
1	S	South_Side	Lighting System Improvements - Interior	$ 84,200	$ 1,111	$ 6,364	$ -	13.23	
1	S	Stafford	Lighting System Improvements - Interior	$ 81,070	$ 1,057	$ 4,900	$ -	16.54	
1	S	W_Bristol	Lighting System Improvements - Interior	$ 145,374	$ 2,540	$ 14,031	$ -	10.36	
1	W	Pump_Stations	Lighting System Improvements - Interior	$ 4,503	$ 92	$ 718	$ -	6.27	
1	W	Water_Pollution	Lighting System Improvements - Interior	$ 28,154	$ 295	$ 2,236	$ -	12.59	

AMERESCO
Green • Clean • Sustainable

City of Bristol

Project Selection Sheet

Measure Number	City/ School	Building	ESM Description	Measure Costs	O&M Savings	Guaranteed Savings	Rebates	Simple Payback (years)	Include? (1=yes)
2	C	Animal	Lighting System Improvements - Exterior	$ 590	$ 1	$ 87	$ 237	4.05	1
2	C	Aquatic	Lighting System Improvements - Exterior	$ 6,129	$ 4	$ 631	$ 1,931	6.65	1
2	C	Bath	Lighting System Improvements - Exterior	$ 3,501	$ 2	$ 343	$ 883	7.62	1
2	C	Chem_Control	Lighting System Improvements - Exterior	$ 858	$ 1	$ 85	$ 356	5.94	1
2	C	Chem_Mech_St	Lighting System Improvements - Exterior	$ 558	$ 1	$ 34	$ 46	15.19	1
2	C	City_Hall	Lighting System Improvements - Exterior	$ 2,452	$ 2	$ 285	$ 1,051	4.92	1
2	C	City_Yard	Lighting System Improvements - Exterior	$ 28,428	$ 12	$ 3,736	$ 12,793	4.18	1
2	C	Engine_2	Lighting System Improvements - Exterior	$ 1,614	$ 2	$ 163	$ 681	5.72	1
2	C	Engine_3	Lighting System Improvements - Exterior	$ 1,955	$ 2	$ 588	$ 880	1.83	1
2	C	Engine_5	Lighting System Improvements - Exterior	$ 1,375	$ 2	$ 430	$ 619	1.76	1
2	C	Filtration	Lighting System Improvements - Exterior	$ 19,663	$ 15	$ 2,034	$ 7,704	5.88	1
2	C	Fire_HQ	Lighting System Improvements - Exterior	$ 3,501	$ 2	$ 307	$ 970	8.24	1
2	C	Hill_St	Lighting System Improvements - Exterior	$ 419	$ 0	$ 48	$ 132	5.99	1
2	C	Main_Library	Lighting System Improvements - Exterior	$ 16,100	$ 11	$ 1,625	$ 5,957	6.24	1
2	C	Manross_Library	Lighting System Improvements - Exterior	$ 9,773	$ 6	$ 697	$ 2,930	9.82	1
2	C	Muzzy	Lighting System Improvements - Exterior	$ 7,231	$ 5	$ 584	$ 1,829	9.25	1
2	C	P_Control_Wolcott	Lighting System Improvements - Exterior	$ 918	$ 1	$ 74	$ 311	8.22	1
2	C	Page_Park	Lighting System Improvements - Exterior	$ 987	$ 2	$ 393	$ 444	1.38	1
2	C	Police	Lighting System Improvements - Exterior	$ 26,521	$ 50	$ 2,692	$ 10,012	6.13	1
2	C	Pool	Lighting System Improvements - Exterior	$ 4,987	$ 5	$ 399	$ 1,360	9.08	1
2	C	Pump_Peck_Lane	Lighting System Improvements - Exterior	$ 871	$ 1	$ 68	$ 285	8.60	1
2	C	Senior	Lighting System Improvements - Exterior	$ 19,391	$ 15	$ 2,507	$ 8,686	4.27	1
2	C	Ski	Lighting System Improvements - Exterior	$ 826	$ 1	$ 64	$ 266	8.81	1
2	C	Transfer_Lake_Ave	Lighting System Improvements - Exterior	$ 6,438	$ 3	$ 716	$ 2,897	4.95	1
2	C	Water_Main	Lighting System Improvements - Exterior	$ 11,923	$ 7	$ 747	$ 3,137	11.76	1
2	C	Well_1	Lighting System Improvements - Exterior	$ 59	$ 0	$ 53	$ 27	0.61	1
2	C	Well_2	Lighting System Improvements - Exterior	$ 2,320	$ 2	$ 97	$ 401	19.86	1
2	C	Youth	Lighting System Improvements - Exterior	$ 8,239	$ 8	$ 803	$ 2,193	7.53	1
2	S	Admin	Lighting System Improvements - Exterior	$ 4,834	$ 3	$ 661	$ 1,523	5.01	1
2	S	Central_High	Lighting System Improvements - Exterior	$ 40,790	$ 23	$ 7,767	$ 15,278	3.28	1
2	S	Chippens	Lighting System Improvements - Exterior	$ 47,347	$ 40	$ 5,589	$ 15,368	5.72	1
2	S	Eastern_High	Lighting System Improvements - Exterior	$ 40,146	$ 25	$ 4,437	$ 15,046	5.66	1
2	S	Edgewood	Lighting System Improvements - Exterior	$ 10,777	$ 6	$ 946	$ 2,434	8.82	1
2	S	Hubbell	Lighting System Improvements - Exterior	$ 29,770	$ 17	$ 2,684	$ 9,202	7.66	1
2	S	Ivy_Drive	Lighting System Improvements - Exterior	$ 33,821	$ 18	$ 974	$ 1,526	33.17	1
2	S	Mt_View	Lighting System Improvements - Exterior	$ 26,228	$ 27	$ 3,234	$ 6,824	6.00	1
2	S	NE_Middle	Lighting System Improvements - Exterior	$ 13,248	$ 8	$ 1,345	$ 3,460	7.28	1
2	S	South_Side	Lighting System Improvements - Exterior	$ 28,070	$ 14	$ 5,292	$ 11,230	3.18	1
2	S	Stafford	Lighting System Improvements - Exterior	$ 14,578	$ 10	$ 3,351	$ 6,560	2.39	1
2	W	Pump_Stations	Lighting System Improvements - Exterior	$ 7,395	$ 7	$ 541	$ 2,266	9.47	1
2	W	Water_Pollution	Lighting System Improvements - Exterior	$ 32,408	$ 18	$ 3,655	$ 14,584	4.88	1
3	C	Animal	Lighting Controls	$ 734	$ -	$ 10	$ -	75.69	
3	C	Aquatic	Lighting Controls	$ 2,537	$ -	$ 50	$ -	50.38	

AMERESCO
Green • Clean • Sustainable

City of Bristol

Project Selection Sheet

Measure Number	City/ School	Building	ESM Description	Measure Costs	O&M Savings	Guaranteed Savings	Rebates	Simple Payback (years)	Include? (1=yes)
3	C	City_Hall	Lighting Controls	$ 9,117	$ -	$ 673	$ -	13.54	
3	C	City_Yard	Lighting Controls	$ 9,456	$ -	$ 247	$ -	38.23	
3	C	Engine_2	Lighting Controls	$ 1,603	$ -	$ 15	$ -	104.43	
3	C	Engine_3	Lighting Controls	$ 1,066	$ -	$ 16	$ -	67.44	
3	C	Engine_5	Lighting Controls	$ 2,560	$ -	$ 20	$ -	126.60	
3	C	Filtration	Lighting Controls	$ 14,416	$ -	$ 314	$ -	45.85	
3	C	Fire_HQ	Lighting Controls	$ 5,463	$ -	$ 173	$ -	31.59	
3	C	Main_Library	Lighting Controls	$ 424	$ -	$ 29	$ -	14.45	
3	C	Manross_Library	Lighting Controls	$ 2,845	$ -	$ 88	$ -	32.45	
3	C	Page_Park	Lighting Controls	$ 1,128	$ -	$ 17	$ -	67.91	
3	C	Police	Lighting Controls	$ 12,791	$ -	$ 806	$ -	15.86	
3	C	Pool	Lighting Controls	$ 210	$ -	$ 1	$ -	236.56	
3	C	Rec_Bldg	Lighting Controls	$ 264	$ -	$ 0	$ -	814.37	
3	C	Rockwell_Park	Lighting Controls	$ 629	$ -	$ 1	$ -	980.32	
3	C	Senior	Lighting Controls	$ 13,252	$ -	$ 1,119	$ -	11.84	
3	C	Ski	Lighting Controls	$ 475	$ -	$ 2	$ -	268.14	
3	C	Transfer_Lake_Ave	Lighting Controls	$ 1,208	$ -	$ 19	$ -	64.65	
3	C	Water_Main	Lighting Controls	$ 4,246	$ -	$ 97	$ -	43.99	
3	C	Youth	Lighting Controls	$ 6,186	$ -	$ 207	$ -	29.81	
3	S	Admin	Lighting Controls	$ 5,855	$ -	$ 547	$ -	10.71	
3	S	Central_High	Lighting Controls	$ 11,607	$ -	$ 1,385	$ -	8.38	
3	S	Chippens	Lighting Controls	$ 35,211	$ -	$ 4,027	$ -	8.74	
3	S	Eastern_High	Lighting Controls	$ 18,554	$ -	$ 2,191	$ -	8.47	
3	S	Edgewood	Lighting Controls	$ 19,781	$ -	$ 768	$ -	25.75	
3	S	Green-Hills	Lighting Controls	$ 1,099	$ -	$ 25	$ -	44.25	
3	S	Hubbell	Lighting Controls	$ 26,096	$ -	$ 1,251	$ -	20.86	
3	S	Mt_View	Lighting Controls	$ 476	$ -	$ 37	$ -	12.86	
3	S	NE_Middle	Lighting Controls	$ 11,912	$ -	$ 429	$ -	27.74	
3	S	South_Side	Lighting Controls	$ 13,347	$ -	$ 1,064	$ -	12.54	
3	S	Stafford	Lighting Controls	$ 5,130	$ -	$ 322	$ -	15.93	
3	S	W_Bristol	Lighting Controls	$ 535	$ -	$ 19	$ -	27.88	
3	W	Water_Pollution	Lighting Controls	$ 3,839	$ -	$ 100	$ -	38.40	
4	C	Aquatic	Energy Management System Upgrade/Expansion	$ 82,337	$ -	$ -	$ -		1
4	C	City_Hall	Energy Management System Upgrade/Expansion	$ 232,971	$ -	$ 7,719	$ 26,920	26.69	1
4	C	Main_Library	Energy Management System Upgrade/Expansion	$ 65,884	$ -	$ 560	$ 2,817	112.60	1
4	C	Manross_Library	Energy Management System Upgrade/Expansion	$ 97,393	$ -	$ 1,875	$ 8,271	47.52	1
4	C	Police	Energy Management System Upgrade/Expansion	$ 72,721	$ -	$ 6,050	$ 8,835	10.56	1
4	C	Senior	Energy Management System Upgrade/Expansion	$ 11,190	$ -	$ 3,487	$ 5,035	1.76	1
4	C	Youth	Energy Management System Upgrade/Expansion	$ 23,600	$ -	$ 1,153	$ -	20.47	1
6	C	City_Hall	Demand Control Ventilation	$ 10,253	$ -	$ 2,386	$ 3,763	2.72	1
6	C	Police	Demand Control Ventilation	$ 13,183	$ -	$ 2,494	$ 1,295	4.77	1
6	S	Central_High	Demand Control Ventilation	$ 33,469	$ -	$ 9,085	$ 12,977	2.26	1
6	S	Chippens	Demand Control Ventilation	$ 9,887	$ -	$ 3,191	$ 4,449	1.70	1

AMERESCO
Green • Clean • Sustainable

City of Bristol

Project Selection Sheet

Measure Number	City/ School	Building	ESM Description	Measure Costs	O&M Savings	Guaranteed Savings	Rebates	Simple Payback (years)	Include? (1=yes)
6	S	Eastern_High	Demand Control Ventilation	$ 9,887	$ -	$ 2,810	$ 4,449	1.94	1
6	S	South_Side	Demand Control Ventilation	$ 27,464	$ -	$ 2,078	$ 6,230	10.22	1
12	C	City_Hall	Variable Frequency Drives	$ 13,971	$ -	$ 2,923	$ 6,287	2.63	1
12	S	Chippens	Variable Frequency Drives	$ 26,753	$ -	$ 2,912	$ 9,243	6.01	1
13	C	City_Hall	Transformer Replacement	$ 49,436	$ -	$ 3,489	$ 11,435	10.89	1
13	C	City_Yard	Transformer Replacement	$ 17,061	$ -	$ 927	$ 3,007	15.16	1
13	C	Main_Library	Transformer Replacement	$ 22,868	$ -	$ 2,327	$ 7,616	6.56	1
13	C	Police	Transformer Replacement	$ 54,968	$ -	$ 4,058	$ 13,156	10.30	1
13	S	Central_High	Transformer Replacement	$ 128,179	$ -	$ 14,866	$ 29,574	6.63	1
13	S	Eastern_High	Transformer Replacement	$ 233,364	$ -	$ 15,505	$ 44,209	12.20	1
13	W	Water_Pollution	Transformer Replacement	$ 88,298	$ -	$ 3,293	$ 11,093	23.44	1
14	S	Central_High	Steam Trap Replacement	$ 178,033	$ -	$ 12,369	$ -	14.39	1
14	S	Eastern_High	Steam Trap Replacement	$ 180,549	$ -	$ 2,518	$ 14,237	66.05	1
15	S	Central_High	Pipe & Jacket Insulation	$ 14,324	$ -	$ 3,578	$ -	4.00	1
15	S	Chippens	Pipe & Jacket Insulation	$ 18,295	$ -	$ 492	$ 2,780	31.55	1
15	S	Eastern_High	Pipe & Jacket Insulation	$ 27,613	$ -	$ 2,595	$ 12,426	5.85	1
18	C	City_Hall	Window Replacements	$ 1,055,119	$ -	$ 7,770	$ -	135.79	1
21	C	Fire_HQ	Boiler Replacement	$ 127,061	$ (3,386)	$ 6,887	$ -	18.45	1
21	C	Police	Boiler Replacement	$ 530,962	$ (3,386)	$ 55,642	$ -	9.54	
23	C	City_Hall	Steam to Hot Water Conversion	$ 546,808	$ (3,386)	$ 32,412	$ 1,596	16.82	1
23	C	Police	Steam to Hot Water Conversion	$ 761,340	$ (3,386)	$ 59,913	$ 1,335	12.69	1
26	C	Manross_Library	Condensing Unit Replacement	$ 87,351	$ -	$ 719	$ 2,451	118.13	1
27	C	Manross_Library	AHU Replacement	$ 109,897	$ -	$ 306	$ 1,498	354.10	1
28	C	City_Hall	Induction Unit Replacement	$ 1,368,294	$ -	$ 2,789	$ -	490.67	1
33	W	Water_Pollution	WPCP - Aeration Control Improvement	$ 80,955	$ -	$ 7,734	$ 33,211	6.17	1
34	W	Water_Pollution	WPCP - Install High Speed Turbo Blower	$ 223,549	$ -	$ 8,289	$ 19,309	24.64	1
38	C	Street_Lighting	Street Lighting	$ 2,324,854	$ 78,987	$ 244,317	$ 443,041	7.70	1
1A	C	Animal	Lighting System Improvements - Interior - LED	$ 4,016	$ 41	$ 300	$ 818	10.66	1
1A	C	Aquatic	Lighting System Improvements - Interior - LED	$ 22,479	$ 132	$ 3,669	$ 7,081	4.20	1
1A	C	Chem_Control	Lighting System Improvements - Interior - LED	$ 1,385	$ 25	$ 199	$ 623	3.82	1
1A	C	Chem_Mech_St	Lighting System Improvements - Interior - LED	$ 472	$ 6	$ 10	$ 99	36.12	1
1A	C	City_Hall	Lighting System Improvements - Interior - LED	$ 144,999	$ 1,420	$ 13,447	$ 42,615	7.61	1
1A	C	City_Yard	Lighting System Improvements - Interior - LED	$ 77,230	$ 303	$ 5,168	$ 13,591	12.31	1
1A	C	Engine_2	Lighting System Improvements - Interior - LED	$ 4,827	$ 57	$ 354	$ 981	10.85	1
1A	C	Engine_3	Lighting System Improvements - Interior - LED	$ 2,837	$ 41	$ 277	$ 703	7.69	1
1A	C	Engine_5	Lighting System Improvements - Interior - LED	$ 3,413	$ 45	$ 266	$ 720	10.13	1
1A	C	Filtration	Lighting System Improvements - Interior - LED	$ 45,202	$ 567	$ 2,700	$ 9,391	13.27	1
1A	C	Fire_HQ	Lighting System Improvements - Interior - LED	$ 23,455	$ 158	$ 2,409	$ 5,327	7.52	1
1A	C	Main_Library	Lighting System Improvements - Interior - LED	$ 184,180	$ 1,541	$ 16,986	$ 46,034	8.13	1
1A	C	Manross_Library	Lighting System Improvements - Interior - LED	$ 29,207	$ 250	$ 2,738	$ 6,211	8.40	1
1A	C	Muzzy	Lighting System Improvements - Interior - LED	$ 13,425	$ 91	$ 752	$ 2,963	13.91	1
1A	C	P_Control_Hill	Lighting System Improvements - Interior - LED	$ 382	$ 19	$ 553	$ 120	0.47	1
1A	C	P_Control_Wolcott	Lighting System Improvements - Interior - LED	$ 1,058	$ 14	$ 67	$ 197	12.85	1

AMERESCO
Green • Clean • Sustainable

City of Bristol

Project Selection Sheet

Measure Number	City/ School	Building	ESM Description	Measure Costs	O&M Savings	Guaranteed Savings	Rebates	Simple Payback (years)	Include? (1=yes)
1A	C	Page_Park	Lighting System Improvements - Interior - LED	$ 2,475	$ 27	$ 206	$ 594	9.13	1
1A	C	Police	Lighting System Improvements - Interior - LED	$ 147,248	$ 2,339	$ 15,194	$ 52,774	6.22	1
1A	C	Pool	Lighting System Improvements - Interior - LED	$ 8,230	$ 84	$ 375	$ 1,020	19.21	1
1A	C	Pump_Peck_Lane	Lighting System Improvements - Interior - LED	$ 941	$ 13	$ 60	$ 175	12.85	1
1A	C	Rockwell_Park	Lighting System Improvements - Interior - LED	$ 2,258	$ 32	$ 214	$ 526	8.08	1
1A	C	Senior	Lighting System Improvements - Interior - LED	$ 107,715	$ 988	$ 8,787	$ 22,999	9.64	1
1A	C	Ski	Lighting System Improvements - Interior - LED	$ 1,067	$ 13	$ 92	$ 288	8.45	1
1A	C	Transfer_Lake_Ave	Lighting System Improvements - Interior - LED	$ 5,148	$ 25	$ 702	$ 2,316	4.03	1
1A	C	Water_Main	Lighting System Improvements - Interior - LED	$ 10,556	$ 116	$ 1,123	$ 2,865	6.85	1
1A	C	Well_1	Lighting System Improvements - Interior - LED	$ 472	$ 6	$ 39	$ 123	8.83	1
1A	C	Well_2	Lighting System Improvements - Interior - LED	$ 1,260	$ 16	$ 55	$ 314	17.20	1
1A	C	Youth	Lighting System Improvements - Interior - LED	$ 18,139	$ 247	$ 1,379	$ 2,575	11.29	1
1A	S	Admin	Lighting System Improvements - Interior - LED	$ 45,132	$ 473	$ 6,644	$ 10,355	5.23	1
1A	S	Central_High	Lighting System Improvements - Interior - LED	$ 442,886	$ 3,413	$ 48,952	$ 92,816	7.15	1
1A	S	Chippens	Lighting System Improvements - Interior - LED	$ 438,162	$ 3,284	$ 32,414	$ 68,390	11.41	1
1A	S	Eastern_High	Lighting System Improvements - Interior - LED	$ 422,461	$ 3,368	$ 32,376	$ 68,548	10.93	1
1A	S	Edgewood	Lighting System Improvements - Interior - LED	$ 82,934	$ 887	$ 6,972	$ 13,511	9.96	1
1A	S	Green-Hills	Lighting System Improvements - Interior - LED	$ 123,947	$ 1,737	$ 9,297	$ 16,222	11.59	1
1A	S	Hubbell	Lighting System Improvements - Interior - LED	$ 150,686	$ 1,402	$ 9,356	$ 22,418	13.71	1
1A	S	Ivy_Drive	Lighting System Improvements - Interior - LED	$ 110,043	$ 948	$ 6,878	$ 16,122	13.66	1
1A	S	Mt_View	Lighting System Improvements - Interior - LED	$ 95,782	$ 938	$ 5,745	$ 15,851	13.91	1
1A	S	NE_Middle	Lighting System Improvements - Interior - LED	$ 148,634	$ 1,232	$ 9,104	$ 18,033	14.34	1
1A	S	South_Side	Lighting System Improvements - Interior - LED	$ 117,267	$ 1,110	$ 9,185	$ 26,918	9.84	1
1A	S	Stafford	Lighting System Improvements - Interior - LED	$ 112,407	$ 1,056	$ 6,076	$ 21,932	14.89	1
1A	S	W_Bristol	Lighting System Improvements - Interior - LED	$ 220,164	$ 2,538	$ 19,706	$ 34,775	9.41	1
1A	W	Pump_Stations	Lighting System Improvements - Interior - LED	$ 6,123	$ 92	$ 795	$ 2,625	4.40	1
1A	W	Water_Pollution	Lighting System Improvements - Interior - LED	$ 35,229	$ 295	$ 2,641	$ 7,411	10.53	1
28A	C	City_Hall	Induction Unit Refurbishment	$ 959,306	$ -	$ 2,789	$ -	344.01	
3A	C	Animal	Lighting Controls - LED	$ 734	$ -	$ 8	$ -	92.93	
3A	C	Aquatic	Lighting Controls - LED	$ 2,537	$ -	$ 44	$ -	57.54	
3A	C	City_Hall	Lighting Controls - LED	$ 9,117	$ -	$ 520	$ -	17.52	
3A	C	City_Yard	Lighting Controls - LED	$ 9,456	$ -	$ 224	$ -	42.18	
3A	C	Engine_2	Lighting Controls - LED	$ 1,603	$ -	$ 12	$ -	128.25	
3A	C	Engine_3	Lighting Controls - LED	$ 1,066	$ -	$ 13	$ -	81.69	
3A	C	Engine_5	Lighting Controls - LED	$ 2,560	$ -	$ 17	$ -	154.38	
3A	C	Filtration	Lighting Controls - LED	$ 14,416	$ -	$ 251	$ -	57.33	
3A	C	Fire_HQ	Lighting Controls - LED	$ 5,463	$ -	$ 114	$ -	47.85	
3A	C	Main_Library	Lighting Controls - LED	$ 424	$ -	$ 29	$ 123	10.29	1
3A	C	Manross_Library	Lighting Controls - LED	$ 2,845	$ -	$ 72	$ -	39.70	
3A	C	Page_Park	Lighting Controls - LED	$ 1,128	$ -	$ 15	$ -	75.93	
3A	C	Police	Lighting Controls - LED	$ 12,791	$ -	$ 646	$ -	19.79	
3A	C	Pool	Lighting Controls - LED	$ 210	$ -	$ 1	$ -	278.81	
3A	C	Rec_Bldg	Lighting Controls - LED	$ 264	$ -	$ 0	$ -	814.37	

AMERESCO Green • Clean • Sustainable

City of Bristol

Project Selection Sheet

Measure Number	City/ School	Building	ESM Description	Measure Costs	O&M Savings	Guaranteed Savings	Rebates	Simple Payback (years)	Include? (1=yes)
3A	C	Rockwell_Park	Lighting Controls - LED	$ 629	$ -	$ 1	$ -	980.32	
3A	C	Senior	Lighting Controls - LED	$ 13,252	$ -	$ 904	$ 3,516	10.77	1
3A	C	Ski	Lighting Controls - LED	$ 475	$ -	$ 1	$ -	322.68	
3A	C	Transfer_Lake_Ave	Lighting Controls - LED	$ 1,208	$ -	$ 14	$ -	84.10	
3A	C	Water_Main	Lighting Controls - LED	$ 4,246	$ -	$ 65	$ -	65.56	
3A	C	Youth	Lighting Controls - LED	$ 6,186	$ -	$ 226	$ -	27.41	
3A	S	Admin	Lighting Controls - LED	$ 5,855	$ -	$ 345	$ -	16.95	
3A	S	Central_High	Lighting Controls - LED	$ 11,607	$ -	$ 1,278	$ 3,345	6.46	1
3A	S	Chippens	Lighting Controls - LED	$ 35,211	$ -	$ 3,394	$ 10,409	7.31	1
3A	S	Eastern_High	Lighting Controls - LED	$ 18,554	$ -	$ 1,886	$ 7,307	5.96	1
3A	S	Edgewood	Lighting Controls - LED	$ 19,781	$ -	$ 608	$ -	32.51	
3A	S	Green-Hills	Lighting Controls - LED	$ 1,099	$ -	$ 20	$ -	54.66	
3A	S	Hubbell	Lighting Controls - LED	$ 26,096	$ -	$ 1,021	$ -	25.55	
3A	S	Mt_View	Lighting Controls - LED	$ 476	$ -	$ 24	$ -	20.11	
3A	S	NE_Middle	Lighting Controls - LED	$ 11,912	$ -	$ 377	$ -	31.57	
3A	S	South_Side	Lighting Controls - LED	$ 13,347	$ -	$ 1,009	$ 2,329	10.92	1
3A	S	Stafford	Lighting Controls - LED	$ 5,130	$ -	$ 300	$ -	17.11	
3A	S	W_Bristol	Lighting Controls - LED	$ 535	$ -	$ 15	$ -	36.84	
3A	W	Water_Pollution	Lighting Controls - LED	$ 3,839	$ -	$ 82	$ -	47.07	
X	T	0	Additional Contingency	$ -	$ -	$ -	$ -		
Total Selected				$ 12,454,546	$ 100,599	$ 839,404	$ 1,613,866	12.91	127 measures

Project Term (years)	15
Escalating vs. Level Debt Payments	Escalating
Assumed rebates	$1,613,866
Upfront Capital Contribution	$0
Upfront Capital Contribution and Rebates	$1,613,866

(enter an integer between 10 and 20)

(If customer elects to contribute capital instea

Annual Contribution / Cost	$ -

Run Scenario	

(push button after selecting deal in column E

Output	
Synchronized?	OK
Selected deal work?	Yes
Year 1 Net Cash Flow	$3,598
Total Financed Amount (including CPI, net of con	$11,481,515
Total Project Size	$12,454,546

Summary	
Total Project Costs	$12,454,546
Total Project Savings	$839,404
WWTP Costs	$473,957
WWTP Savings	$26,950
Simple Payback	17.59
School Costs	$3,766,647
School Savings	$318,550
Simple Payback	11.82
City Costs	$8,213,941
City Savings	$493,905
Simple Payback	16.63

AMERESCO
Green • Clean • Sustainable

City of Bristol

Project Selection Sheet

Measure Number	City/ School	Building	ESM Description	Measure Costs	O&M Savings	Guaranteed Savings	Rebates	Simple Payback (years)	Include? (1=yes)
Investment Grade Audit Fee			$150,000						
Total Project Cost			**$12,604,546**						
Total Savings Over Term			$16,080,369						
Total Costs Over Term			$16,026,392						
Assumed Finance Rate			2.85%						
Assumed Construction Period Financing			2.85%						
Electric Escalation			3.00%						
Gas Escalation			3.00%						
Other Escalation			3.00%						
Finance Term			15.00						

Section 5:
Preliminary Implementation Schedule

The following schedule represents the estimated project schedule from the Preliminary Investment Grade Energy Audit submission to final construction completion. This preliminary schedule is subject to revision based on actual contract execution date and changes in project timing. Naturally, all scheduling will be coordinated with City personnel to ensure that no work will interfere with normal City operations.

This preliminary schedule represents a roll-up of major project activities from execution of the Agreement, through completion of improvements and the City's acceptance, to commencement of performance period services. As construction of this project requires significant involvement of City personnel for review and approval of project specifications, design work, and selection of subcontractors, the schedule is intended to be representative of the expected construction period but in no way is a guarantee that any specific activities or the aggregate project will be completed in accordance with the specified periods.

"Page content is subject to Confidentiality Restrictions"

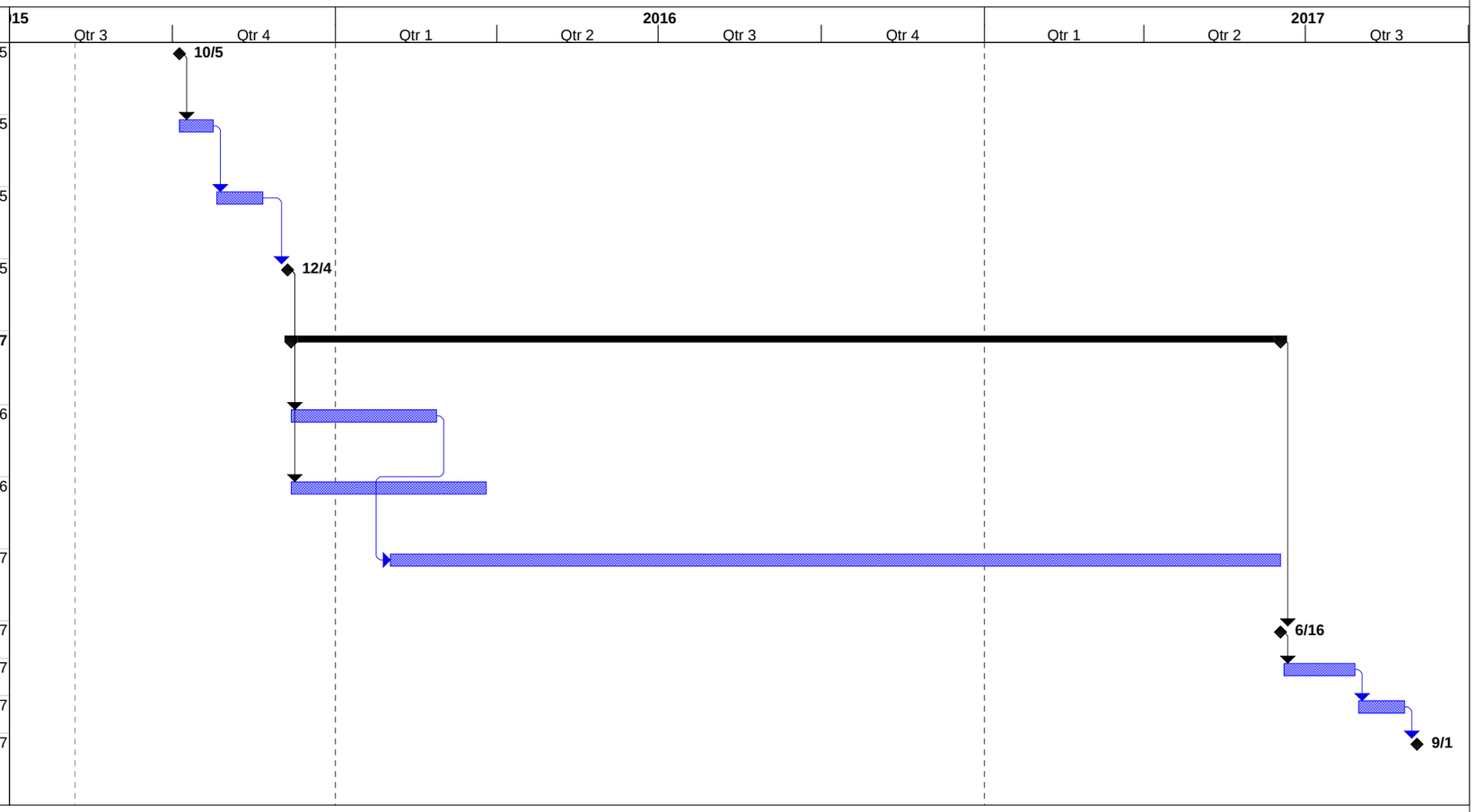
This page is intentionally left blank.

IGEA for City of Bristol, CT

PRELIMINARY PROJECT SCHEDULE
Energy Savings Project

Draft Schedule for Construction & Completion

ID	Task Name	Duration	Start	Finish
1	City Acceptance of Audit and Contract	0 days	Mon 10/5/15	Mon 10/5/15
2	Execute Energy Performance Contract	3 wks	Mon 10/5/15	Fri 10/23/15
3	Secure Project Financing	4 wks	Mon 10/26/15	Fri 11/20/15
4	Project Kick-off Meeting	0 days	Fri 12/4/15	Fri 12/4/15
5	**Construction Phase (required permits and gov. approvals, install, test, start-up)**	**400 days**	**Mon 12/7/15**	**Fri 6/16/17**
6	Project design	3 mons	Mon 12/7/15	Fri 2/26/16
7	Equipment Procurement	4 mons	Mon 12/7/15	Fri 3/25/16
8	ESM Implementation	72 wks	Mon 2/1/16	Fri 6/16/17
9	Completion of Construction Phase	0 days	Fri 6/16/17	Fri 6/16/17
10	Post M&V and Commissioning	6 wks	Mon 6/19/17	Fri 7/28/17
11	Training of Personnel	4 wks	Mon 7/31/17	Fri 8/25/17
12	Project Completion and Commencement of Normal Operations	0 days	Fri 9/1/17	Fri 9/1/17



Project: City of Bristol, CT
Date: Auigust 7, 2015

Task	Rolled Up Progress	External Milestone	Manual Task	Finish-only
Milestone	External Tasks	Inactive Task	Duration-only	Progress
Summary	Project Summary	Inactive Task	Manual Summary Rollup	Deadline
Rolled Up Task	Split	Inactive Milestone	Manual Summary	
Rolled Up Milestone	Rolled Up Split	Inactive Summary	Start-only	

AMERESCO

Section 6:
Preliminary Commissioning Plan

The commissioning of this project will utilize industry accepted standards to insure all ESMs are completed and operating as designed and intended. Ameresco will utilize previously developed documents and strategies to insure the ESMs are installed according to the project specifications, that the installing contractor has provided all the necessary deliverables noted in the specifications, the equipment performs as expected, the facility staff have been properly trained, Operations & Maintenance documents have been provided, and the Measurement &Verification portion of the contract can successfully oversee the operation and maintenance of the equipment thus insuring the project meets the energy and operational expectations of Ameresco and the City.

Commissioning is the systematic process of ensuring all mechanical equipment related to the project performs interactively according to the owner's requirements and the design narrative. Commissioning includes Design Review, Submittal Review, Pre-functional Testing, and Functional Testing. Commissioning additionally ensures that the owner has received all of the deliverables as specified and that the building staff, through supervised training, is prepared to take over the operations and maintenance of the systems and equipment.

The purpose of the commissioning plan is to provide direction for the commissioning process during construction. The plan will identify what equipment and systems will be commissioned. It will also identify parties involved in the commissioning process, their roles, and required deliverables. The commissioning plan will also identify the goals of commissioning and/or the project, if they have not been clearly defined elsewhere.

This preliminary plan will detail the following:

- A breakdown of each ESM and the level of pre-functional and functional testing including areas of responsibility and deliverables. This breakdown will be provided in an easy to read table.
- Acceptance and turn over procedures including the integration of commissioning activities.
- A brief description of commissioning documents.
- A training agenda and sample training goals for each ESM

"Page content is subject to Confidentiality Restrictions"

This page is intentionally left blank.

ESM Performance Testing Matrix

Pre-functional and functional reports shall be modified during the design and construction phases based on actual system design and installation. Results of Pre-functional Testing, as necessary, and Functional Testing will be included in the O & M Manuals.

ESM	Equipment/systems to be performance tested	Observations, Tests and Inspections during Construction (Pre-Functional)	Pre-functional Responsibility	Observations, Tests and Inspections Prior to Acceptance (Functional)	Functional Responsibility	Testing Documentation
ESM 1: Lighting System Improvements - Interior	Lighting fixtures	Verify operation of all fixtures as completed Inspect equipment and compare to approved submittals	Electrical Contractor Ameresco	Verify operation of all newly installed fixtures and/or lamps.	Electrical Contractor Ameresco	Commissioning Data Sheets will be completed for a statistically significant sample.
ESM 2: Lighting System Improvements - Exterior	Lighting fixtures	Verify operation of all fixtures as completed Inspect equipment and compare to approved submittals	Electrical Contractor Ameresco	Verify operation of all newly installed fixtures and/or lamps.	Electrical Contractor Ameresco	Commissioning Data Sheets will be completed for a statistically significant sample.
ESM 3: Lighting Controls	Lighting Controls	Verify operation of all sensors as completed. Time delays and/or sensitivity settings will be set.	Electrical Contractor Ameresco	Visual inspection of controls to ensure that they are installed and functioning properly	Electrical Contractor Ameresco	Results of visual inspection of lighting controls will be provided in spreadsheet format indicating type of device, location, fixture served, and operating status.
ESM 4: Energy Management System Upgrade/Expansion	Schedules, setpoints, sequences, lockouts, alarms, interlocks, control strategies, trending	Provide start up sheets for all controllers and programmable thermostats. Inspect construction progress for conformance to project specifications.	Controls Contractor Ameresco	Ameresco will Functionally test (Ft) the new controls by utilizing the approved sequence of operations to create project specific test sheets. The Ft's will document each step of the sequence and the outcome in order to show conformance to the design intent. Controls testing will be combined with individual equipment testing as it relates to operation and control. Sample sheets to show the depth and detail of testing have been included in appendix A.	Controls Contractor and Ameresco	FPT Reports will be completed for each system.
ESM 6: Demand Control Ventilation	Outside Air Dampers and related sensors	Verify operation of all dampers as completed.	Controls Contractors	Functional testing will be conducted and include the operation of the equipment as well as tie ins to the controls. See sample FPT's in the Appendix.	Controls Contractor Ameresco	FPT Reports will be provided for each system component.
ESM 12: Variable Frequency Drives	New VFDs	VFD start-up sheets will be provided by the manufacturer. Inspect construction progress for conformance to project specifications.	Controls Contractor Ameresco	Perform FPT in accordance with sample FPT Reports in the Appendix.	Controls Contractor Ameresco	FPT Reports will be completed for each system.
ESM-13: Transformer Replacement	Transformers	Verify operation and loading of equipment as installation is completed	Electrical Contractor	Visual inspection of all newly installed transformers to verify they are in place and properly installed.	Electrical Contractor AMERESCO	Results of transformer visual inspection will be provided in written format indicating location and size
ESM 14: Steam Trap Replacement	Steam traps	Inspect construction progress for conformance to project specifications	Ameresco	Functional testing will be conducted on all steam traps at commissioning.	Plumbing Contractor Ameresco	FPT Reports will be provided for all steam traps.
ESM 15: Pipe & Jacket Insulation	Insulation	Inspect construction progress for conformance to project specifications.	Ameresco	Visual inspection of insulation type and thickness for conformance with design documents and work scope.	Installation Contractor Ameresco	Results of insulation visual inspection will be provided in written format indicating insulation location, insulation type, and insulation thickness.
ESM 18: Window Replacements	Windows	Inspect construction progress for conformance to project specifications	Ameresco	Verify proper operation of each window and weather tightness.	Installation Contractor Ameresco	A brief report noting locations and condition of windows will be provided following the inspection by Ameresco.
ESM 21: Boiler Replacement	Boilers, Burners and Controls.	Start-up reports from installing contractors. Boiler tuning sheets Pre-functional check sheets	Mechanical Contractor Ameresco	Functional testing will be conducted and include the operation of the boilers and burners as well as tie ins to controls. See sample FT's in the Appendix.	Mechanical Contractor Ameresco	FPT Reports will be provided for each boiler.
ESM 23: Steam to Hot Water Conversion	Boilers, pumps, Air Handling Unit, Pipe, hot water coils.	Start-up reports from installing contractors. Boiler tuning sheets Pre-functional check sheets	Mechanical Contractor Ameresco	Functional testing will be conducted and include the operation of the boilers and burners as well as tie ins to controls. See sample FT's in the Appendix.	Mechanical Contractor Ameresco	FPT Reports will be provided for each boiler.

"Page content is subject to Confidentiality Restrictions"

ESM	Equipment/systems to be performance tested	Observations, Tests and Inspections during Construction (Pre-Functional)	Pre-functional Responsibility	Observations, Tests and Inspections Prior to Acceptance (Functional)	Functional Responsibility	Testing Documentation
ESM 26: Condensing Unit Replacement	Condensing Unit	Start-up reports from installing contractors. Manufacturer start up reports Pre-functional check sheets	Manufacturer's Representatives Mechanical Contractor Ameresco	Functional testing will be conducted and include the operation of the condensing unit as well as tie ins to the EMS. See sample FT's in the Appendix.	Manufacturer's Representatives Mechanical Contractor Ameresco	FPT Reports will be provided for each condensing unit.
ESM 27: AHU Replacement	Air handling units	Start-up reports from installing contractors. Manufacturer start up reports Pre-functional check sheets	Manufacturer's Representatives Mechanical Contractor Controls Contractor Ameresco	Functional testing will be conducted and include the operation of the equipment as well as tie ins to the EMS. See sample FT's in the Appendix.	Manufacturer's Representatives Mechanical Contractor Controls Contractor Ameresco	FPT Reports will be completed for each system.
ESM 28: Induction Unit Replacement	New Induction Units	Start-up reports from installing contractors. Pre-functional check sheets	Mechanical Contractor Ameresco	Functional testing will be conducted and include the operation of the new equipment as well as tie ins to controls. See sample FT's in the Appendix.	Manufacturer's Representatives Mechanical Contractor Ameresco	FPT Reports will be provided for each system.
ESM 33: WPCP – Aeration Control Improvement	Setpoints, sequences, alarms, interlocks, control strategies, trending	Provide start up sheets for all controllers Inspect construction progress for conformance to project specifications.	Controls Contractor Ameresco	Ameresco will Functionally test (Ft) the new controls by utilizing the approved sequence of operations to create project specific test sheets. The Ft's will document each step of the sequence and the outcome in order to show conformance to the design intent. Controls testing will be combined with individual equipment testing as it relates to operation and control. Sample sheets to show the depth and detail of testing have been included in appendix A.	Controls Contractor and Ameresco	FPT Reports will be completed for each system.
ESM 34: WPCP – Install High Speed Turbo Blower	High Speed Turbo Blower	Start-up reports from installing contractors. Manufacturer start up reports Pre-functional check sheets	Manufacturer's Representatives Mechanical Contractor Ameresco	Functional testing will be conducted and include the operation of the Turbo Blower as well as tie ins to the control system. See sample FT's in the Appendix.	Manufacturer's Representatives Mechanical Contractor Ameresco	FPT Reports will be provided for the new Turbo Blower.
ESM 38: Street Lighting	Lighting fixtures	Verify operation of all fixtures as completed Inspect equipment and compare to approved submittals	Electrical Contractor Ameresco	Verify operation of all newly installed fixtures and/or lamps.	Electrical Contractor Ameresco	Commissioning Data Sheets will be completed for a statistically significant sample.

"Page content is subject to Confidentiality Restrictions"

Acceptance Procedures and Documentation

Upon completion of the pre-functional testing, completion of the functional performance testing, and completion of the training as described below, Ameresco shall issue Certificates of Substantial Completion for each ESM that is providing a performance and financial benefit to the City. The Certificates will have accompanying punch lists; all punch list items that could directly affect the potential to generate energy cost savings must be completed prior to functional performance testing. It is important to note that the warranty periods for equipment/systems that are in operation will begin upon execution of the Certificates of Substantial Completion, which is after completion of functional performance testing.

Upon successful completion of all functional performance tests and all construction period M&V testing, as prescribed in Section 7, the ESMs are deemed to have the potential to achieve the estimated energy cost and maintenance savings. Ameresco will also provide applicable training required to allow the City to assume operational control and maintenance responsibilities for the ESMs, such training to be as described in the section on training, below. Ameresco will then formally request from the City an inspection of the work completed. A Certificate of Substantial Completion will accompany the formal inspection request. The Certificate of Substantial Completion formally acknowledges that the work has been completed, or a portion thereof, and is being accepted. Some ESMs may not be able to be completed at that time due to circumstances beyond the control of Ameresco. In these instances, a percentage complete will be assigned to the ESM and a punch list of outstanding items will be included. These items typically will not have an impact on the savings or the potential to achieve savings since the functional performance test will have been completed prior to requesting the final inspection. All outstanding punch list items will be completed as soon as possible.

Commissioning will include two levels of testing for equipment and systems, Pre-functional Testing and Functional Performance Testing; Pre-functional testing checks the readiness of equipment to work within the system and includes contractor or manufacturer start up sheets. Functional testing tests the operation of the system, specifically the sequence of operations.

Pre-Functional Testing

The PFT is a validation of individual equipment for readiness to work in conjunction with the associated system. The contractors must successfully complete the pre-functional test for each component of a given system prior to formal functional performance testing of equipment and subsystems of the given system. Pre-functional Tests will augment and are combined with the manufacturer's start-up checklist. Completion of the Pre-functional Tests will allow the contractor to ensure that the overall installation reflects the requirements of the plans, specifications and manufacturer's installation manuals.

Functional Performance Testing

The FPT is the equipment or system performance evaluation under operating conditions for compliance with the project documents (installation drawings, one line diagrams, Sequences of Operation, and specifications including changes during construction). It verifies equipment or system component performances, e.g., temperature, humidity, pressure, flow, start/stop etc.

"Page content is subject to Confidentiality Restrictions"

Functional testing is the dynamic testing of systems (rather than just components) under full operation. Systems are tested under various modes, such as during high/low heating loads, high/low steam loads, component failures, etc. The systems are run through all of the control system's sequences of operation and components are verified to be responding as the sequences state. Ameresco develops the FPT procedures in a sequential written form, coordinates, oversees and documents the actual testing, which is performed with assistance, typically from the controls contractor.

The Energy Management or Control system will be used to verify and document the functional performance of the commissioned systems. Since the EMS is critical to the FPT process, the EMS PFT (performed by the contractor point-to-point checkout and controller start up reports) must be complete and accepted before any FPT can begin. Much of the BMS FPT is accomplished during the testing process for the equipment and systems. For example, while testing the hot water heating pumps, the BMS is tested at the same time for many of its individual features such as set point control and scheduling.

Inspection reports

Inspection reports are brief reports completed by an inspecting Ameresco employee that document the extent of construction, verify conformance to approved submittals and construction documents, and identifies any deficiencies. The intent of the reports are to insure equipment is properly supplied to the construction site and installed properly, this will aid in a quick and successful Functional test and final sign off of ESM's.

Operations and Maintenance Manuals

O & M Manuals will be provided upon completion of all functional performance tests and upon completion of the as-built documentation. O&M's will be provided for each ESM and be related to that specific ESM. The manuals will be provided as hard copy binders as well as electronic copies on a CD. A sample O&M outline follows:

Section I – System Description

- A brief description of the system, its major components and function.
- Control strategies and sequences describing start-up, modes of operation, and shutdown.
- Energy conservation strategies important to the selection of the equipment.

Section II – Equipment Data Sheets

- Corrected shop drawings, including performance curves, efficiency ratings, features and options
- Approved submittal
- Copies of approved certifications and factory test reports (where applicable)
- Wiring and control schematics detailing the operation and control of each component for troubleshooting

Section III – Maintenance

- Manufacturer's Operation and Maintenance instructions

"Page content is subject to Confidentiality Restrictions"

- Manufacturer's Spare Parts Lists
- Manufacturer recommended spare parts inventory list
- Manufacturer's recommended maintenance frequency
- Name, address, and telephone number of the manufacturer's local representative for each type of equipment for replacement parts and service.

Section IV– Test Reports

- Pre-functional Reports (Equipment start-up reports and commissioning data sheets)
- Functional Reports (System start-up reports and functional performance tests)
- Copies of welder certifications (where applicable)
- Non-destructive testing reports (where applicable)
- Hydrostatic/pneumatic pipe testing reports (where applicable)
- Water treatment analysis and report (where applicable)
- Testing and Balancing reports (where applicable)
- Other reports as applicable

Section V – Warranties/Guarantees

- A typewritten warranty, on company letterhead, for each system installed. The warranty shall state the system and components covered, the duration of the warranty period, and emergency contact phone numbers for service and repair.
- Warranties/guarantees from subcontractors or equipment suppliers.

Training Plan

Training and orientation on the systems installed will vary depending on the complexity of the specific equipment installed for each ESM. At a minimum each ESM O&M manual will be reviewed with the staff to review the installed measure, scope of work, effect on energy consumption, and warrantee information. Additionally a site inspection to review a typical installation will be conducted. Ameresco will be present at all training sessions to insure training is provided as required and is thorough, a brief training report will be issued for each session that will include a sign in sheet and instructor contact information. Training is anticipated to be provided at the following levels depending on ESM complexity:

1. For systems and/or equipment that are essentially direct replacements of existing equipment, and where no additional specific skills will be required to perform operations and maintenance functions, training will be limited to a general overview of the equipment installed and a review of the O&M manuals. Training will be directed to operating personnel. Training should be provided at the completion of construction of each of the ESMs and will generally last less than a day.

2. For systems/equipment that are new to the site and require more in-depth understanding as to their function and operation, training will include classroom time that will provide an overview of the

"Page content is subject to Confidentiality Restrictions"

implemented technology and design intent as well as O&M review. Training will be geared towards operations staff as well as direct supervisors. Following the classroom training, a site tour will be conducted to view the installation and operation of the equipment, a "hands on" session of training will be provided at this time. Training will be scheduled to coincide with the completion of construction and should be anticipated to last as long as a full day for each ESM.

3. For systems and/or equipment that are new to the site and more complex in nature, training will be directed to the operations staff, immediate supervisors, and site supervisors as necessary. In general, training will consist of classroom training followed by hands-on instruction in the field. Training will be provided through a complement of Ameresco personnel, design engineers, installation contractors, and manufacturer's representatives. Specifics on the training program, including schedule and training materials, will be further refined during the design process, but the training, in general, will consist of the following:

    a. Explanation of the design concept

        i. Design intent

        ii. Energy efficiency considerations

        iii. Seasonal modes of operation

        iv. Emergency conditions and operation

        v. Comfort conditions and indoor air quality

    b. Systems operation

        i. Operation of individual components, instruction from authorized factory technicians, if required

        ii. Physical location of critical shut-off valves, fire, smoke, and balancing dampers, relief valves, safeties, and control panels

        iii. System operational procedures for all modes in manual and automatic modes

    c. Operation of the control systems

        i. Sequences of Operation

        ii. Use of Graphical User Interfaces

        iii. Alarms and problem indicators

        iv. Diagnostics and corrective actions

"Page content is subject to Confidentiality Restrictions"

d. Service and Maintenance

   i. Use of the O&M manuals

   ii. Instruction and logging procedures for maintenance

   iii. Instruction from authorized factory technicians, where applicable

   iv. Troubleshooting and investigation of malfunctions

   v. Recommended procedures for collecting, interpreting, and storing specific performance data

Training will be provided during construction, commissioning, and acceptance phases as dictated by the complexity of the ESM. It is also anticipated that additional training will be provided after 6 and 12 months from acceptance of the ESMs to ensure that the equipment is being operated and maintained in accordance with manufacturer's recommendations and within contract requirements so that the potential to generate cost savings is not jeopardized. All training activities will be coordinated carefully with City facilities personnel.

"Page content is subject to Confidentiality Restrictions"

This page is intentionally left blank.

Training Goal Matrix

This is a general outline of training for each ESM. Specific times and topics will be adjusted as final equipment selections are made.

ESM	Equipment/ Systems	Classroom Training	Hands on Instruction	Personnel Groups Trained
ESM 1: Lighting System Improvements – Interior	Lighting Fixtures	1 hour to go over lighting, lighting controls and operation of controls	Site review to identify typical locations for lighting retrofits and controls.	Facility Engineers Facility Technicians O&M Personnel
ESM 2: Lighting System Improvements – Exterior	Lighting Fixtures	1 hour to go over lighting, lighting controls and operation of controls	Site review to identify typical locations for lighting retrofits and controls.	Facility Engineers Facility Technicians O&M Personnel
ESM 3: Lighting Controls	Lighting Controls	Included with ESM 1 and 2	Provide training on repair or maintenance on new technologies.	Facility Engineers O&M Personnel
ESM 4: Energy Management System Upgrade/Expansion	New and Existing Energy Management Systems	16 hours of classroom training to review the steps to change schedules, set-points, generate trend logs, reset alarms, interpret alarms, and review the control sequences. Classroom training will be broken up into several training sessions	Site review to identify controlled equipment, sensor types and locations.	Facility Engineers Facility Technicians Supervisors O&M Personnel
ESM 5: Demand Control Ventilation	New and Existing Energy Management Systems	To be combined with EMS training	Site review to identify implementation locations and discuss energy savings potentials.	Facility Engineers Facility Technicians O&M Personnel
ESM 12: Variable Frequency Drives	VFDs	2 hours of training to evaluate the new VFD equipment and review of the control sequences.	Onsite overview of equipment, how to adjust controls and settings.	Facility Technicians O&M Personnel
ESM 13: Transformer Replacement	Transformers	Review of O&M	None	Facility Technicians O&M Personnel
ESM 14: Steam Trap Replacement	Steam Traps	None	1 hour, review scope of work and visit sample locations	Facility Engineers Facility Technicians O&M Personnel
ESM 15: Pipe & Jacket Insulation	Pipe Insulation	None	0.5 hour of hands on training to discuss reinstalling insulation during maintenance operations	Facility Technicians O&M Personnel
ESM 18: Window Replacements	Windows	Review of O&M	None	Facility Technicians

"Page content is subject to Confidentiality Restrictions"

ESM	Equipment/ Systems	Classroom Training	Hands on Instruction	Personnel Groups Trained
ESM 21: Boiler Replacements	New Boilers and Burners	4 hours of training to evaluate the new heating equipment and review of the control sequences.	Review of the boiler components, demonstrate the control sequences, show how to change the setpoint and troubleshoot alarms.	Facility Engineers Facility Technicians O&M Personnel
ESM 23: Steam to Hot Water Conversion	New Boilers and Burners, terminal heating units	4 hours of training to evaluate the new heating equipment and review of the control sequences.	Review of the boiler components, demonstrate the control sequences, show how to change the setpoint and troubleshoot alarms. Review new terminal heating equipment and controls.	Facility Engineers Facility Technicians O&M Personnel
ESM 26: Condensing Unit Replacement	Condensing Unit	1 hour of training to evaluate the new cooling equipment and review of the control sequences.	Review of the cooling components, demonstrate the control sequences, show how to change the setpoint and troubleshoot alarms.	Facility Engineers Facility Technicians O&M Personnel
ESM 27: AHU Replacement	New AHU	1 hour of training to evaluate the new equipment and review of the control sequences.	Review of the equipment components, demonstrate the control sequences, show how to change the setpoint and troubleshoot alarms.	Facility Engineers Facility Technicians O&M Personnel
ESM 28: Induction Unit Replacement	New Induction Units	1 hour of training to evaluate the new equipment and review of the control sequences.	Review of the equipment components, demonstrate the control sequences, show how to change the setpoint and troubleshoot alarms.	Facility Engineers Facility Technicians O&M Personnel
ESM 33: WPCP – Aeration Control Improvement	Updated Aeration Controls	8 hours of classroom training to review the steps to change, set-points, generate trend logs, reset alarms, interpret alarms, and review the control sequences.	Site review to identify controlled equipment, sensor types and locations.	Facility Engineers Facility Technicians Supervisors O&M Personnel
ESM 34: WPCP – Install High Speed Turbo Blower	High Speed Turbo Blower	1 hour of training to evaluate the new blower equipment and review of the control sequences.	Review of the blower components, demonstrate the control sequences, show how to change the setpoint and troubleshoot alarms.	Facility Engineers Facility Technicians O&M Personnel
ESM 38: Street Lighting	Lighting Fixtures	1 hour to go over lighting, lighting controls and operation of controls	Site review to identify typical locations for lighting retrofits and controls.	Facility Engineers Facility Technicians O&M Personnel

"Page content is subject to Confidentiality Restrictions"

Appendix:
Sample Testing Documentation Forms

"Page content is subject to Confidentiality Restrictions"

This page is intentionally left blank.

ECM1: Lighting Measurement & Verification Worksheet

Project Name: **Project #:**

Use this worksheet to document the measured post-retrofit light fixture watts, for each circuit of light fixtures, to the nearest whole watt.
Use a separate worksheet for each type of light fixtures. Calculate the overall average watt/fixture at the bottom of each sheet..
Complete Signatures and Metering Device Information at bottom of worksheet.

	New/Retrofitted Light Fixtures (Post-Measurement)								
Item	Building	Location	Qty	Lamp/Ballast Type	Amps	Voltage	PF	Total Watts	Watt Per Fixture
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
							Average Watts/Fixture		

Owner Representative (Print Name):		**Signature:**		**Date:**	
Ameresco Project Manager (Print Name):		**Signature:**		**Date:**	
Contractor Performing M&V (Print Name):		**Signature:**		**Date:**	
Model & Serial Number of Watt Meter:		**Date of Calibration:**		**NIST Standard:**	

"Page content is subject to Confidentiality Restrictions"

This page is intentionally left blank.

Functional Performance Test (FPT) Report

Energy Management System

Project:_____ Date: _____

System:_____ Location:_____

Functional Performance Test: Performance Partner shall verify the operation of the automatic controls to comply with the contract documents. As a minimum, the following functions shall be tested:

Compliance Checklist:

1. Verify that the wiring is correct to each point. **Compliance?** _____

   (Attach a comprehensive list of points with this completed form)

2. Verify that the software address is correct. **Compliance?** _____

   (Attach a list of all software addresses and a brief description of the address (i.e., OADB = Outside Air Dry Bulb temperature in degrees Fahrenheit) with this completed form)

3. If the device is/has an actuator, verify free movement through its full range. **Compliance?** _____

4. Verify stroke/range calibration for all controlled valves, dampers, actuators, fans, pumps, etc.

   Simulate maximum and minimum transmitter signal values and verify minimum and maximum controller output values and verify the stroke and capacity range for each control device. *(Provide completed calibration forms for all sensors and controllers.)* **Compliance?** _____

5. Verify that the software with the correct setpoints has been downloaded for each control loop. **Compliance?** _____

6. ESM Specific:

- Verify the three EMCS front-end computers are installed and operationally identical. **Compliance?** _____
- Verify all inoperable control devices, which were existing, have been replaced with new functional units as per scope. **Compliance?** _____

"Page content is subject to Confidentiality Restrictions"

- Verify existing Honeywell, Trane, and Automated Logic points have been migrated to the new Johnson EMCS. **Compliance?**_____
- EMCS logic:

  Scheduled start / stop. **Compliance?** _____

  Optimum start. **Compliance?** _____ *(Attach control algorithm used to determine optimum start time based on historical weather data and space response time)*

  Enthalpy controlled economizer. **Compliance?** _____

  Supply air temperature reset. **Compliance?** _____

  Outside air lockout. **Compliance?** _____

  Nighttime space temperature setup / setback. **Compliance?** _____ *(space heating setback to 55℉, cooling set up to 85℉)*

  Attach a log, generated for one month at one-hour intervals by the EMCS, with recorded values for date, time, outside air temperature (dry bulb and wet bulb), AHU fan status (supply and return), discharge air temperature, return air temperature (dry bulb and wet bulb), mixed air temperature (dry bulb and wet bulb), supply temperature (dry bulb and wet bulb), supply temperature setpoint and outside air damper position for all AHUs.

7. Certification and Witness

Performance Partner _____

Client _____

Ameresco _____

Sensor Calibration Sheet

Date:

Sensor ID:

Manufacturer:

Model Number:

Serial Number:

Input Low: Output Low:

Input High: Output High:

Input Units: Output Units:

Input Mode:

AS FOUND

Input %	Actual Input in Deg. F	M/A Output	Computer Read	Controller Voltage Read

AS LEFT

Input %	Actual Input in Deg. F	M/A Output	Computer Read	Controller Voltage Read

Test Equipment Used

Manufacturer	Model Number	Serial Number	Cert Date	NIST Number

COMMENTS:

Functional Performance Test (FPT) Report

VFD – Fan Application

Project:_____ Date:_____

Air Handling Unit No.:_____

System:_____ Location:_____

Functional Performance Test: Performance Partner shall verify the operation of the variable frequency drive for control of a variable air volume system for compliance with the contract documents. As a minimum, the following items shall be tested and /or recorded:

1. **General Information**

   VFD manufacturer and model no. _____

   Supply Fan (SF) HP:_____ CFM: _____ RPM: _____ SP: _____

   Return Fan (RF) HP:_____ CFM: _____ RPM: _____ SP: _____

2. **Static Pressure Sensor/Transmitter**

   Verify location of the static pressure sensor in % of the distance from fan to terminal unit. (Normally, the sensor should be located 2/3 to 3/4 downstream of the fan to the terminal unit of the most restrictive branch)

   Distance _____%

3. **Pressure Reading Reliability**

   Duct diameter or equivalent diameter _____

   Nearest duct fitting upstream _____

   Nearest duct fitting downstream _____

   (Ideally, the most reliable readings occur when the sensor is at least 10 duct diameters downstream and 5 duct diameters upstream from takeoffs or fittings)

   Does the location comply? _____

4. **Functional Performance Test**

"Page content is subject to Confidentiality Restrictions"

a. Terminal Units Full Cooling (Boxes at Max)
Adjust all space temperature setpoints at least 10ºF below design setpoints. All zones should be in full cooling and terminal units should be open to the maximum position.

- Measure or read the duct static pressure and record in column A of Table 1.
- Read the frequency output of the VFDs and record in Table 1.

b. Terminal Units Intermediate Position (Boxes Partially Opened)
Readjust thermostats to a few degrees below normal setpoints, to simulate an approaching thermostat satisfaction and take readings.

- Measure or read the duct static pressure and record in column B of Table 1.
- Read the frequency output of the VFDs and record in Table 1.

c. Terminal Units Satisfied (Boxes at Min)
Readjust thermostats to actual room temperatures to simulate a satisfied condition. Boxes should close to the minimum position.

- Measure or read the duct static pressure and record in column C of Table 1.
- Read the frequency output of the VFDs and record in Table 1.

d. Verify Static Pressure Sensor/Transmitter
Using a magnehelic gauge, record actual static pressure at the location of the sensor and record static pressure indicated by the BMS

Actual Static Pressure _____

BMS Static Pressure _____

Is the variance less than 5%? _____ If no, investigate problem.

5. Test Data

Design Static Pressure (in.)_____

Design Frequency (Hz): SF _____ RF _____

Design RPM: SF _____ RF _____

SP Setpoint during test (in.) _____

Table 1.

Test Data	A Boxes at Max position		B Boxes Partially Open		C Boxes at Min position	
	SF	RF	SF	RF	SF	RF

VFD Frequency or RPM						
Static Pressure during Test						

6. Analysis

a. Compare the full open frequency or RPM to the design values for the supply fan. Divide the design value by the reading in Column A. If the percentage is less than 95%, all boxes may not have driven to the full open position. Investigate possible problems.

Is the variance less than 5%? _____

b. Is the static pressure recorded in Columns B & C within 10% of the setpoint?
Is the variance less than 5%? _____

c. The SP during the full open condition should be significantly less than the partially loaded conditions and close to the value calculated in Attachment A (within 0.15 inches). If not, investigate possible problems.

Compliance? _____

7. General Issues

a. Verify that power quality requirements from the specifications have been completed.

b. Record results and include in the Operation and Maintenance Manuals.

c. Certification and Witness

Performance Partner _____

Client _____

Ameresco _____

"Page content is subject to Confidentiality Restrictions"

Functional Performance Test (FPT) Report

VFD – Pump Application

Project:_____ Date:_____

Pump No.:_____

System:_____ Location:_____

Functional Performance Test: Performance Partner shall verify the operation of the variable frequency drive for control of a variable pumping system for compliance with the contract documents. As a minimum, the following items shall be tested and/or recorded:

1. **General Information**

   VFD manufacturer and model no. _____

   Pump HP:_____ GPM: _____ Head (ft): _____

2. **Differential Sensor/Transmitter**

   Verify location of the differential pressure sensor.

   (Ideally, the sensor should be located at or near the last branch takeoff)

   Location _____

3. **Functional Performance Test**

   a. Intermediate Flow – Valves Partially Opened
   It is expected to find the system in this condition.

   – Read the speed, DP at the sensor, and gpm in the loop, if available, and record in condition 3, in Table 1.

   b. Design Flow – Valves Full Open

   (maximum cooling or heating)

"Page content is subject to Confidentiality Restrictions"

- Set the space temperature setpoints 10ºF below the current space temperature for cooling valves and 10ºF above the space temperature for heating so that all valves modulate to the full open position.
- Read the speed, DP at the sensor, and gpm in the loop, if available, and record in condition 2, in Table 1.

c. Minimum Flow – Valves Shut
(minimum cooling or heating)

- Set the space temperature setpoints equal to the current space temperature so that all conditions are satisfied, driving all valves to the minimum or closed position.
- Read the speed, DP at the sensor, and gpm in the loop, if available, and record in condition 4, in Table 1.

4. Test Data

Design Differential Pressure (psig)_____

Design Frequency (Hz): _____

Design RPM: _____

DP Setpoint during test (psig) _____

(The operating setpoint shall be determined using the procedure listed in attachment A)

Table 1.

Condition	Pump No.	Speed (Hz or RPM)		DP at Sensor (psig)		Total Flow (GPM)
		Unit	Avg	Unit	Avg	
1. At design flow by TAB report	Pump - 1					
	Pump - 2					
	Pump - 3					
2. At design flow (during commissioning)	Pump - 1					
	Pump - 2					
	Pump - 3					
3. At intermediate	Pump - 1					

flow (during commissioning)	Pump - 2					
	Pump - 3					
4. At minimum flow (during commissioning)	Pump - 1					
	Pump - 2					
	Pump - 3					

5. Analysis

a. During operation of each pump combination, the average DP readings for all conditions should remain within 10% of each other. If not, investigate problems.

Is the variance less than 5%? _____

b. At no flow, Condition 4, is the flow and DP zero or equal to the minimum by-pass flows?

Compliance? _____

c. Is the system balanced to the lowest DP? **Compliance?** _____

6. General Issues

a. Verify that power quality requirements from the specifications have been completed.
Compliance? _____

b. Verify that there are no 3-way valves in the piping system that may negate the savings from the VFD by allowing flow to bypass the coils.
Complete? _____

c. Verify that the VFD control has been integrated into the BMS as specified.
Complete? _____

7. Record results and include in the Operation and Maintenance Manuals.

8. Certification and Witness

Performance Partner _____

Client _____

Ameresco _____

COMMISSIONING DATA SHEET

AIR HANDLING UNIT

PROJECT NAME:_____ DATE: _____

LOCATION:_____

UNIT NO.:_____ COMPLETED BY: _____

Service/Location:

Manufacturer:

Model Number:

Serial Number:

*** Complete/Attach Data Sheet for the Supply Fan**

*** Complete/Attach Data Sheet for the Return Fan**

DATA	DESIGN	ACTUAL
Total Airflow Rate (cfm)		
Total System Static Pressure (in. of water)		
Discharge Static Pressure		
Filter Differential Static Pressure		
Coil(s) Differential Static Pressure		
Outside Air DB/WB		
Return Air DB/WB		
Mixed Air DB/WB		
Supply Air DB/WB		
Coil(s) Face Velocity (fpm)		
Ent/Lvg Chilled Water Temperature, if applicable		
Ent/Lvg Hot Water Temperature, if applicable		
Inlet Steam Pressure, if applicable		

CHECK	COMPLETE
Condensate Removal (Cond. piping is not obstructed)	
Lubrication	
Damper Operation	
Filters Installed	

"Page content is subject to Confidentiality Restrictions"

Functional Performance Test (FPT) Report

VFD – VAV Fan Application

Project:_____ Date: _____

Air Handling Unit No.:_____

System:_____ Location:_____

Functional Performance Test: Performance Partner shall verify the operation of the variable frequency drive for control of a variable air volume system for compliance with the contract documents. As a minimum, the following items shall be tested and /or recorded:

1. **General Information**

   VFD manufacturer and model no. _____

   Supply Fan (SF) HP:_____ CFM: _____ RPM: _____ SP: _____

   Return Fan (RF) HP:_____ CFM: _____ RPM: _____ SP: _____

2. **Static Pressure Sensor/Transmitter**

   a. Verify location of the static pressure sensor in % of the distance from fan to terminal unit. (Normally, the sensor should be located 2/3 to 3/4 downstream of the fan to the terminal unit of the most restrictive branch)

      Distance _____%

   b. Pressure Reading Reliability

      - Duct diameter or equivalent diameter _____
      - Nearest duct fitting upstream _____
      - Nearest duct fitting downstream _____
      - (Ideally, the most reliable readings occur when the sensor is at least 10 duct diameters downstream and 5 duct diameters upstream from takeoffs or fittings)
      - **Does the location comply?** _____

"Page content is subject to Confidentiality Restrictions"

3. Functional Performance Test

a. Terminal Units Full Cooling (Boxes at Max)
Adjust all space temperature setpoints at least 10ºF below design setpoints. All zones should be in full cooling and terminal units should be open to the maximum position.

- Measure or read the duct static pressure and record in column A of Table 1.
- Read the frequency output of the VFDs and record in Table 1.

b. Terminal Units Intermediate Position (Boxes Partially Opened)
Readjust thermostats to a few degrees below normal setpoints, to simulate an approaching thermostat satisfaction and take readings.

- Measure or read the duct static pressure and record in column B of Table 1.
- Read the frequency output of the VFDs and record in Table 1.

c. Terminal Units Satisfied (Boxes at Min)
Readjust thermostats to actual room temperatures to simulate a satisfied condition. Boxes should close to the minimum position.

- Measure or read the duct static pressure and record in column C of Table 1.
- Read the frequency output of the VFDs and record in Table 1.

d. Verify Static Pressure Sensor/Transmitter
Using a magnehelic gauge, record actual static pressure at the location of the sensor and record static pressure indicated by the BMS

Actual Static Pressure _____

BMS Static Pressure _____

Is the variance less than 5%? _____ If no, investigate problem.

4. Test Data

Design Static Pressure (in.)_____

Design Frequency (Hz): SF _____ RF _____

Design RPM: SF _____ RF _____

SP Setpoint during test (in.) _____

Table 1.

Test Data	**A** Boxes at Max position		**B** Boxes Partially Open		**C** Boxes at Min position	
	SF	RF	SF	RF	SF	RF
VFD Frequency or RPM						
Static Pressure during Test						

5. Analysis

a. Compare the full open frequency or RPM to the design values for the supply fan. Divide the design value by the reading in Column A. If the percentage is less than 95%, all boxes may not have driven to the full open position. Investigate possible problems.

Is the variance less than 5%? _____

b. Is the static pressure recorded in Columns B & C within 10% of the setpoint?
Is the variance less than 5%? _____

c. The SP during the full open condition should be significantly less than the partially loaded conditions and close to the value calculated in Attachment A (within 0.15 inches). If not, investigate possible problems.

Compliance? _____

6. General Issues

Verify that power quality requirements from the specifications have been completed.

7. Record results and include in the Operation and Maintenance Manuals.

8. Certification and Witness

Performance Partner _____

Client _____

Ameresco _____

Attachment A

To ensure that the energy savings are maximized, the system must be operated at the lowest static pressure (SP) possible. The objective is to find the lowest SP at the sensor that will allow full design flow at the terminal unit most difficult to satisfy (the duct run with the greatest pressure losses). The system minimum SP determined should be the setpoint for the VFD.

The procedure for finding the system minimum static pressure is as follows:

1. Manually or automatically set the temperature setpoints for all zones to 55 F, which should cause all units to open to the maximum position.
2. The airflow at each terminal unit should be measured and compared to the design flow.
3. The terminal unit receiving the lowest fraction of the design flow should be identified.
   (It should be the unit with the longest duct run, most fittings, etc.)
4. The SP at the controlling sensor should be noted.
5. A calculation should be made to determine the static pressure at the sensor that will allow the critical terminal unit to achieve its design flow.
   SP (setpoint) = SP (at the sensor from Step 4) X (1 / (fraction of flow from Step 3)^2)

It should be noted that if all terminal units were calling for full cooling simultaneously, the fan may not be able to achieve the SP setpoint calculated in Step 5 due to diversity allowances made by the design engineer.

"Page content is subject to Confidentiality Restrictions"

Section 7:
Measurement & Verification Plan

Site Specific Plan

Ameresco has based its verification pricing on a short-term plan with certain instantaneous measurements performed at commissioning to ensure audit savings projections are met, and on-going monitoring over the project term to assist the City in operating at peak efficiency throughout the project term. This approach allows Ameresco to be a long-term partner of the City while minimizing the on-going cost of verification and thereby allowing significantly more capital improvements to be funded.

The above approach to verification minimizes the effect of inevitable changes at the facility, while still ensuring the City savings will be realized. Other verification approaches require adjustments for changes outside of the ESCO's control and can result in conflicts about the true magnitude of the adjustment. Our recommended approach preserves the ability to recognize savings while minimizing the long-term potential for conflicts.

"Page content is subject to Confidentiality Restrictions"

ESM 1: Lighting System Improvements - Interior

Energy Savings Calculation Methodology

Savings Algorithm:

$$Savings = LightingSavings - Heat + Cool$$

$$LightingSavings = DemandSavings + EnergySavings$$

$$DemandSavings = BaselineDemand - PostDemand$$

$$EnergySavings = BaselineEnergy - PostEnergy$$

$$BaselineDemand = \sum_{buildings}\sum_{fixtures}\left(kW_{Base} \times {\$}/{kW}\right)$$

$$PostDemand = \sum_{buildings}\sum_{fixtures}\left(kW_{retro} \times {\$}/{kW}\right)$$

$$BaselineEnergy = \sum_{buildings}\sum_{fixtures}\left(kW_{Base} \times Hrs_{Base(peak/offpeak)} \times {\$}/{kWh_{(peak/offpeak)}}\right)$$

$$PostEnergy = \sum_{buildings}\sum_{fixtures}\left(kW_{Retro} \times Hrs_{Base(peak/offpeak)} \times {\$}/{kWh_{(peak/offpeak)}}\right)$$

$$Heat = \sum_{buildings}\sum_{fixtures}\left(\frac{(kW_{Base} - kW_{Retro}) \times Hrs_{Base} \times \frac{Mths_{heat}}{12 months} \times 3{,}413\, {btu}/{kWh} \times Util}{Boiler_{Eff} \times 1{,}000{,}000\, {btu}/{mmbtu}} \times {\$}/{mmbtu}\right)$$

$$Cool = \sum_{buildings}\sum_{fixtures}\left(\frac{(kW_{Base} - kW_{Retro}) \times Hrs_{Base(peak/offpeak)} \times \frac{Mths_{cool}}{12 months} \times Util \times \text{Cool\%}}{Cool_{Eff}} \times {\$}/{kWh_{(peak/offpeak)}}\right)$$

Where:

kW_{Base} - Base fixture kW, as per lighting audit calculation included in the energy audit

kW_{Retro} - Retrofit fixture kW, as per lighting audit calculation included in the energy audit, subject to metering described below

Hrs_{Base} - Baseline fixture operating hours broken out into peak and offpeak, as per lighting audit calculation included in the energy audit

$Boiler_{Eff}$ - Average heating system efficiency, as per lighting audit calculation included in the energy audit

"Page content is subject to Confidentiality Restrictions"

$Cool_{Eff}$ - Average cooling system performance (COP), as per lighting audit calculation included in the energy audit

Util - Factor representing the amount of energy transmitted to the space, as per lighting audit calculation included in the energy audit

Cool% - Factor representing the amount space with cooling, as per calculation in the energy audit

$Mths_{heat}$ - Number of months the heating penalty will occur, as per lighting audit calculation included in the energy audit

$Mths_{cool}$ - Number of months the cooling benefit will occur, as per lighting audit calculation included in the energy audit

$/kW - Unit cost of electric demand, as per Unit Prices section

$/$kWh_{peak}$ - Unit cost of peak electric energy, as per Unit Prices section

$/$kWh_{offpeak}$ - Unit cost of offpeak electric energy, as per Unit Prices section

$/mmbtu - Unit cost of fossil fuel, as per Unit Prices section

Metering Plan

Ameresco will measure the post-installation fixture input power for a statistically significant sample size of the retrofit fixtures, and if the total sample values are within 3% of the energy audit values no change will be made. If the total sample values are not within 3%, Ameresco will either take corrective action for them to be within this limit, or will utilize the measured values. Post-retrofit light level measurements for a sample of areas will be provided to the City for reference.

Ameresco will use a calibrated hand held RMS meter (Fluke or equivalent) to measure power readings (kW, V, Amps, PF) from the lighting systems. These measurements can include individual fixtures or single lighting circuits with multiple fixtures of the same type and will continue until the sample size for each lighting group has been achieved. Fixtures to be metered must have at least 100 hours of operation following retrofit. Measurements shall be made only after the fixtures have reached steady state operating temperature and space temperatures are within normal occupied ranges.

The wattage measurements for each sample group will be averaged together. These averages will then be summed for all sample groups in order to determine the total measured wattage for the entire lighting sample. The difference between the total measured sample wattage and the total proposed wattage for the same sample will be subject to the 3% hurdle. If the difference is not within the 3% hurdle, the proposed wattage in the energy audit for the entire lighting project will be multiplied by the measured percentage difference and substituted into the energy audit calculation. The resulting savings will become the actual savings for this ESM. Interactive savings are stipulated and will not be part of the comparison.

"Page content is subject to Confidentiality Restrictions"

ESM 2: Lighting System Improvements - Exterior

Energy Savings Calculation Methodology

Savings Algorithm:

$$Savings = EnergySavings$$

$$EnergySavings = BaselineEnergy - PostEnergy$$

$$BaselineEnergy = \sum_{buildings} \sum_{fixtures} \left(kW_{Base} \times Hrs_{Base(\,peak\,/\,offpeak)} \times \$/kWh_{(\,peak\,/\,offpeak)} \right)$$

$$PostEnergy = \sum_{buildings} \sum_{fixtures} \left(kW_{Retro} \times Hrs_{Base(\,peak\,/\,offpeak)} \times \$/kWh_{(\,peak\,/\,offpeak)} \right)$$

Where:

kW_{Base} - Base fixture kW, as per lighting audit calculation included in the energy audit

kW_{Retro} - Retrofit fixture kW, as per lighting audit calculation included in the energy audit, subject to metering described below

Hrs_{Base} - Baseline fixture operating hours broken out into peak and offpeak, as per lighting audit calculation included in the energy audit

$\$/kWh_{peak}$ - Unit cost of peak electric energy, as per Unit Prices section

$\$/kWh_{offpeak}$ - Unit cost of offpeak electric energy, as per Unit Prices section

Metering Plan

Ameresco will measure the post-installation fixture input power for a statistically significant sample size of the retrofit fixtures, and if the total sample values are within 3% of the energy audit values no change will be made. If the total sample values are not within 3%, Ameresco will either take corrective action for them to be within this limit, or will utilize the measured values. A "true-up" will be provided in spreadsheet format which will detail the measurement results and any savings guarantee adjustments.

Ameresco will use a calibrated hand held RMS meter (Fluke or equivalent) to measure power readings (kW, V, Amps, PF) from the lighting systems. These measurements can include individual fixtures or single lighting circuits with multiple fixtures of the same type and will continue until the sample size for each lighting group has been achieved. Fixtures to be metered must have at least 100 hours of operation following retrofit. Measurements shall be made only after the fixtures have reached steady state operating temperature.

The wattage measurements for each sample group will be averaged together. These averages will then be summed for all sample groups in order to determine the total measured wattage for the entire lighting sample. The difference between the total measured sample wattage and the total proposed wattage for the same sample will be subject to the 3% hurdle. If the difference is not within the 3% hurdle, the proposed wattage in the energy audit for the entire lighting project will be multiplied by the measured percentage

difference and substituted into the energy audit calculation. The resulting savings will become the actual savings for this ESM.

ESM 3: Lighting Controls

Energy Savings Calculation Methodology

Savings Algorithm:

$$Savings = EnergySavings - Heat + Cool$$

$$EnergySavings = BaselineEnergy - PostEnergy$$

$$BaselineEnergy = \sum_{buildings}\sum_{fixtures}\left(kW_{Retro} \times Hrs_{Base(peak/offpeak)} \times {\$}/{kWh_{(peak/offpeak)}}\right)$$

$$PostEnergy = \sum_{buildings}\sum_{fixtures}\left(kW_{Retro} \times Hrs_{Retro(peak/offpeak)} \times {\$}/{kWh_{(peak/offpeak)}}\right)$$

$$Heat = \sum_{buildings}\sum_{fixtures}\left(\frac{kW_{Retro} \times \left(Hrs_{Base} - Hrs_{Retro}\right) \times \frac{Mths_{heat}}{12 months} \times 3{,}413\, {btu}/{kWh} \times Util}{Boiler_{Eff} \times 1{,}000{,}000\, {btu}/{mmbtu}} \times {\$}/{mmbtu}\right)$$

$$Cool = \sum_{buildings}\sum_{fixtures}\left(\frac{kW_{Retro} \times \left(Hrs_{Base(peak/offpeak)} - Hrs_{Retro(peak/offpeak)}\right) \times \frac{Mths_{cool}}{12 months} \times Util \times \text{Cool\%}}{Cool_{Eff}} \times {\$}/{kWh_{(peak/offpeak)}}\right)$$

Where:

kW_{Retro} - Retrofit fixture kW, as per lighting audit calculation included in the energy audit, subject to metering described below

Hrs_{Base} - Baseline fixture operating hours broken out into peak and offpeak, as per lighting audit calculation included in the energy audit

Hrs_{Retro} - Retrofit fixture operating hours broken out into peak and offpeak, as per lighting audit calculation included in the energy audit

$Boiler_{Eff}$ - Average heating system efficiency, as per lighting audit calculation included in the energy audit

$Cool_{Eff}$ - Average cooling system performance (COP), as per lighting audit calculation included in the energy audit

Util - Factor representing the amount of energy transmitted to the space, as per lighting audit calculation included in the energy audit

Cool% - Factor representing the amount space with cooling, as per calculation in the energy audit

$Mths_{heat}$	-	Number of months the heating penalty will occur, as per lighting audit calculation included in the energy audit
$Mths_{cool}$	-	Number of months the cooling benefit will occur, as per lighting audit calculation included in the energy audit
$/kW	-	Unit cost of electric demand, as per Unit Prices section
$/kWh$_{peak}$	-	Unit cost of peak electric energy, as per Unit Prices section
$/kWh$_{offpeak}$	-	Unit cost of offpeak electric energy, as per Unit Prices section
$/mmbtu	-	Unit cost of fossil fuel, as per Unit Prices section

Metering Plan

Ameresco will measure the post-installation fixture input power for a statistically significant sample size of the retrofit fixtures in ESM-1. The energy savings for lighting sensors connected to the ESM-1 samples will be compared to the energy audit using the metered input power. Hours of operation will remain per the energy audit. If the total sample values are within 3% of energy audit values no change will be made. If the total sample values are not within 3%, Ameresco will either take corrective action for them to be within this limit, or will utilize the measured values.

All measurements for this ESM will be from those completed for ESM-1. The lighting controls audit calculation will be update using the resulting ESM-1 lighting wattages per its M&V plan. Interactive savings are stipulated and will not be part of the comparison.

"Page content is subject to Confidentiality Restrictions"

ESM 4: Energy Management System Upgrade/Expansion

Energy Savings Calculation Methodology

Savings Algorithm:

$$Savings = Motors + Heating + Cooling$$

$$Motors = ElecBase - ElecPost$$

$$ElecBase = \sum_{buildings} \left(kW_{Base} \times Hrs_{Base(\,peak\,/\,offpeak\,)} \times {\$}/{kWh_{(\,peak\,/\,offpeak\,)}} \right)$$

$$ElecPost = \sum_{buildings} \left(kW_{Base} \times Hrs_{\mathrm{Re}\,tro(\,peak\,/\,offpeak\,)} \times {\$}/{kWh_{(\,peak\,/\,offpeak\,)}} \right)$$

$$Heating = HeatBase - HeatPost$$

$$HeatBase = \sum_{buildings} \left[\sum_{Bin}^{Heating} \left(\frac{Load_{OccBase} \times Hrs_{OccBase} + Load_{UnoccBase} \times Hrs_{UnoccBase}}{Eff \times 1{,}000\, {mbtu}/{mmbtu}} \right) \times {\$}/{mmbtu} \right]$$

$$HeatPost = \sum_{buildings} \left[\sum_{Bin}^{Heating} \left(\frac{Load_{Occ\,\mathrm{Re}\,tro} \times Hrs_{Occ\,\mathrm{Re}\,tro} + Load_{Unocc\,\mathrm{Re}\,tro} \times Hrs_{Unocc\,\mathrm{Re}\,tro}}{Eff \times 1{,}000\, {mbtu}/{mmbtu}} \right) \times {\$}/{mmbtu} \right]$$

$$Cooling = CoolBase - CoolPost$$

$$CoolBase = \sum_{buildings} \left[\sum_{Bin}^{Cooling} \left(\frac{Load_{OccBase} \times Hrs_{OccBase(\,peak\,/\,offpeak\,)} + Load_{UnoccBase} \times Hrs_{UnoccBase(\,peak\,/\,offpeak\,)}}{COP \times 3.413\, {mbtu}/{kWh}} \right) \times {\$}/{kWh_{(\,peak\,/\,offpeak\,)}} \right]$$

$$CoolPost = \sum_{buildings} \left[\sum_{Bin}^{Cooling} \left(\frac{Load_{Occ\,\mathrm{Re}\,tro} \times Hrs_{Occ\,\mathrm{Re}\,tro(\,peak\,/\,offpeak\,)} + Load_{Unocc\,\mathrm{Re}\,tro} \times Hrs_{Unocc\,\mathrm{Re}\,tro(\,peak\,/\,offpeak\,)}}{COP \times 3.413\, {mbtu}/{kWh}} \right) \times {\$}/{kWh_{(\,peak\,/\,offpeak\,)}} \right]$$

Where:

kW_{Base} - Total fan and pump motor kW under EMS control, as per calculation in the energy audit

Hrs_{Base} - Base motor operating hours broken out into peak and offpeak, as per calculation in the energy audit

Hrs_{Retro} - Retrofit motor operating hours broken out into peak and offpeak, as per calculation in the energy audit

"Page content is subject to Confidentiality Restrictions"

$Load_{OccBase}$ - Building load per bin, including infiltration load, (mbtu/hr) under current conditions during occupied hours, as per calculation in the energy audit

$Load_{UnoccBase}$ - Building load per bin, including infiltration load, (mbtu/hr) under current conditions during unoccupied hours, as per calculation in the energy audit

$Load_{OccRetro}$ - Building load per bin, including infiltration load, (mbtu/hr) with reduced setpoint temperature and improved control, as per calculation in the energy audit

$Load_{UnoccRetro}$ - Building load per bin, including infiltration load, (mbtu/hr) with night setback and improved control, as per calculation in the energy audit

$Hrs_{OccBase}$ - Baseline heating and cooling bin hours during occupied period broken out into peak and offpeak, as per calculation in the energy audit

$Hrs_{UnoccBase}$ - Baseline heating and cooling bin hours during unoccupied period broken out into peak and offpeak, as per calculation in the energy audit

$Hrs_{OccRetro}$ - Retrofit heating and cooling bin hours during occupied period broken out into peak and offpeak, as per calculation in the energy audit

$Hrs_{UnoccRetro}$ - Retrofit heating and cooling bin hours during unoccupied period broken out into peak and offpeak, as per calculation in the energy audit

Eff - Heating system efficiency, as per calculation in the energy audit

COP - Cooling system coefficient of performance, as per calculation included in the energy audit

$\$/kWh_{peak}$ - Unit cost of peak electric energy, as per Unit Prices section

$\$/kWh_{offpeak}$ - Unit cost of offpeak electric energy, as per Unit Prices section

$/mmbtu - Unit cost of fossil fuel, as per Unit Prices section

Metering Plan

Upon completion of the installation, Ameresco will commission the energy management system and test its functionality to ensure the ability of savings as specified in the energy audit to occur, as per the Commissioning Plan in Section 6. Monitoring of equipment operating hours and space temperatures will be completed in detail to verify the performance of the new EMS over at least 4 weather bins at time of commissioning, up to a maximum of 4 weeks. Performance of the new EMS shall be considered verified once all time schedules are shown to turn on and off controlled equipment per the programmed times and temperature setpoints, both occupied and unoccupied are substantially achieved. Additionally, the commissioning report for the EMS, completed during construction, will be attached to the first Annual Measurement and Verification report to confirm the EMS is commissioned per the designed intent. Trends will be setup to track operating hours and temperatures per the final commissioning plan developed during the design and construction phase.

"Page content is subject to Confidentiality Restrictions"

Occupied Scheduling

Ameresco will initially setup the occupancy schedules in the EMS to reflect the current occupancy of the buildings. The HVAC systems will only be operated when the buildings are supposed to be occupied. Other areas of the buildings like meeting rooms can have slightly longer schedules to reflect occupancy outside of the normal occupancy. The vacation schedule will also be initially setup in the system to turn off equipment on vacation days. The City will be responsible for updating the vacation and special days schedule to ensure the systems are not operating when the buildings are not occupied.

Building	Start time (Mon – Fri)	Stop time (Mon – Fri)	Weekends/ Holidays	Period
City Hall	8:00am	8:00pm	Off	Year-round
Police Court Bldg	24/7 Court Area (6am)	24/7 Court Area (11pm)	24/7 Off	Year-round Year-round
Malone Aquatic Center	24/7	24/7	24/7	Year-round
Beals Senior Center	8:00am	5:00pm	Off	Year-round
Main Library	8:30am	8:00pm	Sat 8:30am-5:00pm	Year-round
Manross Library	Mon-Thu 10:00am Fri – 9:00am	Mon-Thu 8:00pm Fri-5:00pm	Sat 9:00am-5:00pm	Year-round
Youth Services Building	8:30am	Mon/Wed/Fri 5:00pm Tue/Thu 8:00pm	Off	Year-round

Unoccupied Zone Temperature Reset

The following setpoints will initially be setup in the EMS.

Building	Occupied Set Point Heating (ºF)	Occupied Set Point Cooling (ºF)	Unoccupied Set Point Heating (ºF)	Unoccupied Set Point Cooling (ºF)
City Hall Annex Bldg	70.0	74.0	55.0	85.0 or off
Police Court	70.0	74.0	55.0	85.0 or off
Malone Aquatic Center	83.0	83.0	83.0	85.0 or off
Beals Senior Center	72.0	74.0	55.0	85.0 or off
Main Library	72.0	74.0	55.0	85.0 or off
Manross Library	70.0	74.0	55.0	85.0 or off
Youth Services Building	68.0	74.0	55.0	85.0 or off

"Page content is subject to Confidentiality Restrictions"

ESM 6: Demand Control Ventilation

Energy Savings Calculation Methodology

Savings Algorithm:

$$Savings = Electric + FossilFuel$$

$$Electric = ElecBase - Elec\,\mathrm{Re}\,tro$$

$$ElecBase = \sum_{Building}\sum_{Bin}\left(\frac{Load_{Base}\times Hrs_{BaseCoolPeak}\times 1{,}000\,{}^{btu}/_{mbtu}}{COP\times 3{,}413\,{}^{btu}/_{kWh}}\right)\times {}^{\$}/_{kWh_{Peak}}$$

$$+\sum_{Building}\sum_{Bin}\left(\frac{Load_{Base}\times Hrs_{BaseCoolOff-Peak}\times 1{,}000\,{}^{btu}/_{mbtu}}{COP\times 3{,}413\,{}^{btu}/_{kWh}}\right)\times {}^{\$}/_{kWh_{Off-Peak}}$$

$$Elec\,\mathrm{Re}\,tro = \sum_{Building}\sum_{Bin}\left(\frac{Load_{\mathrm{Re}\,tro}\times Hrs_{\mathrm{Re}\,troCoolPeak}\times 1{,}000\,{}^{btu}/_{mbtu}}{COP\times 3{,}413\,{}^{btu}/_{kWh}}\right)\times {}^{\$}/_{kWh_{Peak}}$$

$$+\sum_{Building}\sum_{Bin}\left(\frac{Load_{\mathrm{Re}\,tro}\times Hrs_{\mathrm{Re}\,troCoolOff-Peak}\times 1{,}000\,{}^{btu}/_{mbtu}}{COP\times 3{,}413\,{}^{btu}/_{kWh}}\right)\times {}^{\$}/_{kWh_{Off-Peak}}$$

$$FossilFuel = FuelBase - Fuel\,\mathrm{Re}\,tro$$

$$FuelBase = \sum_{Building}\sum_{Bin}\left(\frac{Load_{Base}\times Hrs_{BaseHeat}}{Eff\times 1{,}000\,{}^{mbtu}/_{mmbtu}}\right)\times {}^{\$}/_{mmbtu}$$

$$Fuel\,\mathrm{Re}\,tro = \sum_{Building}\sum_{Bin}\left(\frac{Load_{Post}\times Hrs_{\mathrm{Re}\,troHeat}}{Eff\times 1{,}000\,{}^{mbtu}/_{mmbtu}}\right)\times {}^{\$}/_{mmbtu}$$

Where:

$Load_{Base}$ - Building load {mbtu/hr} after EMS savings are accounted for, as per calculation in the energy audit

$Load_{Retro}$ - Building load {mbtu/hr} CO_2 control, as per calculation in the energy audit

$Hrs_{BaseHeat}$ - Base bin hours for each heating period, occ/unocc, as per calculation in the energy audit

$Hrs_{RetroHeat}$ - Retrofit bin hours for each heating period, occ/unocc, as per calculation in the energy audit

$Hrs_{BaseCool}$ - Base bin hours for each cooling period, occ/unocc, as per calculation in the energy audit

$Hrs_{RetroCool}$ - Retrofit bin hours for each cooling period, occ/unocc, as per calculation in the energy audit

"Page content is subject to Confidentiality Restrictions"

Eff - Average heating system efficiency, as per calculation in the energy audit
COP - Cooling system coefficient of performance, as per calculation included in the energy audit
$/kWh$_{peak}$ - Unit cost of peak electric energy, as per Unit Prices section
$/kWh$_{offpeak}$ - Unit cost of offpeak electric energy, as per Unit Prices section
$/mmbtu - Unit cost of fossil fuel, as per Unit Prices section below

Metering Plan

Upon completion of the installation, Ameresco will commission the CO_2 sensors and test their functionality to ensure the ability of savings as specified in the energy audit to occur. Monitoring of equipment operating hours and CO_2 will be completed to verify the performance of the new CO_2 sensors in conjunction with the EMS measurement and verification plan. Trends will be setup to track operating hours and CO_2 levels per the final commissioning plan developed during the design and construction phase.

No measurements will be taken for this ESM.

"Page content is subject to Confidentiality Restrictions"

ESM 12: Variable Frequency Drives

Energy Savings Calculation Methodology

Savings Algorithm:

$$Savings = Baseline - PostInstallation$$

$$Baseline = \sum_{Building} \left(kW \times Hours_{(peak/offpeak)} \times {\$}/{kWh_{(peak/offpeak)}} \right)$$

$$Postinstallation = \sum_{Building} \left(Usage_{(peak/offpeak)} \times {\$}/{kWh_{(peak/offpeak)}} \right)$$

Where:

kW - Base motor kW, as per calculation in the energy audit

Hours - Run hours of each applicable motor broken out into peak and off peak, as per calculation in the energy audit

Usage - Energy usage of each motor with VFD control, broken out into peak and offpeak, as per calculation in the energy audit

$\$/kWh_{peak}$ - Unit cost of peak electric energy, as per Unit Prices section

$\$/kWh_{offpeak}$ - Unit cost of offpeak electric energy, as per Unit Prices section

Metering Plan

Ameresco will confirm performance of the variable frequency drives by trending fan or pump speed over the course of at least one representative 24-hour period (operation across at least three 5 degree F temperature BINs). Trending will be extended to longer than 24 contiguous hours if necessary to capture a three bin operating range. If the fan or pump speed modulates based upon system loading and is able to turn down below the speed referenced in the energy audit, no change will be made. The mildest temperature BIN measured, plus 10%, will be compared to the same temperature bin in the savings calculation. If the fan or pump does not modulate as predicted, Ameresco will either take corrective action and remeasure, or will recalculate the savings using measured performance data as inputs into the energy audit savings analysis.

ESM 13: Transformer Replacements

Energy Savings Calculation Methodology

Savings Algorithm:

$$Savings = Baseline - PostInstallation$$

$$Baseline = \sum_{transformer} \left(Usage_{Base_{(Peak/offPeak)}} \times \$/kWh_{(Peak/offPeak)} + kW_{Base} \times \$/kW \right)$$

$$PostInstallation = \sum_{transformer} \left(Usage_{Retro_{(Peak/offPeak)}} \times \$/kWh_{(Peak/offPeak)} + kW_{Retro} \times \$/kW \right)$$

Where:

kW_{Base} - Baseline transformer kW, as per calculation in the energy audit

kW_{Retro} - Retrofit transformer kW, as per calculation in the energy audit, subject to metering described below

$Usage_{Base}$ - Baseline energy usage for transformers, as per calculation in the energy audit, subject to metering described below

$Usage_{Post}$ - Retrofit energy usage for transformers, as per calculation in the energy audit, subject to metering described below

$/kW - Unit cost of electrical demand, as per Unit Prices section

$/kWh$_{peak}$ - Unit cost of peak electric energy, as per Unit Prices section

$/kWh$_{offpeak}$ - Unit cost of offpeak electric energy, as per Unit Prices section

Metering Plan

Ameresco will measure the input and output power for a statistically significant sample size of transformers after replacement, and if the total sample values are within 5% of the energy audit values no change will be made. If the total sample values are not within 5%, Ameresco will either take corrective action for them to be within this limit, or will utilize the measured values.

"Page content is subject to Confidentiality Restrictions"

ESM 14: Steam Trap Replacement

Energy Savings Calculation Methodology

Savings Algorithm:

$$Savings = Baseline - PostInstallation$$

$$Baseline = SteamLoss_{Base} \times {}^{\$}/_{mmbtu}$$

$$PostInstallation = SteamLoss_{Post} \times {}^{\$}/_{mmbtu}$$

Where:

$SteamLoss_{Base}$ - Base energy lost due to steam traps (mmbtu), as per calculation in energy audit

$SteamLoss_{Post}$ - Retrofit energy lost due to steam traps (mmbtu), as per calculation in energy audit

$/mmbtu - Unit cost of fossil fuel, as per Unit Prices section below

Metering Plan

No measurements will be taken for this ESM.

"Page content is subject to Confidentiality Restrictions"

ESM 15: Pipe & Jacket Insulation

Energy Savings Calculation Methodology

Savings Algorithm:

$$Savings = \sum_{Heat}\left(Baseline_{Heat} - PostInstallation_{Heat}\right) + \sum_{Cool}\left(Baseline_{Cool} - PostInstallation_{Cool}\right)$$

$$Baseline_{Heat} = \sum_{Pipes}\left(\frac{LossRate_{Base} \times Hrs}{Eff \times 1000\,{}^{mbtu}/_{mmbtu}}\right) \times {}^{\$}/_{mmbtu}$$

$$PostInstallation_{Heat} = \sum_{Pipes}\left(\frac{LossRate_{Retro} \times Hrs}{Eff \times 1000\,{}^{mbtu}/_{mmbtu}}\right) \times {}^{\$}/_{mmbtu}$$

$$Baseline_{Cool} = \sum_{Pipes}\left(\frac{LossRate_{Base} \times Hrs}{COP} \times \frac{1{,}000\,{}^{btu}/_{mbtu}}{3{,}413\,{}^{btu}/_{kWh}}\right) \times {}^{\$}/_{kWh_{Peak}}$$

$$PostInstallation_{Heat} = \sum_{Pipes}\left(\frac{LossRate_{Retro} \times Hrs}{COP} \times \frac{1{,}000\,{}^{btu}/_{mbtu}}{3{,}413\,{}^{btu}/_{kWh}}\right) \times {}^{\$}/_{kWh_{Peak}}$$

Where:

$LossRate_{Base}$ - Existing pipe heat loss rate (mbtu/hr), as per calculation in energy audit
$LossRate_{Retro}$ - Proposed pipe heat loss rate (mbtu/hr), as per calculation in energy audit
Hrs - Total pipe run hours, as per calculation in energy audit
Eff - Base heating plant efficiency, as per calculation in energy audit
COP - Cooling system coefficient of performance, as per calculation included in energy audit
$/mmbtu - Unit cost of fossil fuel, as per Unit Prices section below
$/kWh$_{peak}$ - Unit cost of peak electric energy, as per Unit Prices section

Metering Plan

No measurements will be taken for this ESM.

ESM 18: Windows Replacements

Energy Savings Calculation Methodology

Savings Algorithm:

$$Savings = Baseline - PostInstallation$$

$$Baseline = \sum_{Building}\left(\sum_{Bin}^{Heating}\left(\frac{Load_{BaseOcc}\times Hrs_{Occ(peak/offpeak)}+Load_{BaseUnocc}\times Hrs_{Unocc(peak/offpeak)}}{Eff\times 1{,}000\,{}^{mbtu}/_{mmbtu}}\right)\times {}^{\$}/_{mmbtu}+\sum_{Bin}^{Cooling}\left(\frac{Load_{BaseOcc}\times Hrs_{Occ(peak/offpeak)}+Load_{BaseUnocc}\times Hrs_{Unocc(peak/offpeak)}}{COP\times 3.413\,{}^{mbtu}/_{kWh}}\right)\times {}^{\$}/_{kWh_{(peak/offpeak)}}\right)$$

$$PostInstallation = \sum_{Building}\left(\sum_{Bin}^{Heating}\left(\frac{Load_{RetroOcc}\times Hrs_{Occ(peak/offpeak)}+Load_{RetroUnocc}\times Hrs_{Unocc(peak/offpeak)}}{Eff\times 1{,}000\,{}^{mbtu}/_{mmbtu}}\right)\times {}^{\$}/_{mmbtu}+\sum_{Bin}^{Cooling}\left(\frac{Load_{RetroOcc}\times Hrs_{Occ(peak/offpeak)}+Load_{RetroUnocc}\times Hrs_{Unocc(peak/offpeak)}}{COP\times 3.413\,{}^{mbtu}/_{kWh}}\right)\times {}^{\$}/_{kWh_{(peak/offpeak)}}\right)$$

$$Load_{Base/RetroOcc/Unocc} = \left(Trans_{Base/RetroOcc/Unocc} + Infil_{Base/RetroOcc/Unocc}\right)$$

Where:

Trans	-	The transmission load per bin (mbtu/hr) for either the base case or the retrofit case during either the occupied or unoccupied period, as per the calculation in the energy audit
Infil	-	The infiltration load per bin (mbtu/hr) for either the base case or the retrofit case during either the occupied or unoccupied period, as per the calculation in the energy audit
Hrs_{Occ}	-	Bin hours for occupied period broken out into peak and off peak, as per calculation in the energy audit
Hrs_{Unocc}	-	Bin hours for unoccupied period broken out into peak and off peak, as per calculation in the energy audit
Eff	-	Heating system efficiency, as per calculation in the energy audit
COP	-	Cooling system coefficient of performance, as per calculation included in the energy audit
$/mmbtu	-	Unit cost of fossil fuel, as per Unit Prices section below
$/kWh$_{peak}$	-	Unit cost of peak electric energy, as per Unit Prices section
$/kWh$_{offpeak}$	-	Unit cost of offpeak electric energy, as per Unit Prices section

Metering Plan

No measurements will be taken for this ESM.

ESM 21: Boiler Replacements

Energy Savings Calculation Methodology

Savings Algorithm:

$$Savings = Baseline - PostInstallation$$

$$Baseline = \frac{Usage_{Current} \times Eff_{Retro}}{Eff_{Base}} \times {}^{\$}/_{mmbtu_{Base}}$$

$$PostInstallation = Usage_{Current} \times {}^{\$}/_{mmbtu_{Post}}$$

Where:

Eff_{Base} - Base heating system efficiency, as per calculation in the energy audit

Eff_{Retro} - Retrofit heating system efficiency, as per calculation in the energy audit, subject to metering plan below

$Usage_{Current}$ - Actual metered fuel usage in mmbtu for new boilers, minimum of the proposed usage in the energy audit. Actual metered fuel usage for the affected boilers only shall be provided by the City or utility and must be from utility grade meters.

$\$/mmbtu_{Base}$ - Baseline unit cost of fossil fuel, as per Unit Prices section below

$\$/mmbtu_{Post}$ - Proposed unit cost of fossil fuel, as per Unit Prices section below

Metering Plan

As part of the commissioning process, the combustion efficiency of the newly installed boilers will be measured and compared to the expected values for the new boilers per the energy audit calculation. If the measurement is within 3% of the energy audit combustion efficiency values no change will be made. If the measurement value is not within 3%, Ameresco will either take corrective action for them to be within this limit, or will utilize the measured values. For condensing boilers these measurements will be taken over a range of return water temperatures during a period of not more than a week. For non-condensing boilers these measurements will be taken one time during a burner cycle, after steady state firing has been reached.

Ameresco will use a calibrated portable flue gas analyzer (Testo or equivalent) to measure combustion efficiency for each new boiler. Boilers will only be tested once they have reached steady state firing, which shall be defined as having continuously fired on high fire for at least 15 minutes and the return water temperature remains constant, plus or minus 2.5ºF, for 15 minutes. For steam boilers, the return water requirement is replaced with 15 minutes of continuous steam production as indicated by continuously rising or constant steam pressure greater than 1psi. Once steady state is reached, the operational boiler's combustion efficiency will be measured with at least two additional measurements taken at least 5 minutes apart with the boiler remaining in continuous high fire operation. Only one boiler shall be operated at a time in order to assist steady state operation. This process shall be repeated for each new boiler.

For non-condensing boilers, the above measurement procedure shall only need to be performed once. For condensing boilers, the above measurement procedure shall be repeated so as to perform measurements at

"Page content is subject to Confidentiality Restrictions"

multiple steady state return water temperatures between 100ºF and 140ºF. At least 3 return water states shall be measured with at least 5ºF between states.

The measurements for all new boilers associated with a single boiler plant will be averaged together to represent the measured combustion efficiency for each new boiler plant. The difference between the energy audit combustion

ESM 23: Steam to Hot Water Conversion

Energy Savings Calculation Methodology

Savings Algorithm:

$$Savings = Baseline - PostInstallation$$

$$Baseline = \frac{Usage_{Current} \times Eff_{Retro}}{Eff_{Base}} \times {}^{\$}/_{mmbtu\ Base}$$

$$PostInstallation = Usage_{Current} \times {}^{\$}/_{mmbtu\ Post}$$

Where:

Eff_{Base} - Base heating system efficiency, as per calculation in the energy audit

Eff_{Retro} - Retrofit heating system efficiency, as per calculation in the energy audit, subject to metering plan below

$Usage_{Current}$ - Actual metered fuel usage in mmbtu for new boilers, minimum of the proposed usage in the energy audit. Actual metered fuel usage for the affected boilers only shall be provided by the City or utility and must be from utility grade meters.

$\$/mmbtu_{Base}$ - Baseline unit cost of fossil fuel, as per Unit Prices section below

$\$/mmbtu_{Post}$ - Proposed unit cost of fossil fuel, as per Unit Prices section below

Metering Plan

As part of the commissioning process, the combustion efficiency of the newly installed boilers will be measured and compared to the expected values for the new boilers per the energy audit calculation. If the measurement is within 3% of the energy audit combustion efficiency values no change will be made. If the measurement value is not within 3%, Ameresco will either take corrective action for them to be within this limit, or will utilize the measured values. For condensing boilers these measurements will be taken over a range of return water temperatures during a period of not more than a week. For non-condensing boilers these measurements will be taken one time during a burner cycle, after steady state firing has been reached.

Ameresco will use a calibrated portable flue gas analyzer (Testo or equivalent) to measure combustion efficiency for each new boiler. Boilers will only be tested once they have reached steady state firing, which shall be defined as having continuously fired on high fire for at least 15 minutes and the return water temperature remains constant, plus or minus 2.5ºF, for 15 minutes. For steam boilers, the return water requirement is replaced with 15 minutes of continuous steam production as indicated by continuously rising or constant steam pressure greater than 1psi. Once steady state is reached, the operational boiler's combustion efficiency will be measured with at least two additional measurements taken at least 5 minutes apart with the boiler remaining in continuous high fire operation. Only one boiler shall be operated at a time in order to assist steady state operation. This process shall be repeated for each new boiler.

For non-condensing boilers, the above measurement procedure shall only need to be performed once. For condensing boilers, the above measurement procedure shall be repeated so as to perform measurements at

"Page content is subject to Confidentiality Restrictions"

multiple steady state return water temperatures between 100ºF and 140ºF. At least 3 return water states shall be measured with at least 5ºF between states.

The measurements for all new boilers associated with a single boiler plant will be averaged together to represent the measured combustion efficiency for each new boiler plant. The difference between the energy audit boiler calculation efficiency and the measured combustion efficiency will be subject to the 3% hurdle.

ESM 26: Condensing Unit Replacement

Energy Savings Calculation Methodology

Savings Algorithm:

$$Savings = Demand + ElecBase - Elec\,\mathrm{Re}\,tro$$

$$Demand = \left(kW_{Base} - kW_{\mathrm{Re}\,tro}\right) \times Mths_{cool} \times {\$}/{kW}$$

$$ElecBase = \sum_{buildings}\left[\sum_{Bin}^{Cooling}\left(\frac{Load_{Occ} \times Hrs_{Occ(\,peak\,/\,offpeak\,)} + Load_{Unocc} \times Hrs_{Unocc(\,peak\,/\,offpeak\,)}}{COP_{Base} \times 3.413\,{mbtu}/{kWh}}\right) \times {\$}/{kWh_{(\,peak\,/\,offpeak\,)}}\right]$$

$$ElecPost = \sum_{buildings}\left[\sum_{Bin}^{Cooling}\left(\frac{Load_{Occ} \times Hrs_{Occ(\,peak\,/\,offpeak\,)} + Load_{Unocc} \times Hrs_{Unocc(\,peak\,/\,offpeak\,)}}{COP_{\mathrm{Re}\,tro} \times 3.413\,{mbtu}/{kWh}}\right) \times {\$}/{kWh_{(\,peak\,/\,offpeak\,)}}\right]$$

Where:

- kW_{Base} - Base average annual cooling kW, as per calculation in the energy audit
- kW_{Retro} - Retrofit average annual cooling kW, as per calculation in the energy audit
- $Mths_{cool}$ - Number of months cooling will occur, as per calculation in the energy audit
- $Load_{Occ}$ - Interacted building load per bin, (mbtu/hr) during occupied hours, as per calculation in the energy audit
- $Load_{Unocc}$ - Interacted building load per bin, (mbtu/hr) during unoccupied hours, as per calculation in the energy audit
- Hrs_{Occ} - Interacted cooling bin hours during occupied period broken out into peak and offpeak, as per calculation in the energy audit
- Hrs_{Unocc} - Interacted cooling bin hours during unoccupied period broken out into peak and offpeak, as per calculation in the energy audit
- COP_{Base} - Base cooling system coefficient of performance, as per calculation included in the energy audit
- COP_{Retro} - Retrofit cooling system coefficient of performance, as per calculation included in the energy audit
- $/kW - Unit cost of electric demand, as per Unit Prices section
- $/kWh_{peak}$ - Unit cost of peak electric energy, as per Unit Prices section
- $/kWh_{offpeak}$ - Unit cost of offpeak electric energy, as per Unit Prices section

Metering Plan

No measurements will be taken for this ESM.

ESM 27: AHU Replacement

Energy Savings Calculation Methodology

Savings Algorithm:

$$Savings = Heating + Cooling$$

$$Heating = HeatBase - HeatPost$$

$$HeatBase = \sum_{buildings}\left[\sum_{Bin}^{Heating}\left(\frac{Load_{OccBase}\times Hrs_{OccBase}+Load_{UnoccBase}\times Hrs_{UnoccBase}}{Eff\times 1{,}000\,{}^{mbtu}/_{mmbtu}}\right)\times {}^{\$}/_{mmbtu}\right]$$

$$HeatPost = \sum_{buildings}\left[\sum_{Bin}^{Heating}\left(\frac{Load_{Occ\,Retro}\times Hrs_{OccBase}+Load_{Unocc\,Retro}\times Hrs_{UnoccBase}}{Eff\times 1{,}000\,{}^{mbtu}/_{mmbtu}}\right)\times {}^{\$}/_{mmbtu}\right]$$

$$Cooling = CoolBase - CoolPost$$

$$CoolBase = \sum_{buildings}\left[\sum_{Bin}^{Cooling}\left(\frac{Load_{OccBase}\times Hrs_{OccBase}+Load_{UnoccBase}\times Hrs_{UnoccBase}}{COP\times 3.413\,{}^{mbtu}/_{kWh}}\right)\times {}^{\$}/_{kWh_{(peak\,/\,offpeak)}}\right]$$

$$CoolPost = \sum_{buildings}\left[\sum_{Bin}^{Cooling}\left(\frac{Load_{Occ\,Retro}\times Hrs_{OccBase}+Load_{Unocc\,Retro}\times Hrs_{UnoccBase}}{COP\times 3.413\,{}^{mbtu}/_{kWh}}\right)\times {}^{\$}/_{kWh_{(peak\,/\,offpeak)}}\right]$$

Where:

$Load_{OccBase}$ - Building load per bin, (mbtu/hr) under current conditions during occupied hours, as per calculation in the energy audit

$Load_{UnoccBase}$ - Building load per bin, (mbtu/hr) under current conditions during unoccupied hours, as per calculation in the energy audit

$Load_{OccRetro}$ - Building load per bin, (mbtu/hr) with new wall, as per calculation in the energy audit

$Load_{UnoccRetro}$ - Building load per bin, (mbtu/hr) with new wall, as per calculation in the energy audit

$Hrs_{OccBase}$ - Baseline heating and cooling bin hours during occupied period broken out into peak and offpeak, as per calculation in the energy audit

$Hrs_{UnoccBase}$ - Baseline heating and cooling bin hours during unoccupied period broken out into peak and offpeak, as per calculation in the energy audit

Eff - Heating system efficiency, as per calculation in the energy audit

"Page content is subject to Confidentiality Restrictions"

COP - Cooling system coefficient of performance, as per calculation included in the energy audit
$/kWh$_{peak}$ - Unit cost of peak electric energy, as per Unit Prices section
$/kWh$_{offpeak}$ - Unit cost of offpeak electric energy, as per Unit Prices section
$/mmbtu - Unit cost of fossil fuel, as per Unit Prices section

Metering Plan

No measurements will be taken for this ESM.

"Page content is subject to Confidentiality Restrictions"

ESM 28: Induction Unit Replacement

Energy Savings Calculation Methodology

Savings Algorithm:

$$Savings = Baseline - PostInstallation$$

$$Baseline = \sum_{Building} \left(Electric_{Base} \times \$/kWh_{peak} + Fuel_{Base} \times \$/mmbtu \right)$$

$$Postinstallation = \sum_{Building} \left(Electric_{Post} \times \$/kWh_{peak} + Fuel_{Post} \times \$/mmbtu \right)$$

Where:

$Electric_{Base}$ - Electric usage based on existing system, as per calculation in energy audit
$Electric_{Post}$ - Electric usage based on proposed system, as per calculation in energy audit
$Fuel_{Base}$ - Fossil fuel usage based on existing system, as per calculation in energy audit
$Fuel_{Post}$ - Fossil fuel usage based on proposed system, as per calculation in energy audit
$/mmbtu - Unit price of fossil fuel, as per the Unit Prices section
$/$kWh_{peak}$ - Unit cost of peak electric energy, as per Unit Prices section

Metering Plan

No measurements will be taken for this ESM.

ESM 33: WPCP – Aeration Control Improvement

Energy Savings Calculation Methodology

Savings Algorithm:

$$Savings = Baseline - PostInstallation$$

$$Baseline = \sum_{Building} \left(Electric_{Base_{(peak\ /\ offpeak)}} \times {\$}/{kWh_{(peak\ /\ offpeak)}} \right)$$

$$Postinstallation = \sum_{Building} \left(Electric_{Post_{(peak\ /\ offpeak)}} \times {\$}/{kWh_{(peak\ /\ offpeak)}} \right)$$

Where:

$Electric_{Base}$ - Electric usage based on existing system, as per calculation in the energy audit

$Electric_{Post}$ - Electric usage based on proposed system, as per calculation in the energy audit

$/kW - Unit cost of electric demand, as per Unit Prices section

$/kWh$_{peak}$ - Unit cost of peak electric energy, as per Unit Prices section

$/kWh$_{offpeak}$ - Unit cost of offpeak electric energy, as per Unit Prices section

Metering Plan

No measurements will be taken for this ESM.

"Page content is subject to Confidentiality Restrictions"

ESM 34: WPCP – Install High Speed Turbo Blower

Energy Savings Calculation Methodology

Savings Algorithm:

$$Savings = Baseline - PostInstallation$$

$$Baseline = \sum_{Building} \left(kW \times Hours_{(peak/offpeak)} \times {}^{\$}/_{kWh_{(peak/offpeak)}} \right)$$

$$Postinstallation = \sum_{Building} \left(Usage_{(peak/offpeak)} \times {}^{\$}/_{kWh_{(peak/offpeak)}} \right)$$

Where:

kW	-	Base motor kW, as per calculation in the energy audit
Hours	-	Run hours of applicable motor broken out into peak and off peak, as per calculation in the energy audit
Usage	-	Energy usage of motor with VFD control, broken out into peak and offpeak, as per calculation in the energy audit
$\$/kWh_{peak}$	-	Unit cost of peak electric energy, as per Unit Prices section
$\$/kWh_{offpeak}$	-	Unit cost of offpeak electric energy, as per Unit Prices section

Metering Plan

No measurements will be taken for this ESM.

"Page content is subject to Confidentiality Restrictions"

ESM 38: Street Lighting

Energy Savings Calculation Methodology

Savings Algorithm:

$$Savings = BaselineEnergy - PostEnergy$$

$$BaselineEnergy = \sum_{buildings} \sum_{fixtures} \left(kW_{Base} \times Hrs_{Base(\,peak\,/\,offpeak)} \times \$/kWh_{(\,peak\,/\,offpeak)} \right)$$

$$PostEnergy = \sum_{buildings} \sum_{fixtures} \left(kW_{Retro} \times Hrs_{Base(\,peak\,/\,offpeak)} \times \$/kWh_{(\,peak\,/\,offpeak)} \right)$$

Where:

kW_{Base} - Base fixture kW, as per lighting audit calculation included in the energy audit

kW_{Retro} - Retrofit fixture kW, as per lighting audit calculation included in the energy audit, subject to metering described below

Hrs_{Base} - Baseline fixture operating hours broken out into peak and offpeak, as per lighting audit calculation included in the energy audit

$\$/kWh_{peak}$ - Unit cost of peak electric energy, as per Unit Prices section

$\$/kWh_{offpeak}$ - Unit cost of offpeak electric energy, as per Unit Prices section

Metering Plan

No measurements will be taken for this ESM. Ameresco will inventory the post-installation fixtures and submit them to the utility in order to update the charges imposed by the utility and verify the City is properly billed. The inventory will be used to prove to the utility that the installed fixtures meet the applicable "bin" in the rate tariff.

"Page content is subject to Confidentiality Restrictions"

Measurement and Verification Report Services

ESM 1: Lighting System Improvements - Interior

Ameresco will perform a yearly site inspection of a sampling of the lighting systems to ensure that the lamp and ballast technologies that were installed are in operation and that future replacement lamps and ballasts are at least as efficient as the Ameresco installed technologies. The observations during this inspection will be made part of the Annual Reconciliation Report.

ESM 2: Lighting System Improvements - Exterior

Ameresco will perform a yearly site inspection of a sampling of the lighting systems to ensure that the lamp and ballast technologies that were installed are in operation and that future replacement lamps and ballasts are at least as efficient as the Ameresco installed technologies. The observations during this inspection will be made part of the Annual Reconciliation Report.

ESM 3: Lighting Controls

Ameresco will perform a yearly site inspection of a sampling of the lighting controls to ensure that the sensors are in place and operational. The observations during this inspection will be made part of the Annual Reconciliation Report.

ESM 4: Integrated and New Energy Management Systems

Ameresco will inspect the energy management system both quarterly and annually, as part of its site inspection. A review of available trend data will be performed, and a visual inspection of major control areas will be completed. Observations identified during the site inspection shall be incorporated into the annual reconciliation report.

Annual Inspection Procedures (General)

- Confirm that the system/equipment is functional and operating as intended.
- Verify that the system is being properly maintained. Review current O&M practices to ensure compliance with the contract requirements.
- Review current or past problems with the system, especially those that may affect energy savings.
- Identify any building renovations or changes in the facility operation during the past year that would affect the project performance and/or savings.

Quarterly Inspection Procedures (EMS)

- Review trend logs and compare with the standards established in the ESA.
- Review the notification history for set-points and occupancy schedules that have been modified since the last inspection.
- Recommend set-point and schedule adjustments – particularly those that do not comply with the contract standards.

"Page content is subject to Confidentiality Restrictions"

- Review the basic system operation with new personnel and recommend training, if necessary.
- Review alarm history and discuss possible reasons and corrections.

ESM 6: Demand Control Ventilation

The ongoing monitoring for the new CO_2 sensors will be completed with ESM-4, only for sensors connected to a direct digital control system with trending capability.

ESM 12: Variable Frequency Drives

Ameresco will perform a yearly site inspection of the installed VFDs to ensure they are operational. The observations during this inspection will be made part of the Annual Reconciliation Report.

ESM 13: Transformer Replacements

Ameresco will perform a yearly site inspection of a sampling of the transformers to ensure they are in operation and that future replacement transformers are at least as efficient as the Ameresco installed technologies. The observations during this inspection will be made part of the Annual Reconciliation Report.

ESM 14: Steam Trap Measures

Ameresco will perform a yearly site inspection of a sampling of the installed steam traps to ensure they are in operation. If the steam systems are operational during the site visit, thermographic images will be taken to verify trap operation. The observations during this inspection will be made part of the Annual Reconciliation Report.

ESM 15: Pipe & Equipment Insulation

Ameresco will perform a yearly site inspection of a sampling of the installed insulation to ensure it is installed. The observations during this inspection will be made part of the Annual Reconciliation Report.

ESM 18: Window Replacements

Ameresco will perform a yearly site inspection of the installed windows to ensure they are functional and remain as installed. The observations during this inspection will be made part of the Annual Reconciliation Report.

ESM 21: Boiler Replacements

Ameresco will perform a yearly site inspection of the new boilers and burners to verify they are operational. Ameresco will also inspect available maintenance logs to verify proper maintenance is occurring. The observations during this inspection will be made part of the Annual Reconciliation Report.

ESM 23: Steam to Hot Water Conversion

Ameresco will perform a yearly site inspection of the new boilers and new heating coils to verify they are operational. Ameresco will also inspect available maintenance logs to verify proper maintenance is occurring. The observations during this inspection will be made part of the Annual Reconciliation Report.

"Page content is subject to Confidentiality Restrictions"

ESM 26: Condensing Unit Replacement

Ameresco will perform a yearly site inspection of the new condensing unit to verify it is operational. Ameresco will also inspect available maintenance logs to verify proper maintenance is occurring. The observations during this inspection will be made part of the Annual Reconciliation Report.

ESM 27: AHU Replacement

Ameresco will perform a yearly site inspection of the air handling units to ensure they are operational. The observations during this inspection will be made part of the Annual Reconciliation Report.

ESM 28: Induction Unit Replacement

Ameresco will perform a yearly site inspection of the new induction units to verify they are operational. Ameresco will also inspect available maintenance logs to verify proper maintenance is occurring. The observations during this inspection will be made part of the Annual Reconciliation Report.

ESM 33: WPCP – Aeration Control Improvement

Ameresco will inspect the updated aeration control system annually, as part of its site inspection. A review of available trend data will be performed, and a visual inspection of major control areas will be completed. Observations identified during the site inspection shall be incorporated into the annual reconciliation report.

Annual Inspection Procedures (General)

- Confirm that the system/equipment is functional and operating as intended.
- Verify that the system is being properly maintained. Review current O&M practices to ensure compliance with the contract requirements.
- Review current or past problems with the system, especially those that may affect energy savings.
- Identify any building renovations or changes in the facility operation during the past year that would affect the project performance and/or savings.
- Review the basic system operation with new personnel and recommend training, if necessary.
- Review alarm history and discuss possible reasons and corrections.

ESM 34: WPCP – Install High Speed Turbo Blower

Ameresco will perform a yearly site inspection of the high speed turbo blower to ensure it is operational. Ameresco will also inspect available maintenance logs to verify proper maintenance is occurring. The observations during this inspection will be made part of the Annual Reconciliation Report.

ESM 38: Street Lighting

Ameresco will perform a yearly site inspection of a sampling of the lighting systems to ensure that the lamp and ballast technologies that were installed are in operation and that future replacement lamps and ballasts are at least as efficient as the Ameresco installed technologies. The observations during this inspection will be made part of the Annual Reconciliation Report.

"Page content is subject to Confidentiality Restrictions"

Operations and Maintenance Savings

$$AnnualSavings = \$MAINT/_{year} \times (1 + Esc)^{(CurrentYear - 2015)}$$

The maintenance savings breakdown per measure is as follows:

ESM	$MAINT/year
ESM 1: Lighting System Improvements - Interior	$31,391
ESM 2: Lighting System Improvements – Exterior	$380
ESM 21: Boiler Replacement	-$3,386
ESM 23: Steam to Hot Water Conversion	-$6,772
ESM 38: Street Lighting	$78,987
Totals	**$**100,600

ESM 1 & 2 O&M savings are based on reduced material replacements costs due to replacing old lamps and ballasts with new.

ESM 21 & 23 O&M savings are based on switching from oil to gas and the increased fixed gas costs that will be assessed by the utility.

ESM 38 O&M savings are based on switching from the utility owned tariff to the customer owned tariff.

The variable "Esc" equals 3.0% for the term of the project and is described in the Unit Prices section.

"Page content is subject to Confidentiality Restrictions"

Unit Prices Section

The following base unit prices are based on unit prices for the City, as provided for purposes of this project. These unit prices were utilized in calculating the financial savings associated with modified energy use.

Electricity Costs:

$$\$/_{kW} = Base_kW \times (1+Esc)^{(CurrentYear-2015)}$$

$$\$/_{kWh_{peak}} = Base_kWh_{peak} \times (1+Esc)^{(CurrentYear-2015)}$$

$$\$/_{kWh_{offpeak}} = Base_kWh_{offpeak} \times (1+Esc)^{(CurrentYear-2015)}$$

The base for each location is listed in the Utility Rate Table.

Fossil Fuel Costs:

$$\$/_{mmbtu_{gas}} = \frac{Base_gas}{100\, mbtu/_{Therm}} \times (1+Esc)^{(CurrentYear-2015)}$$

$$\$/_{mmbtu_{2oil}} = \frac{Base_oil}{138.7\, mbtu/_{Gal}} \times (1+Esc)^{(CurrentYear-2015)}$$

$$\$/_{mmbtu_{propane}} = \frac{Base_propane}{91.3\, mbtu/_{Gal}} \times (1+Esc)^{(CurrentYear-2015)}$$

The base for each location is listed in the Utility Rate Table.

Water Costs:

$$\$/_{kgal} = (Base_water + Base_sewer) \times (1+Esc)^{(CurrentYear-2015)}$$

The base for each location is listed in the Utility Rate Table.

Utility Escalation:

$$Esc = 3.0\%/_{yr}$$

For the purposes of the calculations set forth in this verification plan, the Parties stipulate that all Base Year utility rates and avoided maintenance cost savings shall be cumulatively escalated at three percent (3.0%) for each successive twelve (12) month period commencing with the first twelve (12) month period following the date of the energy audit. This escalation rate will be fixed for the full term of the project and applied annually to all energy unit prices.

Utility Rate Table:

The following table presents the floor utility rates to be used for calculating the energy cost savings, per building, associated with this project, unless modified by the tables following below. These utility rate tables are considered the floor rates. The rates used for calculating the annual energy cost savings will be the greater of the floor rates or the current rates in effect during the period covered by the Annual Reconciliation Report.

Facility	Electric Demand $/kW	Electric Peak $/kWh	Electric Off-Peak $/kWh	Natural Gas $/CCF	#2 Fuel Oil $/Gallon
Bristol Central High School	$16.34	$0.1825	$0.1511		$2.75
Bristol Eastern High School	$16.47	$0.1056	$0.1032	$0.5571	
Chippens Hill Middle School	$11.10	$0.1300	$0.1087	$0.5571	
Northeast Middle School	$19.02	$0.1043	$0.1043		$2.75
West Bristol K8 School	$16.47	$0.1056	$0.1032		
Green-Hills K8 School	$16.47	$0.1056	$0.1032		
Ellen P. Hubbell Elementary School	$19.02	$0.1043	$0.1043		$2.75
Stafford Elementary School	$ -	$0.1692	$0.1692		$2.75
Ivy Drive Elementary School	$ -	$0.1692	$0.1692	$0.5571	
Edgewood Elementary School	$19.02	$0.1043	$0.1043		$2.75
Mountain View Elementary School	$ -	$0.1692	$0.1692	$0.6264	
South Side Elementary School	$ -	$0.1692	$0.1692	$0.5571	
Board of Education Administration Building & Warehouse	$19.02	$0.1043	$0.1043	$0.6264	
City Hall & Annex	$11.10	$0.1106	$0.0893	$0.5953	$2.75
Water Main Office & Garage	$19.02	$0.0849	$0.0849		$2.75
Water Filtration Plant & High Service Pump Station	$11.10	$0.1106	$0.0893		$2.75
#1 Well House	$19.02	$0.0849	$0.0849		
#2 Well House	$8.26	$0.0845	$0.0845		
Chemical Control, Generator & #3-5 Well Houses	$8.26	$0.0845	$0.0845		
Chemical Control - Mechanic St	$ -	$0.1933	$0.1933		
Pump Control - Peck Lane	$19.02	$0.0849	$0.0849		
Pump Control & Generator - Hill St.	$19.02	$0.0849	$0.0849		$2.75
Pump and Control - Wolcott St	$19.02	$0.0849	$0.0849		
Police Court & Parking Garage	$11.10	$0.1106	$0.0893	$0.5831	$2.75
Rockwell Park & Pavilion	$19.02	$0.0849	$0.0849		$2.75
Muzzy Field	$15.54	$0.1139	$0.0900		
Ski Lodge	$19.02	$0.0849	$0.0849		
Page Park Pavilion	$19.02	$0.0849	$0.0849		$2.75
Recreation Building	$19.02	$0.0849	$0.0849		
Dennis Malone Aquatic Center	$19.02	$0.0849	$0.0849	$0.5571	
Fire Head Quarters	$19.02	$0.0849	$0.0849	$0.7001	

"Page content is subject to Confidentiality Restrictions"

Engine 2	$19.02	$0.0849	$0.0849		$2.75
Engine 3	$19.02	$0.0849	$0.0849	$0.8423	
Engine 5	$19.02	$0.0849	$0.0849		$2.75
Beals Senior Center	$11.10	$0.1106	$0.0893	$0.5571	
Main Library	$11.10	$0.1106	$0.0893	$0.6264	
Manross Library	$19.02	$0.0849	$0.0849	$0.6264	
Youth Services Building	$19.02	$0.1304	$0.1304		$2.75
Animal Control	$19.02	$0.1304	$0.1304	$0.8423	
Hill Street	$19.02	$0.0849	$0.0849		
City Yard	$19.02	$0.0849	$0.0849	$0.6264	$2.75
Transfer Stations - Lake Ave	$19.02	$0.0849	$0.0849		
Water Pollution Control Park	$16.47	$0.0861	$0.0838	$0.5571	
Remote Pumping Stations	$19.02	$0.0849	$0.0849		
Street Lighting	Exiting Rate $0.10068, Proposed Rate $0.10054				

"Page content is subject to Confidentiality Restrictions"

Utility Rates for Thermal Savings:

The following table presents the fuels to be used for each ESM having thermal savings.

ESM	ESM 1: Lighting	ESM 3: Lighting Controls	ESM 4: EMS	ESM 6: DCV	ESM 14: Steam Traps	ESM 15: Pipe Insulation	ESM 18: Windows	ESM 21: Boilers	ESM 23: Steam to HW	ESM 27: AHUs	ESM 28: Induction Units
Central High	O	O		O	O	O					
Eastern High	G	G		G	G	G					
Chippens	G	G		G		G					
NE Middle	O										
Hubbell	O										
Stafford	O										
Ivy Drive	G										
Edgewood	O										
Mt. View	G										
South Side	G	G		G							
Admin	G										
City Hall	O		GO	O			O		GO		O
Water Main	O										
Filtration	O										
P Control Hill	O										
Police	O		O	O					G/O		
Rockwell Park	O										
Page Park	O										
Aquatic	G										
Fire HQ	O							G/O			
Engine_2	O										
Engine_3	G										
Engine_5	O										
Senior	G	G	G								
Main Library	G	G	G								

"Page content is subject to Confidentiality Restrictions"

ESM	ESM 1: Lighting	ESM 3: Lighting Controls	ESM 4: EMS	ESM 6: DCV	ESM 14: Steam Traps	ESM 15: Pipe Insulation	ESM 18: Windows	ESM 21: Boilers	ESM 23: Steam to HW	ESM 27: AHUs	ESM 28: Induction Units
Manross Library	G		G							G	
Youth	O		O								
Animal	G										
City Yard	G										
Water Pollution	G										
Pool	O										

Gas = G
Oil = O

"Page content is subject to Confidentiality Restrictions"

CONTACTS:

Ameresco Inc.

111 Speen Street, Suite 410

Framingham, MA 01701

T: 508.661.2200 • F: 508.661.2201

Name of contact person in the firm:

James Daylor, Senior Account Executive

T: 508.598.3035

ameresco.com

AMERESCO
Green • Clean • Sustainable

©2015 Ameresco Inc. Ameresco, the Ameresco logo, the orb symbol and the tagline “Green. Clean. Sustainable.” Are registered in the U.S. Patent and trademark Office. All rights reserved.

PP-5440-00-0-/13-06-00.9