

City of Redmond Upgrades; Lighting to LED and Public Safety Building Heat Pumps

Investment Grade Audit

REDMOND, WASHINGTON

SEPTEMBER 20, 2019

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5.1 PURPOSE AND ORGANIZATION

This exhibit documents the analysis performed to establish the utility and operational savings for the project.

The information is organized by FIM (Facility Improvement Measure) as follows:

- FIM Narrative with key assumptions and criteria
- Savings calculation methodology and analysis

Additionally, relevant site survey data, measurement and verification data, utility information and miscellaneous back-up information are provided in the sections following the various FIM sections.



5.2 EXISTING FACILITY DESCRIPTION

REDMOND PUBLIC SAFETY BUILDING

Building Overview

The Redmond Public Safety Building (PSB) is a two-story office building with an underground parking garage. The conditioned gross area of the building is 53,328 ft² and the parking garage below is 41,647 ft². The building was originally constructed in 1990. A laboratory and a vehicle bay was added to the building through 2006 and 2007. Most of the building is dedicated to the Redmond Police Department and its support offices. Areas and functions of the building include a city jail, a 911 Emergency Dispatch center, an auditorium, detective and administrative offices as well as a community outreach office. While the building is open to public access from 7:30AM to 6:00PM, due to the nature of the building's multiple functions operation is 24 hours a day, 7 days a week.



Figure 1: Main Entrance to Redmond PSB

Electricity

Plug load use is above average for an office building due to the 911 Dispatch center as well as the jail. The 911 Dispatch center has multiple workstations suited with computer towers and laptops. Most workstations have between 6 to 9 monitors as well a space heater. Several television monitors surround the room displaying local and national news networks around the clock. Electricity is provided and metered by Puget Sound Energy. During the period of 5/1/2016 through 5/1/2019, the building consumed about 1,475,500 kWh per year. As of this study, the General Service Rate was approximately \$0.073/kWh and a demand rate at \$8.51 per kW. Using those rates as the basis of energy cost, the annual electricity cost for the Redmond PSB was about \$126,100 for the same period. See Section 5.5 for detailed utility history.

Envelope

The Redmond PSB is roughly a rectangular-shaped building. The roof is comprised of a steel deck with board insulation on top and either pitched metal or torch down roofing. External wall construction is metal frame with batt insulation and exterior stucco. Floor construction is slab on grade on the first floor at ground level and concrete floors on steel deck between floors and above the parking garage. The fenestration is double-pane glass with aluminum framing and makes up about 9% of gross wall area from floor to floor. Most of the first and second floors are 12 feet, floor to floor with 9-foot-high t-bar acoustical tile ceilings.



Lighting

In the City of Redmond Phase 1 project, McKinstry upgraded the existing 32-Watt T8 fixtures with LED lamp and drivers. Typical interior lighting is recessed 2 feet by 4 feet prismatic lens fixtures with two LED lamps and driver. Some stairways and all exterior lights are high intensity discharge fixtures. There are no occupancy or daylighting controls currently in the building. See the lighting audit summary for more detail.



Figure 2: Typical Interior Lighting

HVAC

Redmond PSB is served by sixty-three water source heat pumps (WSHP). Most heat pumps are located in ceiling plenums and mechanical mezzanines. As part of the Phase 1 project, 15 WSHPs were replaced and re-positioned as needed with higher efficiency models. Return air is directed through an open ceiling plenum to main return ducts. Heat pumps are connected to a hydronic loop and features two gas-fired boilers, a cooling tower and two condenser water circulation pumps. One large Air Handling Unit (AHU-1) serves the bulk of the building's ventilation. The evidence garage to the northwest is served by two roof top units. Parking garages are served by gas-fired overhead unit heaters and a set of exhaust fans and intake louvers. The gun range located in the northeastern corner of the parking garage is served by a gas-fired make-up air unit and an industrial exhaust fan.



Figure 3: Typical Heat Pump and Exterior Cooling Tower



HVAC Controls

Redmond PSB is controlled by the campus DDC system and allows for constant monitoring of the most of the building's heat pumps and thermostats, some heat pumps are not visible. Trend data and set point information is also available through the DDC system, but is limited. Heat pump set points are generally at set points between 65°F and 74°F, with most around 69°F. Heat pumps are on 24 hours a day, 7 days a week.

The City of REDMOND	5-Sep-2019 6:34 AM
UNC Time Change Web Page	OSA 61.8 T
Senior Center 74.30 Highest Room Temp	Public Safety 74.93 Highest Room Temp
20.89 Average Room Temp 69.17 Lowest Room Temp 68 T Night Set Back Set Point	70.35 Average Room Temp 66.42 Lowest Room Temp Level Two East
Override Compressors Off	Heat Pumps 1 Heat Pumps 2
Hydronics Heat Pumps	Schedule On 911 Server Rm
Floor Plan N Floor Plan S Boiler Alarm Normal L00 Classic fum for Pump Alarm Normal L00	City Server Rm
Pump Alarm Normal Los Community Center Click here if inside sity of Redmond Network Click here if outside sity of Redmond Network	Computer Room 237 68.33 % 51.62 %RH Computer Room 220 70.22 % 48.48 %RH Alarm1 Normal Reset Off
S300 Derver Ave. S. Seattle Washington 98109 (206) 328-1730	Alarm 2 Normal GR Sump 5 Normal GR Sump 6 Normal GR Sump 7 Normal

Figure 4: DDC Dashboard

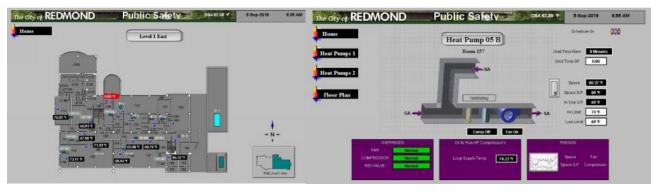


Figure 5: Level 1 Thermostat Data and HP-05B Interface



REDMOND CITY HALL

Building Address: 15670 NE 85th St, Redmond, WA 98052

Building Area: 107,212 ft²

Property Type: Office



Figure 6: Redmond City Hall

FIRE STATION 14

Building Address: 5021 264th Ave NE, Redmond, WA 98053

Building Area: 9,441 ft²

Property Type: Fire Station



Figure 7: Fire Station 14



FIRE STATION 16 & SHOP

Building Address: 6502 185th Ave NE, Redmond, WA 98052 Building Area: 9,852 ft² (Fire Station), 5,625 ft² (Shop) Property Type: Fire Station



Figure 8: Fire Station 16

FIRE STATION 17

Building Address: 16917 NE 116th St, Redmond, WA 98052

Building Area: 16,899 ft²

Property Type: Fire Station



Figure 9: Fire Station 17



FIRE STATION 18

Building Address: 22710 Alder Crest Dr, Redmond, WA 98053

Building Area: 7,714 ft²

Property Type: Fire Station



Figure 10: Fire Station 18

REDMOND TEEN CENTER

Building Address: 16510 NE 79th St, Redmond, WA 98052

Building Area: 8,650 ft²

Property Type: Community Center



Figure 11: Teen Center



MOC CAMPUS

Building Address: 18080 NE 76th St, Redmond, WA 98052

Building Area: 42,000 ft²

Property Type: Office/Warehouse/Storage/Shop



Figure 12: MOC Campus



5.3 FACILITY IMPROVEMENT MEASURES – CALCULATIONS FIM # 03.01-PSB: PH 2 UPGRADES OF HEAT PUMPS FIM # 09.01-VAR: UPGRADE LIGHTING TO LED

For The Life Of Your Building

Facility Improvement Measure (FIM) Detail



Project	City of Redmond Lightin	g	
Scenario	Lighting and PSB Heat		For The Life Of Your Building
Date	September 20, 2019		
FIM ID	41866	Facility	Redmond Public Safety Building
FIM Name	03.01-PSB: Ph 2 Upgrad	les of Heat Pumps	
FIM Description			
heat pumps, as well as aut Replace one (1) 25 hp con	tomatic shutoff valves to denser water pump with to remain as emergency	convert the condenser water a high efficiency pump and v	nodels. Provide manual shutoff valves for the new - loop to variable flow per the WA Energy Code. variable frequency drive (VFD). Second existing 25 red pump. Provide new controls for the thirteen (13)
Savings Methodology Whole building energy mod efficiencies.	del using eQUEST v.3.65	, comparing existing heat pu	mp efficiencies with the proposed heat pump

Confidential & Proprietary

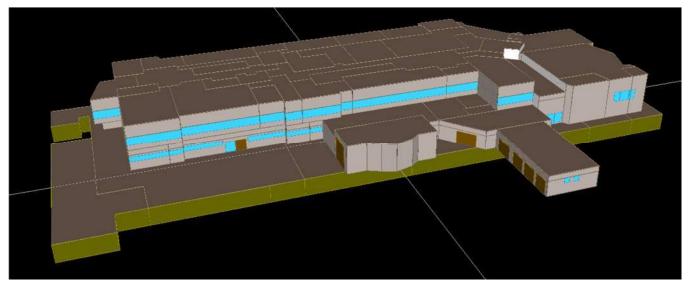
FIM 03.01-PSB: Ph 2 Upgrades of Heat Pumps

EQUEST MODEL

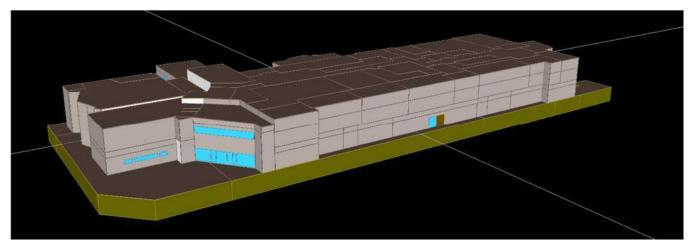
An eQUEST energy simulation model was generated for the Redmond Public Safety Building Phase 2 Heat Pump calculation to simulate energy consumption over a year period. The model was calibrated using recently utility bills. The model is updated to include the heat pumps that were upgraded during the Phase 1 Project.

Building Geometry

See the figures below for images of the Redmond Public Safety Building's model geometry. The model's zoning is based on the HVAC zoning.



North Facade



South Façade



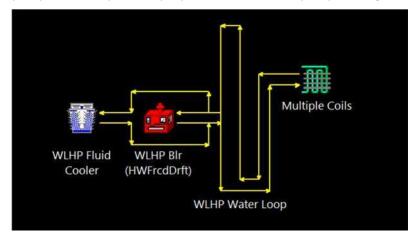
Air-Side HVAC

The air-side systems at the Public Safety Building were modeled as water to water heat pumps. Existing and proposed unit sizes and efficiencies were based on as-built drawings from previous phases of work, site survey information, and proposed submittal information. The zones are modeled to represent the space that the heat pumps are serving.



Water-Side HVAC

The water-side HVAC is modeled to include the water loop boiler and cooler serving the water-source heat pump water loop. In the proposed scenario, the pump serving the water loop has variable speed control.





Proposed Changes

Unit	Baseline	Proposed
HP-5A	 COUEST DD Wizard: Air-Side System Type HP-SA (F) Packaged HVAC Equipment HVAC System 1: Water-Source HP (single/multi-zone) Cooling Overall Size: Specify . 2.5 tr Typical Unit Size: > 135 kBtuh or 11.25 tons . Efficiency: EER . 10.300 IF Allow Crankcase Heating Heating Size: Specify . 36.6 kBtuh Efficiency: COP . 3.700 Wizard Screen 3 of 7 . Wizard Screen 3 of 7 . COUEST DD Wizard: Air-Side System Type HP-SA (F) HVAC System Fans System(s): 1: Water-Source HP (single/multi-zone) Supply Fans Power & Mtr Eff: 1.000 cfm 10.00% OSA Return Fans © None C Return C Relief 	 eQUEST DD Wizard: Air-Side System Type HP-SA (F) Packaged HVAC Equipment HVAC System 1: Water-Source HP (single/multi-zone) Cooling Overall Size:
	Wizard Screen 4 of 7 💌	Wizard Screen 4 of 7 🔽 🛞 Help 💽 Previous Screen



Unit	Baseline	Proposed
	▶ eQUEST DD Wizard: Air-Side System Type HP-5B (H)	🔿 eQUEST DD Wizard: Air-Side System Type HP-58 (H)
	Packaged HVAC Equipment	Packaged HVAC Equipment
		HVAC System 1: Water-Source HP (single/multi-zone)
	HVAC System 1: Water-Source HP (single/multi-zone)	HVAC System 1: Water-Source PP (single/multi-zone)
	Cooling	Cooling
	Overall Size: Specify 3.5 tr	Overall Size: Specify - 3.5 tr
	Typical Unit Size: > 135 kBtuh or 11.25 tons	Typical Unit Size: > 135 kBtuh or 11.25 tons
	Albear one acces (> 133 resent or 11123 runs	
		Efficiency: EER V 14,900
	Efficiency: EER 💽 10,400	
	Allow Crankcase Heating	Allow Crankcase Heating
	Heating	Heating
	Size: Specify Size: 51.6 kBtuh	Size: Specify 💌 50.4 kBtuh
	Efficiency: COP V 3.800	Efficiency: COP - 4.500
	Wizard Screen 3 of 7 -	Wizard Screen 3 of 7 💌
HP-5B		
пр-эр	eQUEST DD Wizard: Air-Side System Type HP-5B (H)	eQUEST DD Wizard: Air-Side System Type HP-58 (H)
	HVAC System Fans	HVAC System Fans
	System(s): 1: Water-Source HP (single/multi-zone) 654 SqFt Served (all perimeter)	System(s): 1: Water-Source HP (single/multi-zone) 654 SqFt Served (all perimeter)
	Supply Fans	Supply Fans
	and but the second se	
	Power & Mtr Eff: I.OB in. WG 💌 Standard 💌	Power & Mtr Eff: LOE in. WG V Premium
	Fan Flow & OSA: 1,450 cfm 10.00% OSA	Fan Flow & OSA: 1,450 cfm 10.00% OSA
		Law Strategies
	Return Fans	Return Fans
	None C Return C Relief	- Hone - Peters
		Wizard Screen 4 of 7 · • (2) Help
	Wizard Screen 4 of 7 💌	Wizard Screen 4 of 7 💌



Packaged HVAC Equipment HVAC System 1: Water-Source HP (single/multi-zone) HVAC System 1: Water-Source HP (single/multi-zone) Cooling Overall Size: Specify ● 0.6 tr Overall Size: Solong Overall Size: > 135 kBtuh or 11.25 tons ● Image: Specify ● 11.000 Image: Specify ● Size: <	Proposed
HVAC System Fans HVAC System Fans System(s): 1: Water-Source HP (single/multi-zone) 481 SqFt Served (all perimeter) Supply Fans Supply Fans Supply Fans Power & Mtr Eff: DLG2 in. WG • Standard • Fan Flow & OSA: 350 cfm 10.00% OSA Return Fans Return Fans	Water-Source HP (single/multi-zone) Specify O.7 tt > 135 kBtuh or 11.25 tons EER Allow Crenkcase Heating Specify Allow Crenkcase Heating Allow Crenkcase Heating



	ard: Air-Side System Type HP-98 (H) AC Equipment 1: Water-Source HP (single/multi-zone)	eQUEST DD Wizard: Air-Side System Type HP-9B (H) Packaged HVAC Equipment
Cooling	e: Specify ▼ 3.5 tx t Size: > 135 kBtuh or 11.25 tons ▼ EER ▼ 10.400 ♥ Allow Crankcese Heating Specify ▼ 51.6 kBtuh COP ▼ 3.800 3 of 7 .▼ @ Help E Previous ard: Air-Side System Type HP-98 (H) a Fans 1: Water-Source HP (single/multi-zone) 1,299 SqR Served (all core) 1,299 SqR Served (all core) tr Eff: 1000 n. WG ♥ Standard ♥ 1,450 cfm 10.00% OSA • None C Return C Relief	HVAC System 1: Water-Source HP (single/multi-zone) Cooling 2.0 tr Overall Size: >135 kBtuh or 11.25 tons Efficiency: EER Wizerd Screen 3 of 7 • Wizerd Screen 3 of 7 •



Unit	Baseline	Proposed
HP-17B	Baseline eQUEST DD Wizard: Air-Side System Type HP-178 (C) Packaged HVAC Equipment HVAC System 1: Water-Source HP (single/multi-zone) Cooling Overall Size: Specify ■ 1.2 tr Typical Unit Size: > 135 k8tuh or 11.25 tons ■ Efficiency: EER ■ 10.400	Proposed ■ eQUEST DD Wizard: Air-Side System Type HP-178 (C) Packaged HVAC Equipment HVAC System 1: Water-Source HP (single/multi-zone) Cooling Overall Size: Decedy III State: III State Efficiency: EER IIII State Efficiency: EER IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII



Unit	Baseline	Proposed
HP-24A	Wizard Screen 1 of 0.00% OBA Wizard Screen 1 of 0.00% OBA	eQUEST DD Wizard: Air-Side System Type HP-24A (B) Packaged HVAC Equipment HVAC System 1: Water-Source HP (single/multi-zone) Cooling Overall Size: Steed/ 13.500 F Allow Crankcase Heating Heating Size: Speedfy 15.2 kBtuh Efficiency: COP 4.300 Wizard Screen 3 of 7 Wizard Screen 3 of 7 Previous System(s): 1: Water-Source HP (single/multi-zone) Supply Pans Power & Mr Eff: If I water-Source HP (single/multi-zone) Supply Pans Power & Mr Eff: If I water-Source MP (single/multi-zone) Supply Pans Power & Mr Eff: If I water-Source MP (single/multi-zone) Supply Pans Power & Mr Eff: If I water-Source MP (single/multi-zone) Supply Pans Power & Mr Eff: If I water-Source MP (single/multi-zone) Supply Pans Power & Mr Eff: If I water-Source MP (single/multi-zone) Supply Pans Power & Mr Eff: If I water-Source MP (single/multi-zone) Supply Pans Power & Mr Eff: If I water-Source MP (single/multi-zone) Supply Pans Power & Mr Eff: If I water-Source MP (single/multi-zone) Supply Pans Power & Mr Eff: If I water-Source MP (single/multi-zone) Supply Pans Power & Mr Eff: If I water-Source MP (single/multi-zone) Pan Flow & OSA: 400 dfm 10.00% OSA Return Fans Power & Mr Eff: If I water-Source MP (single/multi-zone) If I water-Source MP (single/multi-zone)
		Wizard Screen 4 of 7 💽



Unit	Baseline	Proposed
	eQUEST DD Wizard: Air-Side System Type HP-25A (G)	🔿 eQUEST DD Wizard: Air-Side System Type HP-25A (G)
	Packaged HVAC Equipment	Packaged HVAC Equipment
	HVAC System 1: Water-Source HP (single/multi-zone)	HVAC System 1: Water-Source HP (single/multi-zone)
	Cooling Overall Size: Specify 3.0 tr Typical Unit Size: > 135 kBtuh or 11.25 tons	Cooling Overall Size: Specify 2.9 tr Typical Unit Size: > 135 kBtuh or 11.25 tons
	Efficiency: EER 10.600	Efficiency: EER 15.100
	Heating	Heating
	Size: Specify 38:6 kBtuh	Size: Specify 42.0 kBtuh
	Efficiency: COP 3.500	Efficiency: COP . 4.600
	Wizard Screen 3 of 7 -	Wizard Screen 3 of 7 🔽 🎯 Help 🔚 Previous Screen
HP-25A	💣 eQUEST DD Wizard: Air-Side System Type HP-25A (G)	★ eQUEST DD Wizard: Air-Side System Type HP-25A (G)
	HVAC System Fans	HVAC System Fans
	System(s): 1: Water-Source HP (single/multi-zone) 1,053 Sqft Served (all perimeter) Supply Fans	System(s): 1: Water-Source HP (single/multi-zone) 1,053 SqFt Served (all perimeter)
		Supply Fans
	Power & Mtr Eff: The fine WG - Standard - Fan Flow & OSA: 1,250 cfm 10.00% OSA	Power & Mtr Eff: TS in. WG Fan Flow & OSA: 1,250 cfm 10.00% OSA
	Return Fans . (* None C Return C Relief	Return Fans
	Wizard Screen 4 of 7	Wizard Screen 4 of 7 🔽 🛞 Help 🔚 Previous Screen



Unit	Baseline	Proposed
HP-26B	eQUEST DD Wizard: Air-Side System Type HP-268 (A) Packaged HVAC Equipment HVAC System 1: Water-Source HP (single/multi-zone) Cooling Overall Size: ●Becofy ● 0.8 ti Typical Unit Size: > 135 kBtuh or 11.25 tons ● Efficiency: EER ● 11.000	◆ CQUEST DD Wizard: Air-Side System Type HP-268 (A) Packaged HVAC Equipment HVAC System 1: Water-Source HP (single/multi-zone) Cooling 0.7 tr Overall Size: > 135 kBtuh or 11.25 tons Efficiency: EER 13.400 Vizard Size: > 135 kBtuh or 11.25 tons Size: Specify 11.6 kBtuh Efficiency: COP 4.300 Wizard Screen 3 of 7 . Wizard Screen Vizard Screen 3 of 7 . Wizard Screen System (s): 1: Water-Source HP (single/multi-zone) 237 SqRt Served (all perimeter) Supply Fans Power & Mtr Eff: 0.00 (m. WG = High = Power & Mtr Eff: 0.00 (m. WG = High = Size = Power & Mtr Eff: 0.00 (m. WG = High = Fan Flow & OSA = Size (r) None (° Return (° Relief None (° Return (° Relief
	Wizard Screen 4 of 7 💌	Wizard Screen 4 of 7 -



Unit	Baseline	Proposed
	eQUEST DD Wizard: Air-Side System Type HP-27A (G)	eQUEST DD Wizard: Air-Side System Type HP-27A (G)
	Packaged HVAC Equipment	Packaged HVAC Equipment
	HVAC System 1: Water-Source HP (single/multi-zone)	HVAC System 1: Water-Source HP (single/multi-zone)
	Cooling Overall Size: Specify 3.0 tr	Cooling Overall Size: Specify 2.9 tr
	Typical Unit Size: > 135 kBtuh or 11.25 tons	Typical Unit Size: > 135 kBtuh or 11.25 tons
	Efficiency: EER - 10.600	Efficiency: EER 15.100
	Allow Crankcase Heating	Allow Crankcase Heating
	Heating	Heating
	Size: Specify 38.6 kBtuh	Size: Specify - 42.0 kBtuh
	Efficiency: COP 3.500	Efficiency: COP • 4.600
	Wizard Screen 3 of 7 💽	Wizard Screen 3 of 7 • Wizard Screen 3 of 7 •
HP-27A	eQUEST DD Wizard: Air-Side System Type HP-27A (G)	🔥 eQUEST DD Wizard: Air-Side System Type HP-27A (G)
	HVAC System Fans	HVAC System Fans
	System(s): 1: Water-Source HP (single/multi-zone)	System(s): 1: Water-Source HP (single/multi-zone)
	1,046 SqFt Served (all perimeter)	1,046 SqFt Served (all perimeter)
	Supply Fans	Supply Fans
	Power & Mtr Eff: III III In, WG V Standard V	Power & Mtr Eff: III In. WG 💌 Premium 💌
	Fan Flow & OSA: 1,250 cfm 10.00% OSA	Fan Flow & OSA: 1,250 cfm 10.00% OSA
	Return Fans	Return Fans
	€ None C Return C Relief	
	Wizard Screen 4 of 7 💌 🛞 Help 🔛 Previous Screen	Wizard Screen 4 of 7 💌 🛞 Help 🚼 Previous Screen



Unit	Baseline	Proposed
	eQUEST DD Wizard: Air-Side System Type HP-33B (K)	eQUEST DD Wizard: Air-Side System Type HP-33B (K)
	Packaged HVAC Equipment	Packaged HVAC Equipment
	HVAC System 1: Water-Source HP (single/multi-zone)	HVAC System 1: Water-Source HP (single/multi-zone)
	Cooling Overall Size: Specify 10.2 tx Typical Unit Size: > 135 kBtuh or 11.25 tons	Cooling Overall Size: Specify I.3.3 tr Typical Unit Size: > 135 kBtuh or 11.25 tons
	Efficiency: EER 🔄 11.400	Efficiency: EER 9.900
	Heating	10.00 C
	Size: Specify 119.0 kBtuh	Heating Size: Specify T 160.0 kBtuh
	Efficiency: COP 3.300	Efficiency: COP . 4.600
HP-33B	Wizard Screen 3 of 7 -	Wizard Screen 3 of 7
пр-ээр	eQUEST DD Wizard: Air-Side System Type HP-33B (K)	n eQUEST DD Wizard: Air-Side System Type HP-33B (K)
	HVAC System Fans	HVAC System Fans
	System(s): 1: Water-Source HP (single/multi-zone) 2,914 SqFt Served (all perimeter) Supply Fans	System(s): 1: Water-Source HP (single/multi-zone) 2,914 SqPt Served (all perimeter) Supply Fans
	Suppry rans	
	Power & Mtr Eff: 1225 In. WG ▼ Standard ▼ Fan Flow & OSA: 4,000 cfm 10.00% OSA ▼	Power & Mtr Eff: 155 in. WG - High - Fan Flow & OSA: 4,000 cfm 10.00% OSA
	Return Fans	Return Fans で None
	Wizard Screen 4 of 7 -	Wizard Screen 4 of 7 💌 🛞 Help 🚺 Previous Screen



Unit	Baseline	Proposed
	🕐 eQUEST DD Wizard: Air-Side System Type HP-D (D)	🖍 eQUEST DD Wizard: Air-Side System Type HP-D (D)
	Packaged HVAC Equipment	Packaged HVAC Equipment
	HVAC System 1: Water-Source HP (single/multi-zone)	HVAC System 1: Water-Source HP (single/multi-zone)
	Cooling Overall Size: Specify 1.6 tr Typical Unit Size: > 135 kBtuh or 11.25 tons	Cooling Overall Size: Specify I.0 tr Typical Unit Size: > 135 kBtuh or 11.25 tons
	Efficiency: EER I 10.900	Efficiency: EER I3.500 Allow Crankcase Heating
	Heating	
	Size: Specify 20.8 kBtuh	Heating Size: Specify IS-2 kBtuh
	Efficiency: COP . 3.600	Efficiency: COP • 4.300
HP-D	Wizard Screen 3 of 7	Wizard Screen 3 of 7
	r HVAC System Fans	HVAC System Fans
	System(s): 1: Water-Source HP (single/multi-zone) 506 SqRt Served (all core)	System(s): 1: Water-Source HP (single/multi-zone) 506 SqPt Served (all core)
	Supply Fans	Supply Fans
	Power & Mtr Eff: Fan Flow & OSA: 650 cfm 10.00% OSA	Power & Mtr Eff: Fan Flow & OSA: 650 cfm 10.00% OSA
	Return Fans	Return Fans
	Wizard Screen 4 of 7 💽 🕐 Help 💽 Previous Screen	Wizard Screen 4 of 7 · • Ø Help Screen

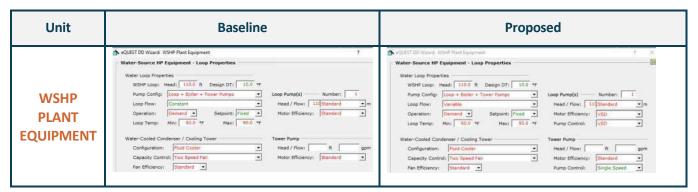


Unit	Baseline	Proposed
	eQUEST DD Wizard: Air-Side System Type HP-G (G)	▲ eQUEST DD Wizard: Air-Side System Type HP-G (G)
	Packaged HVAC Equipment	Packaged HVAC Equipment
	HVAC System 1: Water-Source HP (single/multi-zone)	HVAC System 1: Water-Source HP (single/multi-zone)
	Cooling	Cooling
	Overall Size: Specify 3.0 tt	Overall Size: Specify 2.9 tr
	Typical Unit Size: > 135 kBtuh or 11.25 tons	Typical Unit Size: > 135 kBtuh or 11.25 tons
	Efficiency: EER 10.600	Efficiency: EER I 15.100
	₩ Allow Crankcase Heating	✓ Allow Crankcase Heating
	Heating	Heating
	Size: Specify 38.6 kBtuh	Size: Specify - 42.0 kBtuh
	Efficiency: COP 3.500	Efficiency: COP • 4.600
	Wizard Screen 3 of 7 💽 🛞 Help 📓 Previous Screen	Wizard Screen 3 of 7 💌 🛞 Help 🔛 Brevious Screen
HP-G	🔥 eQUEST DD Wizard: Air-Side System Type HP-G (G)	▲ eQUEST DD Wizard: Air-Side System Type HP-G (G)
	HVAC System Fans	HVAC System Fans
	System(s): 1: Water-Source HP (single/multi-zone) 925 SqPt Served (all perimeter)	System(s): 1: Water-Source HP (single/multi-zone) 925 SqFt Served (all perimeter)
	Supply Fans	Supply Fans
	Power & Mtr Eff: I.15 In. WG 💌 Standard 💌	Power & Mtr Eff: IIIS in. WG 💌 Premium 💌
	Fan Flow & OSA:1,250 cfm 10.00% OSA	Fan Flow & OSA: 1,250 cfm 10.00% OSA
	Return Fans	Return Fans
		Winted Groups (4 of 7 - x) (b) Halo (P) Previous
	Wizard Screen 4 of 7 -	Wizard Screen 4 of 7 💌 🛞 Help 🔛 Previous Screen

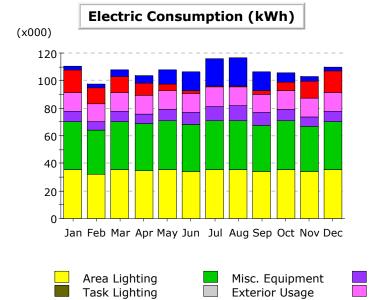


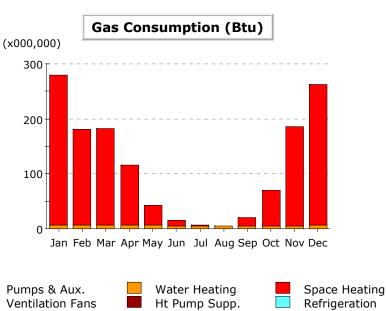
Unit	Baseline	Proposed
HP-J (UNIT 3)	CQUEST DD Wizard: Air-Side System Type HP-J (Unit 3) Packaged HVAC Equipment HVAC System 1: Water-Source HP (single/multi-zone) Cooling Overall Size: Auto-size Typical Unit Size: > 135 kBtuh or 11.25 tons Fificiency: EER IO.200 F Allow Crankcase Heating Heating Size: Auto-size Efficiency: COP State Efficiency: COP Eli Efficiency: Eli Efficiency: Eli Efficiency: Eli Efficiency: Eli Efficiency: Eli Ef	CQUEST DD Wizard: Air-Side System Type HP-J (Unit 3) Packaged HVAC Equipment HVAC System 1: Water-Source HP (single/multi-zone) Cooling Overall Size: Specify ● 0.7 tx Typical Unit Size: > 135 KBtuh or 11.25 tons Efficiency: EER ● 13.400 If Allow Crankcase Heating Heating Size: Specify ● 11.6 kBtuh Efficiency: COP ● 4.300 Wizard Screen 3 of 7 ● ④ Help











Electric Consumption (kWh x000)

	Jan	Feb	Mar	Apr	Мау	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Space Cool	2.5	3.0	4.2	5.5	10.5	13.9	20.0	20.0	13.5	6.6	3.3	2.6	105.7
Heat Reject.	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	0.1
Refrigeration	-	-	-	-	-	-	-	-	-	-	-	-	-
Space Heat	16.6	11.5	11.9	8.5	4.3	2.2	0.9	0.7	2.7	6.3	12.5	15.9	94.0
HP Supp.	-	-	-	-	-	-	-	-	-	-	-	-	-
Hot Water	-	-	-	-	-	-	-	-	-	-	-	-	-
Vent. Fans	13.8	12.5	13.8	13.4	13.8	13.3	13.8	13.8	13.3	13.9	13.2	13.8	162.5
Pumps & Aux.	7.5	6.5	7.4	7.2	8.5	9.1	10.8	10.9	8.9	7.6	7.0	7.4	98.9
Ext. Usage	-	-	-	-	-	-	-	-	-	-	-	-	-
Misc. Equip.	34.8	31.7	34.8	34.2	35.1	33.6	35.1	35.1	33.6	35.4	32.9	34.8	411.0
Task Lights	-	-	-	-	-	-	-	-	-	-	-	-	-
Area Lights	35.4	32.2	35.5	34.5	35.6	34.3	35.6	35.6	34.3	35.7	34.0	35.5	418.3
Total	110.6	97.4	107.4	103.4	107.9	106.5	116.2	116.3	106.3	105.6	103.0	109.9	1,290.5

Gas Consumption (Btu x000,000)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Space Cool	-	-	-	-	-	-	-	-	-	-	-	-	-
Heat Reject.	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigeration	-	-	-	-	-	-	-	-	-	-	-	-	-
Space Heat	272.4	174.0	174.9	109.7	37.0	9.6	0.9	0.1	14.8	63.4	179.7	256.6	1,293.1
HP Supp.	-	-	-	-	-	-	-	-	-	-	-	-	-
Hot Water	6.5	6.1	6.7	6.5	6.3	5.7	5.7	5.5	5.2	5.8	5.5	6.2	71.9
Vent. Fans	-	-	-	-	-	-	-	-	-	-	-	-	-
Pumps & Aux.	-	-	-	-	-	-	-	-	-	-	-	-	-
Ext. Usage	-	-	-	-	-	-	-	-	-	-	-	-	-
Misc. Equip.	-	-	-	-	-	-	-	-	-	-	-	-	-
Task Lights	-	-	-	-	-	-	-	-	-	-	-	-	-
Area Lights	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	278.9	180.1	181.6	116.2	43.4	15.3	6.6	5.6	20.1	69.2	185.2	262.8	1,365.0

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	and vemand (pg 1 of 2) $_{ m D}$	M	Annual Energy USE or DEMAND	Base Design 16,:	0+0901-PSB Lighting Upgrade 15,	1+0301-PSB Ph2 Upgrade Heat Pumps - HP 15,0	2+0301-PSB Ph2 Upgrade Heat Pumps - VFD 14,				
Ann. Source Energy	Total EUI	Mbtu kBtu/sf/yr		16,733 288.73	15,149 261.41	15,026 259.29	14,578 251.56				
Annual Site Energy	Elect	kWh		1,535,469	1,360,109	1,344,718	1,290,488				
e Energy	Nat Gas	Therms		10,111	12,230	12,580	13,650				
Lighting	Electric	kWh		570,264	418,288	418,288	418,288				
	Electric	kWh		554,213	530,829	515,439	461,209				
HVAC Energy	Nat Gas	Therms		9,392	11,511	11,861	12,931				
	Total	Mbtu		2,831	2,963	2,945	2,867				
Pe	Elect	kW		301	266	262	259				
Peak	Cooling	Tons		06	83	83	83				

Incremental SAVINGS

L λ.

(values are relative to previous measure (% savings are relative to base case use), negative entries indicate increased use)

	0+0901-PSB Lighting Upgrade	1,584	(%6) 77.77 12/10/10/10/10/10/10/10/10/10/10/10/10/10/	1/5,360 (11%)	-2,120 (-21%)		23,383 (4%)	-2,120 (-23%)	-132 (-5%)		(%)/ (%)/
v m	2+0301-PSB Ph2 Upgrade Heat Pumps - VFD	448	2.12 (1.%) 7.73 (3%)	54.230 (4%)	(% C-) 0CC- (%11-) 020.1-	0 (0%)	(%C) 06C'CI (9%C) 06C'CI	(% +-) 000-	10 (1.70) 78 (3%)	3 (1%)	(%)-) 0-
2	mmmmmmmmmmm	1	min		·····	111111	· · · · · · · · · · · · · · · · · · ·	111111	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	1111	

Cumul	Cumulative SAVINGS (values	(values (and % savings) are relative to the Base Case, negative entries indicate increased use)	ative to the Base Case,	negative entries indica	nte increased use)						
1	0+0901-PSB Lighting Upgrade	1,584	27.32 (9%)	175,360 (11%)	-2,120 (-21%)	151,977 (27%)	23,383 (4%)	-2,120 (-23%)	-132 (-5%)	35 (12%)	7 (8%)
2	1+0301-PSB Ph2 Upgrade Heat Pumps - HP	P 1,706	29.44 (10%)	190,752 (12%)	-2,469 (-24%)	151,977 (27%)	38,774 (7%)	-2,469 (-26%)	-115 (-4%)	39 (13%)	8 (%)
e	2+0301-PSB Ph2 Upgrade Heat Pumps - VFD	FD 2,154	37.17 (13%)	244,981 (16%)	-3,540 (-35%)	151,977 (27%)	93,004 (17%)	-3,540 (-38%)	-37 (-1%)	42 (14%)	8 (%)

Facility Improvement Measure (FIM) Detail



Project	City of Redmond Lighting	
Scenario	Lighting and PSB Heat	
Date	September 20, 2019	
FIM ID	42078 Facility	C
FIM Name	09.01-VAR: Upgrade Lighting to LED	

City of Redmond

FIM Description

The City of Redmond has asked McKinstry to identify lighting upgrade opportunities to the City Hall, Teen Center, the MOC Campus, and Fire Stations 14, 16, 17, and 18. The intent of the upgrades at these facilities is to drive energy savings, while staying within a defined budget that was established from good payback. With that in mind, the extent of the upgrades at these sites cover interior spaces only and are not comprehensive. Instead, they focus on the areas of the buildings that yield the best return on investment.

The existing lighting systems are a mix of fluorescent and HID sources. In the older facilities, many of the fixtures are original to the building and are beginning to show signs of wear and tear. The upgrade strategy across this project is a mix of retrofits and fixture replacements, based on McKinstry's discretion, to be sensitive to the City's allocated budget while driving the best return on investment.

This project will save energy, reduce maintenance burden of legacy systems, and standardize most of their lighting to LED, while improving the lighting quality in the space.

Savings Methodology

McKinstry spreadsheet comparing existing lighting fixture wattages and runtimes to proposed lighting fixture wattages and runtimes.

Confidential & Proprietary

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									Existing				Ргороз	ed								Energ	ıy			
									Lamp &					Mounting	if		Watts					kW	kWh He	ating Heating		Net Energy Cost
ID Building	FIM Name	Floor/General Area	Room Name	ASHRAE Space Types	Time Code	Switching	Fixture Schedule		Ballast Type	Description Fix	of stures Fixture 0	Retrofit Type Code (Current Scope)	Description	# of from Fixtures existing)	Lamp Type	# of Lamps per Fixture	per Fixture # of Lamp		xisting Propose W kW	ed Existing kWh		onth per Year			Credit Savings per (kWh) Year	r Savings per Year
1 City Hall	09.01-RCH: Upgrade Lighting to LED	1st Floor	Sprinkler room (exterior access)	Maintenance Areas - Inactive	501	1 \$		4' Industrial w/reflectors	32T803E	4' Industrial w/reflectors / 32W Fluorescent, 4'- 0" T8 / Electronic, T8	2 N	No Retrofit - Payback/Budget	No Retrofit Proposed	2 Chain	N/A	0	86	6 261	0.2	0.2 45	45	0.00 0.0	0	0 0	0	0\$-
2 City Hall	09.01-RCH: Upgrade Lighting to LED	1st Floor	Exterior	Outside Areas	718	3 \$T		Fresnel		Fresnel /	6 N	No Retrofit - Payback/Budget	No Retrofit Proposed	6 Surface	N/A	0	0	0 6570	0.0	0.0 0	0	0.00 0.0	0	0 0	0	0\$-
3 City Hall	09.01-RCH: Upgrade Lighting to LED	1st Floor	Exterior	Outside Areas	718	3 \$T		Drum		Drum /	4 N	No Retrofit - Payback/Budget	No Retrofit Proposed	4 Surface	N/A	0	0	0 6570	0.0	0.0 0	0	0.00 0.0	0	0 0	0	0\$-
4 City Hall	09.01-RCH: Upgrade Lighting to LED	1st Floor North Wing	Council Conference Rm	Conf. Room	506	5 \$		2x4 Parabolic	32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	6 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	A 6 Recessed	LED Lamp and Driver	2	30	12 1564	0.4	0.2 591	282	0.20 2.4	310	0 -1	17 3.	26 \$ 38
5 City Hall	09.01-RCH: Upgrade Lighting to LED	1st Floor South Wing	Water heater Plans 120	Janitor Closet	502	2 \$		2x4 Prismatic	32T802E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 N	No Retrofit - Payback/Budget	No Retrofit Proposed	2 Recessed	N/A	0	63	4 521	0.1	0.1 66	66	0.00 0.0	0	0 0	0	0\$-
6 City Hall	09.01-RCH: Upgrade	1st Floor South Wing	Unisex bathroom	Restrooms, existing sensor	505	5 \$O		2x4 Prismatic	32T802E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1 12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	A 1 Recessed	LED Lamp and Driver	2	30	2 1304	0.1	0.0 82	39	0.03 0.4	43	0 0	2	45 \$ 6
7 City Hall	09.01-RCH: Upgrade	1st Floor North Wing	Pantry	Halls & common areas	518	3 \$		2x4 Prismatic	32T802E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1 12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	1	LED Lamp and 0 Driver	2	30	2 4693	0.1	0.0 296	141	0.03 0.4	155	0 -1	8 1/	.63 \$ 12
8 City Hall	09.01-RCH: Upgrade	1st Floor North Wing		Halls & common areas	518	3 \$3		2x4 Prismatic		2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	6 12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI		LED Lamp and	2	30	12 4693	0.4	0.2 1.774	845	0.20 2.4	929	0 -3		179 \$ 75
9 City Hall	09.01-RCH: Upgrade	1st Floor South Wing		Halls & common areas	518	3 st		4' Strip	32T802E	4' Strip / 32W Fluorescent, 4'-0" T8 / Electronic, T8	812	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	8 Chain	LED Lamp and	2	30	16 4693	0.5	0.2 2.365	1.126	0.26 3.2	1.239	0 -5	66 1.3	05 \$ 100
10 City Hall	09.01-RCH: Upgrade	1st Floor South Wing		Restrooms, existing sensor		5 \$0		Recessed		Recessed Downlight / Compact Fluorescent, 42W Triple, Horizontal / N/A	2 L14H0	Retrofit Lamp	LED PL Bypass Lamp Upgrade, (1) Horizontal mount lamp with internal driver and remove existing ballast, 15.5W each, 1750 delivered lumens, GREEN CREATIVE: PL H 15.5W BYP	2 Recessed	LED Integral Driver	1	16	2 1304	0.1	0.0 115	40	0.06 0.7	74	0 0		78 \$ 10
	09.01-RCH: Upgrade	1st Floor South Wing		Restrooms, existing		5 \$0		2x4 Prismatic		2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	112	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI		LED Lamp and		20	2 1304	0.1	0.0		0.03 0.4	42	0 0		45 \$ 6
11 City Hall	09.01-RCH: Upgrade	1st Floor South Wing		Restrooms, existing		5 \$0		2x4 Prismatic		2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI		LED Lamp and		20	4 1304	0.1	0.1	35	0.07 0.8	45	0 0		91 \$ 12
12 City Hall	09.01-RCH: Upgrade			sensor						2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	2 12		LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-		LED Lamp and	2	30	4 1304	0.1	0.1 164	78		00	0 0		
13 City Hall	09.01-RCH: Upgrade		Vestibule @ lockers and fitness	Halls & common areas	518			2x4 Parabolic		Electronic, T8 2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /	1 12	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI		Driver	2	30	2 4693	0.1	0.0 296	141	0.03 0.4	155	0 -1	8 16	.63 \$ 12
14 City Hall	09.01-RCH: Upgrade		Janitor closet off kitchen	Janitor Closet	502			2x4 Prismatic		Electronic, T8 2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	4 N	Payback/Budget	No Retrofit Proposed LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	4 Recessed	LED Lamp and	0	63	8 521	0.3	0.3 131	131	0.00 0.0	0	0 0	0	0 \$ -
15 City Hall	Lighting to LED 09.01-RCH: Upgrade	1st Floor South Wing		Cafeteria	518			2x4 Parabolic Recessed		Electronic, T8 Recessed Downlight / Compact Fluorescent.	8 L2	Lamp and Driver	Iamp driver, 30W (system), 4300+ delivered lumens, SYLVANI LED PL Bypass Lamp Upgrade, (1) Horizontal mount lamp with internal driver and remove existing ballast, 15.5W each, 1750	8 Recessed	Driver LED Integral	2	30	16 4693	0.5	0.2 2,365		0.26 3.2	1,239	0 -5		05 \$ 100
16 City Hall	Lighting to LED 09.01-RCH: Upgrade	1st Floor South Wing	Cafeteria	Cafeteria	518	3 \$T		Downlight	42CFL01HZT	42W Triple, Horizontal / N/A 2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	8 L14HO	Retrofit Lamp	delivered lumens, GREEN CREATIVE: PL H 15.5W BYP LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	8 Recessed	LED Lamp and	1	16	8 4693	0.4	0.1 1,652	582	0.23 2.7	1,070	0 -4	57 1,12	.27 \$ 86
17 City Hall	Lighting to LED 09.01-RCH: Upgrade	1st Floor South Wing	Cafeteria	Cafeteria	518	3 \$T		2x4 Parabolic	32T802E	Electronic, T8 2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	15 12	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	A 15 Recessed	Driver	2	30	30 4693	0.9	0.5 4,435	2,112	0.50 5.9	2,323	0 -9	124 2,44	47 \$ 187
18 City Hall	Lighting to LED 09.01-RCH: Upgrade	1st Floor South Wing	Camera room 114	Storage Areas	502	2 \$3		2x4 Parabolic	32T802E	Electronic, T8 2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	10 N	Payback/Budget	No Retrofit Proposed LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	10 Recessed	N/A LED Lamp and	0	63	20 521	0.6	0.6 329	329	0.00 0.0	0	0 0	0	0 \$ -
19 City Hall	Ughting to LED 09.01-RCH: Upgrade	1st Floor South Wing	Traffic Eq. 115	Open Office	508	3 \$3		2x4 Parabolic 4' Industrial	32T802E	4' Industrial w/reflectors / 32W Fluorescent, 4'-	7 L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	A 7 Recessed	Driver	2	30	14 2086	0.4	0.2 920	438	0.23 2.8	482	0 -2	26 50	i07 \$ 51
20 City Hall	Lighting to LED	1st Floor South Wing	Work 122	Storage Areas - Active	504	\$		w/reflectors	32T802E	0" T8 / Electronic, T8	2 N	Payback/Budget	No Retrofit Proposed	2	0 N/A	0	63	4 1043	0.1	0.1 131	131	0.00 0.0	0	0 0	0	0 \$ -
21 City Hall		1st Floor South Wing	Work 123	Storage Areas - Active	504	1 \$		4' Industrial w/reflectors	32T802E	4' Industrial w/reflectors / 32W Fluorescent, 4'- 0" T8 / Electronic, T8	2 N	No Retrofit - Payback/Budget	No Retrofit Proposed	2	0 N/A	0	63	4 1043	0.1	0.1 131	131	0.00 0.0	0	0 0	0	0\$-
22 City Hall		1st Floor South Wing	Loading dock 127	Warehouse	512	2 \$		4' Strip	32T802E	4' Strip / 32W Fluorescent, 4'-0" T8 / Electronic, T8	8 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	A 8 Chain	LED Lamp and Driver	2	30	16 3129	0.5	0.2 1,577	751	0.26 3.2	826	0 -3	44 87	\$70 \$ 75
23 City Hall		1st Floor North Wing	Restroom vestibules	Halls & common areas	518	3 \$T		g	LED	Recessed Downlight / LED Fixture / LED Driver	6 N	No Retrofit - LED	No Retrofit Proposed LED PL Bypass Lamp Upgrade, (1) Horizontal mount lamp with	6 Recessed	N/A	0	12	6 4693	0.1	0.1 338	338	0.00 0.0	0	0 0	0	0\$-
24 City Hall	09.01-RCH: Upgrade Lighting to LED	1st Floor North Wing	Conf. 137	Conf. Room, existing sensor	506	5 \$O		Recessed Downlight	42CFL01HZT	Recessed Downlight / Compact Fluorescent, 42W Triple, Horizontal / N/A	1 L14HO	Retrofit Lamp	Internal driver and remove existing ballast, 15.5W each, 1750 delivered lumens, GREEN CREATIVE: PL H 15.5W BYP	1 Recessed	LED Integral Driver	1	16	1 1564	0.0	0.0 69	24	0.03 0.3	45	0 0	2 4	47 \$ 5
25 City Hall	09.01-RCH: Upgrade Lighting to LED	1st Floor North Wing	Conf. 137	Conf. Room, existing sensor	506	5 \$O		2x4 Parabolic	32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	A 2 Recessed	LED Lamp and Driver	2	30	4 1564	0.1	0.1 197	94	0.07 0.8	103	0 0	6 10	.09 \$ 13
26 City Hall	09.01-RCH: Upgrade Lighting to LED	1st Floor North Wing	Corner quiet room	Hallways, existing sensor	504	1 \$O		2x4 Parabolic	32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1 N	No Retrofit - Payback/Budget	No Retrofit Proposed	1 Recessed	N/A	0	63	2 1043	0.1	0.1 66	66	0.00 0.0	0	0 0	0	0\$-
27 City Hall	09.01-RCH: Upgrade Lighting to LED	1st Floor North Wing	Mens Restroom	Restrooms	518	3 \$T		2x4 Parabolic	32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	3 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	A 3 Recessed	LED Lamp and Driver	2	30	6 4693	0.2	0.1 887	422	0.10 1.2	465	0 -2	25 48	189 \$ 37
28 City Hall	09.01-RCH: Upgrade Lighting to LED	1st Floor North Wing	Private Office 138	Offices, existing sensor	508	3 \$O		2x4 Parabolic	32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1 12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	A 1 Recessed	LED Lamp and Driver	2	30	2 2086	0.1	0.0 131	63	0.03 0.4	69	0 0	4 7	72 \$ 7
29 City Hall	09.01-RCH: Upgrade Lighting to LED	1st Floor North Wing	Conference N. Corner	Conf. Room, existing sensor	506	5 \$O		2x4 Parabolic	32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	A 2 Recessed	LED Lamp and Driver	2	30	4 1564	0.1	0.1 197	94	0.07 0.8	103	0 0	6 10	.09 \$ 13
30 City Hall	09.01-RCH: Upgrade Lighting to LED	1st Floor South Wing	Storage 117	Storage Areas	502	2 \$		2x4 Prismatic	32T802E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1 N	Lamp and Driver	No Retrofit Proposed	1 Recessed	N/A	0	63	2 521	0.1	0.1 33	33	0.00 0.0	0	0 0	0	0\$-
31 City Hall	09.01-RCH: Upgrade Lighting to LED	1st Floor South Wing	Hall 118	Halls & common areas	518	3 \$T		2x4 Parabolic	32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	5 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	A 5 Recessed	LED Lamp and Driver	2	30	10 4693	0.3	0.2 1,478	704	0.17 2.0	774	0 -3	41 87	16 \$ 62
32 City Hall	09.01-RCH: Upgrade Lighting to LED	1st Floor North Wing	Open Office (south North wing)	Offices	506	5 \$		Undercabinet	17T801E	Undercabinet / 17W Fluorescent, 2'-0" T8 / Electronic, T8	16 L8	Retrofit Lamp	LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 delivered lumens, SYLVANIA	16 Surface	LED Integral Driver	1	9	16 1564	0.3	0.1 451	225	0.14 1.7	225	0 -1	12 2:	37 \$ 27
33 City Hall	09.01-RCH: Upgrade Lighting to LED	1st Floor North Wing	Open Office (south North wing)	Offices	506	5 \$		Undercabinet	25T801E	Undercabinet / 25W Fluorescent, 3'-0" T8 / Electronic, T8	16 <mark>L9</mark>	Retrofit Lamp	LED 3FT T8 Bypass Lamp Upgrade, (1) lamp, 12W (system), 1600+ delivered lumens, SYLVANIA	16 Surface	LED Integral Driver	1	12	16 1564	0.4	0.2 651	300	0.22 2.7	350	0 -1	19 30	69 \$ 43
34 City Hall	09.01-RCH: Upgrade Lighting to LED	1st Floor North Wing	Open Office (south North wing)	Open Office	518	3 \$T		2x4 Parabolic	32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	30 <mark>L2</mark>	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	A 30 Recessed	LED Lamp and Driver	2	30	60 4693	1.9	0.9 8,870	4,224	0.99 11.9	4,646	0 -17	248 4,85	194 \$ 375
35 City Hall	09.01-RCH: Upgrade	1st Floor South Wing		Gym lockers	515	5 \$3		2x4 Parabolic		2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	10 12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	A 10 Recessed	LED Lamp and Driver	2	30	20 3911	0.6	0.3 2,464	1,173	0.33 4.0	1,291	0 -5	69 1,35	59 \$ 109
36 City Hall	09.01-RCH: Upgrade	1st Floor North Wing	Open Office (north-north wing)	Offices	506					Undercabinet / 17W Fluorescent, 2'-0" T8 / Electronic, T8	3 L8	Retrofit Lamp	LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 delivered lumens, SYLVANIA	3 Surface	LED Integral Driver	1	9	3 1564	0.1	0.0 84	42	0.03 0.3	42	0 0		44 \$ 5
37 City Hall	09.01-RCH: Ungrade		Open Office (north-north wing)	Offices	506					Undercabinet / 25W Fluorescent, 3'-0" T8 / Electronic, T8	23 L9	Retrofit Lamp	LED 3FT T8 Bypass Lamp Upgrade, (1) lamp, 12W (system), 1600+ delivered lumens, SYLVANIA	23 Surface	LED Integral Driver	1	12	23 1564	0.6	0.3 935	432	0.32 3.9	504	0 -2	27 5	i31 \$ 61
38 City Hall	09.01-RCH: Upgrade		Open Office (north-north wing)	Open Office	518			2x4 Parabolic		2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	25 1 2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI		LED Lamp and	2	30	50 4693	16	0.8 7.391	3 520	0.83 9.9	3 872	0 -14		178 \$ 312
	09.01-RCH: Upgrade		IDF	Maintenance Areas	502					4' Strip / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 N	No Retrofit - Payback/Budget	No Retrofit Proposed	2 Chain	N/A		62	4 521	0.1	0.1 66	5,520	0.00 0.0	5,072	0 0		0 \$ -
39 City Hall	09.01-RCH: Upgrade									4' Strip / 32W Fluorescent, 4'-0" T8 /	2 1	No Retrofit -						4 521	0.1	0.1 00						0 -
40 City Hall	09.01-RCH: Upgrade	1st Floor North Wing		Maintenance Areas -	502					Electronic, T8 4' Strip / 32W Fluorescent, 4'-0" T8 /	3 N	Payback/Budget	No Retrofit Proposed	3 Chain	N/A	0	63	o 521	0.2	0.2 99	99	0.00 0.0	0	0 0	0	0 0 0
41 City Hall	09.01-RCH: Upgrade	1st Floor North Wing		Inactive Maintenance Areas -	501					4' Strip / 32W Fluorescent, 4'-0" T8 /	2 N	Payback/Budget No Retrofit -	No Retrofit Proposed	2 Chain	N/A	0	63	4 261	0.1	0.1 33	33	0.00 0.0	0	0 0	U	0 \$ -
42 City Hall	Ughting to LED 09.01-RCH: Upgrade	1st Floor South Wing		Inactive	501				32T802E	Electronic, T8 4' Strip / 32W Fluorescent, 4'-0" T8 /	3 N	Payback/Budget No Retrofit -	No Retrofit Proposed	3 Chain	N/A	0	63	6 261	0.2	0.2 49	49	0.00 0.0	0	0 0	0	0 \$ -
43 City Hall	Lighting to LED 09.01-RCH: Upgrade		Elevator Machine Room 123	Maintenance Areas	502			4' Strip		Electronic, T8 2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	2 N	Payback/Budget No Retrofit -	No Retrofit Proposed	2	0 N/A	0	63	4 521	0.1	0.1 66	66	0.00 0.0	0	0 0	0	0 \$ -
44 City Hall	Ughting to LED 09.01-RCH: Upgrade	1st Floor South Wing		Offices Offices, existing	504			2x4 Parabolic	32T802E	Electronic, T8 2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	4 N	Payback/Budget	No Retrofit Proposed LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	4 Recessed	N/A LED Lamp and	0	63	8 1043	0.3	0.3 263	263	0.00 0.0	0	0 0	0	0 \$ -
45 City Hall	Lighting to LED	1st Floor South Wing		sensor	508	3 \$O		2x4 Parabolic Recessed	32T802E	Electronic, T8 Recessed Downlight / Compact Fluorescent,	4 L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	A 4 Recessed	Driver	2	30	8 2086	0.3	0.1 526	250	0.13 1.6	275	0 -1	15 29	90 \$ 29
46 City Hall	09.01-RCH: Upgrade Lighting to LED 09.01-RCH: Upgrade	1st Floor North Wing	Council Storage	Storage Areas - Active	504	\$			42CFL01	42W Triple, Vertical / N/A	1 N	No Retront - Payback/Budget	No Retrofit Proposed	1 Recessed	N/A	0	44	1 1043	0.0	0.0 46	46	0.00 0.0	0	0 0	0	0 \$ -
47 City Hall	09.01-RCH: Upgrade Lighting to LED	1st Floor North Wing	Council Toilet	Restrooms, existing sensor	506	5 \$O		Vanity	LED	Vanity / LED Fixture / LED Driver	1 N	No Retrofit - LED	No Retrofit Proposed	1 Wall	N/A	0	12	1 1564	0.0	0.0 19	19	0.00 0.0	0	0 0	0	0\$-



								Existing				Propos	ed						Energy		
								Lamp &					Mountin		Watts				kW kWh	Heating Heatin	
ID Building	FIM Name	Floor/General Area	Room Name	ASHRAE Space Types Tim	e Code Switching	Fixture Schedule		Ballast Type	Description	# of Fixtures Fixture Code	Retrofit Type (Current Scope)	Description LED PL Bypass Lamp Upgrade, (1) Horizontal mount lamp with	# of from Fixtures existing	Lamp Type	# of Lamps per per Fixture Fixture #	Operating of Lamps Hours	Existing Proposed kW kW Existing k	Proposed kW Savings Wh kWh per Month	Savings Savings per Year Year	er Penalty Penalty (kWh) (therm	Credit Savings per Savings s) (kWh) Year Year
48 City Hall	09.01-RCH: Upgrade Lighting to LED	1st Floor North Wing	Council Toilet 133	Restrooms, existing sensor	506 \$O		Recessed Downlight	42CFL01HZT	Recessed Downlight / Compact Fluorescent, 42W Triple, Horizontal / N/A	1 L14HO	Retrofit Lamp	Internal driver and remove existing ballast, 15.5W each, 1750 delivered lumens, GREEN CREATIVE: PL H 15.5W BYP	1 Recessed	LED Integral Driver	1 16	1 1564	0.0 0.0	69 24 0.03	0.3	45 0	0 2 47 \$
49 City Hall	09.01-RCH: Upgrade Lighting to LED	1st Floor North Wing	Council Office	Offices	504 \$		2x4 Parabolic	32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	3 N	No Retrofit - Payback/Budget	No Retrofit Proposed	3 Recessed	N/A	0 63	6 1043	0.2 0.2	197 197 0.00	0.0	0 0	0 0 0 \$
50 City Hall	09.01-RCH: Upgrade Lighting to LED	1st Floor North Wing	TV Booth 131	Offices	502 \$		Track	50PAR01	Track / Incandescent, PAR lamp / N/A	3 <mark>N</mark>	No Retrofit - Payback/Budget	No Retrofit Proposed	3 Track	N/A	0 50	3 521	0.2 0.2	78 78 0.00	0.0	0 0	0 0 0 \$
51 City Hall	09.01-RCH: Upgrade Lighting to LED	1st Floor North Wing	TV Booth 131	Offices	502 \$		Recessed Downlight	42CFL01HZT	Recessed Downlight / Compact Fluorescent, 42W Triple, Horizontal / N/A	2 N	No Retrofit - Payback/Budget	No Retrofit Proposed	2 Recessed	N/A	0 44	2 521	0.1 0.1	46 46 0.00	0.0	0 0	0 0 0 \$
52 City Hall	09.01-RCH: Upgrade Lighting to LED	1st Floor North Wing	Council Chamber 130	Conf. Room	506 \$		2x4 Parabolic	32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	3 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	3 Recessed	LED Lamp and Driver	2 30	6 1564	0.2 0.1	296 141 0.10	1.2	155 0	-1 8 163 \$
53 City Hall	09.01-RCH: Upgrade	1st Floor North Wing	Council Chamber 130	Conf. Room	502 Remote		Recessed Downlight 4	42CFL01	Recessed Downlight / Compact Fluorescent, 42W Triple, Vertical / N/A	2 N	No Retrofit - Payback/Budget	No Retrofit Proposed	2 Recessed	N/A	0 44	2 521	0.1 0.1	46 46 0.00	0.0	0 0	0 0 0 \$
54 City Hall	09.01-RCH: Upgrade	1st Floor North Wing	Council Chamber 130	Conf. Room	502 Remote		Recessed Downlight	50MR16	Recessed Downlight / Halogen, MR16 / Dimming, Magnetic	3 N	No Retrofit - Payback/Budget	No Retrofit Proposed	3 Recessed	N/A	0 50	3 521	0.2 0.2	78 78 0.00	0.0	0 0	0 0 0 s
55 City Hall	09.01-RCH: Upgrade		Council Chamber 130	Conf. Room	502 Remote		Recessed	42CFL01	Recessed Downlight / Compact Fluorescent, 42W Triple, Vertical / N/A	4 N	No Retrofit - Payback/Budget	No Retrofit Proposed	4 Recessed		0 44	4 521	0.2 0.2	92 92 0.00	0.0	0 0	0 0 0 5
	09.01-RCH: Upgrade		Council Chamber 130	Conf. Room	502 Remote		Recessed	75A01	Recessed Downlight / Incandescent, A lamp /	28 N	No Retrofit -	No Retrofit Proposed	28 Recessed		0 75	29 521	21 21	1.095 1.095 0.00		0 0	
56 City Hall	09.01-RCH: Upgrade	1st Floor	Lobby 101	Halls & common areas	518 ST		Recessed	LED		12 N	Payback/Budget	No Retrofit Proposed	12 Recessed	N/A	0 13	12 4693	0.1 0.1	676 676 0.00		0 0	
57 City Hall	09.01-RCH: Upgrade						Recessed		Recessed Downlight / LED Fixture / LED Driver Recessed Downlight / Compact Fluorescent,	12 N		LED PL Bypass Lamp Upgrade, (1) Horizontal mount lamp with internal driver and remove existing ballast, 15.5W each, 1750		LED Integral	0 12	12 4695	0.1 0.1			0 0	
58 City Hall	09.01-RCH: Upgrade	1st Floor	Lobby 101	Halls & common areas	518 \$T		Recessed		42W Triple, Horizontal / N/A	5 L14HO	Retrofit Lamp	delivered lumens, GREEN CREATIVE: PL H 15.5W BYP	5 Recessed	Driver	1 16	5 4693	0.2 0.1	1,032 364 0.14		669 0	-2 36 704 \$
59 City Hall	09.01-RCH: Upgrade	1st Floor	Lobby 101	Halls & common areas	518 \$T		Recessed	LED	Recessed Downlight / LED Fixture / LED Driver	11 N	No Retrofit - LED	No Retrofit Proposed	11 Recessed	N/A	0 12	11 4693	0.1 0.1	619 619 0.00		0 0	0 0 0 \$
60 City Hall	Lighting to LED 09.01-RCH: Upgrade	1st Floor	Lobby 101	Halls & common areas	518 \$T			LED	Recessed Downlight / LED Fixture / LED Driver 2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	9 <mark>N</mark>	No Retrofit - LED	No Retrofit Proposed LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	9 Recessed	N/A LED Lamp and	0 12	9 4693	0.1 0.1	507 507 0.00		0 0	0 0 0 \$
61 City Hall	09.01-RCH: Upgrade	1st Floor North Wing	Womans Restroom	Gym lockers, existing	518 \$T		2x4 Parabolic		Electronic, T8 Recessed Downlight / Compact Fluorescent,	3 L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA LED PL Bypass Lamp Upgrade, (1) Horizontal mount lamp with internal driver and remove existing ballast, 15.5W each, 1750	3 Recessed	LED Integral	2 30	6 4693	0.2 0.1	887 422 0.10	1.2	465 0	-2 25 489 \$
62 City Hall	Lighting to LED 09.01-RCH: Upgrade	1st Floor South Wing	Womans lockers	sensor Gym lockers, existing	509 \$O		Downlight 4	42CFL01HZT	42W Triple, Horizontal / N/A 2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /	2 L14H0	Retrofit Lamp	delivered lumens, GREEN CREATIVE: PL H 15.5W BYP LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	2 Recessed	Driver LED Lamp and	1 16	2 2346	0.1 0.0	206 73 0.06	0.7	134 0	0 7 141 \$
63 City Hall	Lighting to LED 09.01-RCH: Upgrade	1st Floor South Wing	Womans lockers	Gym lockers, existing	509 \$O		2x4 Prismatic	32T802E	Electronic, T8 2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /	1 L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	1 Recessed	Driver LED Lamp and	2 30	2 2346	0.1 0.0	148 70 0.03	0.4	77 0	0 4 82 \$
64 City Hall	Lighting to LED	1st Floor South Wing	Womans lockers	sensor	509 \$O		2x4 Prismatic	32T802E	Electronic, T8	2 L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	2 Recessed	Driver	2 30	4 2346	0.1 0.1	296 141 0.07	0.8	155 0	-1 8 163 \$
65 City Hall		2nd Floor	Main FI Lobby	Halls & common areas	518 \$T		Downlight L	LED	Recessed Downlight / LED Fixture / LED Driver	13 N	No Retrofit - LED	No Retrofit Proposed	13 Recessed		0 12	13 4693	0.2 0.2	732 732 0.00	0.0	0 0	0 0 0 \$
66 City Hall		2nd Floor South Wing	Conference 213	Conf. Room, existing sensor	506 \$O		2x4 Parabolic		2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	2 Recessed	LED Lamp and Driver	2 30	4 1564	0.1 0.1	197 94 0.0	0.8	103 0	0 6 109 \$
67 City Hall		2nd Floor South Wing	Work copy 208	Offices	506 \$		Undercabinet 1	17T801E	Undercabinet / 17W Fluorescent, 2'-0" T8 / Electronic, T8	2 L8	Retrofit Lamp	LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 delivered lumens, SYLVANIA	2 Surface	LED Integral Driver	1 9	2 1564	0.0 0.0	56 28 0.02	0.2	28 0	0 2 30 \$
68 City Hall		2nd Floor South Wing	Work copy 208	Halls & common areas	510 \$0		2x4 Prismatic	32T802E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	4 <mark>L2</mark>	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	4 Recessed	LED Lamp and Driver	2 30	8 2607	0.3 0.1	657 313 0.13	1.6	344 0	-1 18 362 \$
69 City Hall	09.01-RCH: Upgrade Lighting to LED	2nd Floor South Wing	Private office 207	Offices	506 \$		Undercabinet 1	17T801E	Undercabinet / 17W Fluorescent, 2'-0" T8 / Electronic, T8	2 L8	Retrofit Lamp	LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 delivered lumens, SYLVANIA	2 Surface	LED Integral Driver	1 9	2 1564	0.0 0.0	56 28 0.02	0.2	28 0	0 2 30 \$
70 City Hall		2nd Floor South Wing	Private office 207	Offices, existing sensor	508 \$O		2x4 Parabolic	32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	2 Recessed	LED Lamp and Driver	2 30	4 2086	0.1 0.1	263 125 0.07	0.8	138 0	-1 7 145 \$
71 City Hall	09.01-RCH: Upgrade Lighting to LED	2nd Floor South Wing	Private office 209	Offices	506 \$		Undercabinet 1	17T801E	Undercabinet / 17W Fluorescent, 2'-0" T8 / Electronic, T8	2 L8	Retrofit Lamp	LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 delivered lumens, SYLVANIA	2 Surface	LED Integral Driver	1 9	2 1564	0.0 0.0	56 28 0.02	0.2	28 0	0 2 30 \$
72 City Hall	09.01-RCH: Upgrade Lighting to LED	2nd Floor South Wing	Private office 209	Offices, existing sensor	508 \$O		2x4 Parabolic	32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	2 Recessed	LED Lamp and Driver	2 30	4 2086	0.1 0.1	263 125 0.0	0.8	138 0	-1 7 145 \$
73 City Hall	09.01-RCH: Upgrade Lighting to LED	2nd Floor South Wing	Corner conference	Conf. Room, existing sensor	506 \$O		2x4 Parabolic 3	32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	3 <mark>L2</mark>	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	3 Recessed	LED Lamp and Driver	2 30	6 1564	0.2 0.1	296 141 0.10	1.2	155 0	-1 8 163 \$
74 City Hall	09.01-RCH: Upgrade Lighting to LED	2nd Floor South Wing	Open Office SW	Offices	506 \$		Undercabinet 1	17T801E	Undercabinet / 17W Fluorescent, 2'-0" T8 / Electronic, T8	7 <mark>L8</mark>	Retrofit Lamp	LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 delivered lumens, SYLVANIA	7 Surface	LED Integral Driver	1 9	7 1564	0.1 0.1	197 99 0.06	0.8	99 0	0 5 104 \$
75 City Hall	09.01-RCH: Upgrade Lighting to LED	2nd Floor South Wing	Open Office SW	Offices	506 \$		Undercabinet 2	25T801E	Undercabinet / 25W Fluorescent, 3'-0" T8 / Electronic, T8	16 L9	Retrofit Lamp	LED 3FT T8 Bypass Lamp Upgrade, (1) lamp, 12W (system), 1600+ delivered lumens, SYLVANIA	16 Surface	LED Integral Driver	1 12	16 1564	0.4 0.2	651 300 0.22	2.7	350 0	-1 19 369 \$
76 City Hall	09.01-RCH: Upgrade Lighting to LED	2nd Floor South Wing	Open Office SW	Open Office	518 \$T		2x4 Parabolic	32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	9 L2 DIM	Lamp and Driver	LED 4FT T8 Lamp and Dimmable Driver Upgrade, (2) lamps with (1) 2-lamp driver, 30W (system), 4300+ delivered lumens SYLVANIA	9 Recessed	LED Lamp and Driver	2 32	18 4693	0.6 0.3	2,661 1,352 0.28	3.3 1	309 0	-5 70 1,379 \$
77 City Hall	09.01-RCH: Upgrade Lighting to LED	2nd Floor South Wing	Open Office SW	Open Office	518 \$T		2x4 Parabolic	32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	9 <mark>L2</mark>	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	9 Recessed	LED Lamp and Driver	2 30	18 4693	0.6 0.3	2,661 1,267 0.30	3.6 1	394 0	-5 74 1,468 \$
78 City Hall	09.01-RCH: Upgrade	2nd Floor South Wing	Conference 216	Conf. Room	506 \$T		2x4 Parabolic	32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	3 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	3 Recessed	LED Lamp and Driver	2 30	6 1564	0.2 0.1	296 141 0.10	1.2	155 0	-1 8 163 \$
79 City Hall	09.01-RCH: Upgrade Lighting to LED	2nd Floor South Wing	East open office	Offices	506 \$		Undercabinet 1	17T801E	Undercabinet / 17W Fluorescent, 2'-0" T8 / Electronic, T8	2 18	Retrofit Lamp	LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 delivered lumens, SYLVANIA	2 Surface	LED Integral Driver	1 9	2 1564	0.0 0.0	56 28 0.02	0.2	28 0	0 2 30 \$
80 City Hall	09.01-RCH: Upgrade	2nd Floor South Wing		Offices	506 \$				Undercabinet / 25W Fluorescent, 3'-0" T8 / Electronic, T8	29 L9	Retrofit Lamp	LED 3FT T8 Bypass Lamp Upgrade, (1) lamp, 12W (system), 1600+ delivered lumens, SYLVANIA	29 Surface	LED Integral Driver	1 12	29 1564	0.8 0.3	1,179 544 0.43	4.9	635 0	-2 34 669 \$
81 City Hall	09.01-RCH: Upgrade	2nd Floor South Wing		Open Office	518 \$T				2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	6 L2 DIM	Lamp and Driver	LED 4FT T8 Lamp and Dimmable Driver Upgrade, (2) lamps with (1) 2-lamp driver, 30W (system), 4300+ delivered lumens SYLVANIA		LED Lamp and Driver	2 32	12 4693				873 0	-3 47 919 \$
82 City Hall	09.01-RCH: Ungrade	2nd Floor South Wing		Open Office	518 \$T		2x4 Parabolic		2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	48 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA		LED Lamp and Driver	2 30	96 4693		4,191 6,758 1.56		433 0	-28 396 7,830 \$
	09.01-RCH: Upgrade	2nd Floor South Wing		Offices	506 \$				Undercabinet / 17W Fluorescent, 2'-0" T8 / Electronic, T8	218	Retrofit Lamp	LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 delivered lumens, SYLVANIA	2 Surface	LED Integral Driver	1	2 1564	0.0 0.0	56 28 0.00		28 0	0 2 20 6
83 City Hall	09.01-RCH: Upgrade	2nd Floor South Wing 2nd Floor South Wing		Offices, existing sensor	508 \$O		2x4 Parabolic		2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	21.2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA		LED Lamp and Driver	9	4 2086	0.1 0.1	263 125 0.07		138 0	-1 7 145 \$
84 City Hall	09.01-RCH: Upgrade			Conf. Room, existing					2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	2 12		LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA		LED Lamp and			0.1 0.1			138 0	
85 City Hall	09.01-RCH: Upgrade	2nd Floor North Wing		sensor	506 \$O				Electronic, T8 Indirect / 32W Fluorescent, 4'-0" T8 /	2 12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-		LED Lamp and	2 30	4 1564		197 94 0.0		103 0	0 6 109 \$
86 City Hall	09.01-RCH: Upgrade		Traffic management center	Conf. Room Conf. Room, existing	506 \$D				Electronic, T8 2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	5 L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-		0 Driver	2 30	10 1564	0.3 0.2	493 235 0.1		258 0	-1 14 272 \$
87 City Hall	Ughting to LED 09.01-RCH: Upgrade	2nd Floor North Wing		sensor	506 \$O				Electronic, T8 2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /	3 L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA		Driver	2 30	6 1564	0.2 0.1	296 141 0.10		155 0	-1 8 163 \$
88 City Hall	Ughting to LED 09.01-RCH: Upgrade	2nd Floor North Wing		Storage Areas - Active	503 \$O				Electronic, T8 2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /	2 N	Payback/Budget	No Retrofit Proposed LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	2 Recessed	LED Lamp and	0 63	4 782	0.1 0.1	99 99 0.00		0 0	0 0 0 \$
89 City Hall	Ughting to LED 09.01-RCH: Upgrade	2nd Floor North Wing		Halls & common areas Maintenance Areas -	518 \$T		2x4 Prismatic		Electronic, T8 4' Strip / 32W Fluorescent, 4'-0" T8 /	3 L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	3 Recessed	Driver	2 30	6 4693	0.2 0.1	887 422 0.10	1.2	465 0	-2 25 489 \$
90 City Hall	09.01-RCH: Upgrade	2nd Floor North Wing	Air Handler	Storage Areas,	501 \$		4' Strip 3	32T802E	Electronic, T8 2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /	1 N	Payback/Budget	No Retrofit Proposed	1	0 N/A	0 63	2 261	0.1 0.1	16 16 0.00	0.0	0 0	0 0 0 \$
91 City Hall	09.01-RCH: Upgrade	2nd Floor North Wing	Storage 251	existing sensor	502 \$O		2x4 Prismatic 3	32T802E	Electronic, T8 Undercabinet / 17W Fluorescent, 2'-0" T8 /	1 N	Payback/Budget	No Retrofit Proposed	1 Recessed	N/A LED Integral	0 63	2 521	0.1 0.1	33 33 0.00	0.0	0 0	0 0 0 \$
92 City Hall	Lighting to LED	2nd Floor North Wing	Private office 239	Offices	506 \$		Undercabinet 1	17T801E	Electronic, T8	2 L8	Retrofit Lamp	LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 delivered lumens, SYLVANIA	2 Surface	Driver	1 9	2 1564	0.0 0.0	56 28 0.02	0.2	28 0	0 2 30 \$
93 City Hall		2nd Floor North Wing	Private office 239	Offices, existing sensor	508 \$O		2x4 Parabolic	32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	2 Recessed	LED Lamp and Driver	2 30	4 2086	0.1 0.1	263 125 0.0	0.8	138 0	-1 7 145 \$
94 City Hall	09.01-RCH: Upgrade Lighting to LED	2nd Floor North Wing	Storage 241	Storage Areas, existing sensor	502 \$O		2x4 Prismatic	32T802E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1 N	No Retrofit - Payback/Budget	No Retrofit Proposed	1 Recessed	N/A	0 63	2 521	0.1 0.1	33 33 0.00	0.0	0 0	0 0 0 \$



							Existing				Propos	ed							Energy		
							Lamp &					Mounting (i different	if	Watts				L. L	w kWh	Heating Heating	Cooling Net kWh Cost
ID Building	FIM Name	Floor/General Area	Room Name	ASHRAE Space Types Tin	me Code Switching	Fixture Schedule	Fixture Type	Description	# of Fixtures Fixture Code	Retrofit Type (Current Scope)	Description	# of from Fixtures existing)		FLamps per Fixture Fixture # of		xisting Proposed W kW E	Prop xisting kWh kWh	sed kW Savings S		Penalty (kWh) (therms)	
95 City Hall	09.01-RCH: Upgrade Lighting to LED	2nd Floor North Wing	File Rm (near stairs)	Storage Areas - Active	503 \$O		2x4 Prismatic 32T802E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 N	No Retrofit - Payback/Budget	No Retrofit Proposed	2 Recessed	N/A	0 63	4 782	0.1 0.1	99	99 0.00	0.0	0 0	0 0 0 \$ -
96 City Hall	09.01-RCH: Upgrade	2nd Floor North Wing		Halls & common areas	510 \$O			2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	412	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver. 30W (system), 4300+ delivered lumens, SYI VANIA	4 Recessed	LED Lamp and Driver	2 30	8 2607	0.3 0.1	657	313 0.13	1.6 34	4 0	-1 18 362 \$ 33
	09.01-RCH: Upgrade	2nd Floor North Wing		Offices, existing	508 \$O		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	212	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/	2 Recessed	LED Lamp and	2 20	4 2096	0.1 0.1	262	125 0.07	0.9 13	• •	-1 7 145 \$ 15
97 City Hall	Lighting to LED 09.01-RCH: Upgrade			2010				Undercabinet / 17W Fluorescent, 2'-0" T8 /	2 12		LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system),		LED Integral	2 50	4 2000	0.1 0.1	205		0.0		
98 City Hall	09.01-RCH: Upgrade	2nd Floor North Wing		Offices Offices, existing	506 \$			Electronic, T8 2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	2 18	Retrofit Lamp	1100 delivered lumens, SYLVANIA LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	2 Surface	LED Lamp and	1 9	2 1564	0.0 0.0	56	28 0.02	0.2 2	8 0	
99 City Hall	09.01-RCH: Upgrade	2nd Floor North Wing	Private Office 232	sensor	508 \$O		2x4 Parabolic 32T802E	4' Strip / 32W Fluorescent, 4'-0" T8 /	2 L2	Lamp and Driver No Retrofit -	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/	A 2 Recessed	Driver	2 30	4 2086	0.1 0.1	263	125 0.07	0.8 13	8 0 .	1 7 145 \$ 15
100 City Hall	Ughting to LED 09.01-RCH: Upgrade	2nd Floor North Wing	IDF	Maintenance Areas Kitchen , existing	502 \$		4' Strip 32T802E	Electronic, T8 2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /	2 N	Payback/Budget	No Retrofit Proposed LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	2	0 N/A LED Lamp and	0 63	4 521	0.1 0.1	66	66 0.00	0.0	0 0	0 0 0 \$ -
101 City Hall	Lighting to LED 09.01-RCH: Upgrade	2nd Floor North Wing	Pantry	sensor Hallways, existing	506 \$O		2x4 Prismatic 32T802E	Electronic, T8 2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /	1 L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/ LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	A 1 Recessed	Driver LED Lamp and	2 30	2 1564	0.1 0.0	99	47 0.03	0.4 5	2 0	0 3 54 \$ 6
102 City Hall	09.01-RCH: Upgrade	2nd Floor North Wing	Phone Room	sensor	510 \$0		2x4 Prismatic 32T802E	Electronic, T8 Undercabinet / 25W Fluorescent, 3'-0" T8 /	1 L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/ LED 3FT T8 Bypass Lamp Upgrade, (1) lamp, 12W (system),	A 1 Recessed	LED Integral	2 30	2 2607	0.1 0.0	164	78 0.03	0.4 8	6 0	0 5 91 \$ 8
103 City Hall	Lighting to LED	2nd Floor North Wing	Open Office North	Offices	506 \$		Undercabinet 25T801E	Electronic, T8	24 L9	Retrofit Lamp	1600+ delivered lumens, SYLVANIA LED 4FT T8 Lamp and Dimmable Driver Upgrade, (2) lamps	24 Surface	Driver	1 12	24 1564	0.6 0.3	976	451 0.34	4.0 52	6 0	-2 28 554 \$ 64
104 City Hall		2nd Floor North Wing	Open Office North	Open Office	518 \$T		2x4 Parabolic 32T802E		14 L2 DIM	Lamp and Driver	with (1) 2-lamp driver, 30W (system), 4300+ delivered lumens SYLVANIA	, 14 Recessed	LED Lamp and Driver	2 32	28 4693	0.9 0.4	4,139	2,102 0.43	5.2 2,03	7 0	-8 109 2,145 \$ 164
105 City Hall	09.01-RCH: Upgrade Lighting to LED	2nd Floor North Wing	Open Office North	Open Office	518 \$T		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	15 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANL/	A 15 Recessed	LED Lamp and Driver	2 30	30 4693	0.9 0.5	4,435	2,112 0.50	5.9 2,32	3 0	-9 124 2,447 \$ 187
106 City Hall	09.01-RCH: Upgrade Lighting to LED	2nd Floor North Wing	Open Office West	Offices	506 \$		Undercabinet 25T801E	Undercabinet / 25W Fluorescent, 3'-0" T8 / Electronic, T8	3 L9	Retrofit Lamp	LED 3FT T8 Bypass Lamp Upgrade, (1) lamp, 12W (system), 1600+ delivered lumens, SYLVANIA LED 4FT T8 Lamp and Dimmable Driver Upgrade, (2) lamps	3 Surface	LED Integral Driver	1 12	3 1564	0.1 0.0	122	56 0.04	0.5 6	6 0	0 4 69 \$ 8
107 City Hall	09.01-RCH: Upgrade Lighting to LED	2nd Floor North Wing	Open Office West	Open Office	518 \$T		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	4 L2 DIM	Lamp and Driver	with (1) 2-lamp driver, 30W (system), 4300+ delivered lumens SYLVANIA	4 Recessed	LED Lamp and Driver	2 32	8 4693	0.3 0.1	1,183	601 0.12	1.5 58	2 0	-2 31 613 \$ 47
108 City Hall	09.01-RCH: Upgrade Lighting to LED	2nd Floor North Wing	Open Office West	Open Office	518 \$T		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	4 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/	4 Recessed	LED Lamp and Driver	2 30	8 4693	0.3 0.1	1,183	563 0.13	1.6 61	9 0	-2 33 652 \$ 50
109 City Hall	09.01-RCH: Upgrade Lighting to LED	2nd Floor North Wing	Open Office South	Offices	506 \$		Undercabinet 25T801E	Undercabinet / 25W Fluorescent, 3'-0" T8 / Electronic, T8	22 19	Retrofit Lamp	LED 3FT T8 Bypass Lamp Upgrade, (1) lamp, 12W (system), 1600+ delivered lumens, SYLVANIA	22 Surface	LED Integral Driver	1 12	22 1564	0.6 0.3	895	413 0.31	3.7 48	2 0	-2 26 507 \$ 59
110 City Hall	09.01-RCH: Upgrade Lighting to LED	2nd Floor North Wing	Open Office South	Open Office	518 \$T		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	15 L2 DIM	Lamp and Driver	LED 4FT T8 Lamp and Dimmable Driver Upgrade, (2) lamps with (1) 2-lamp driver, 30W (system), 4300+ delivered lumens SYLVANIA	, 15 Recessed	LED Lamp and Driver	2 32	30 4693	0.9 0.5	4,435	2,253 0.47	5.6 2,18	2 0	-8 116 2,299 \$ 176
111 City Hall	09.01-RCH: Upgrade Lighting to LED	2nd Floor North Wing	Open Office South	Open Office	518 \$T		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	26 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVAND	A 26 Recessed	LED Lamp and Driver	2 30	52 4693	1.6 0.8	7,687	3,660 0.86	10.3 4,02	6 0 -:	15 215 4,241 \$ 325
112 City Hall	09.01-RCH: Upgrade Lighting to LED	2nd Floor	Elevator Lobby	Halls & common areas	518 \$T		Recessed Downlight 42CFL01	Recessed Downlight / Compact Fluorescent, 42W Triple, Vertical / N/A	6 L16HO	Retrofit Lamp	LED PL Bypass Lamp Upgrade, (1) Vertical mount lamps with internal driver and remove existing ballast, 16.5W each, 1000 delivered lumens, GREEN CREATIVE: PL V 16.5W BYP	6 Recessed	LED Integral Driver	2 17	12 4693	0.3 0.1	1,239	465 0.17	2.0 77	4 0	-3 41 816 \$ 62
113 City Hall	09.01-RCH: Upgrade	2nd Floor South Wing	Permit Center	Open Office	518 ST		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	3 12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/	A 3 Recessed	LED Lamp and Driver	2 30	6 4693	0.2 0.1	887	422 0.10	1.2 46	5 0	-2 25 489 \$ 37
114 City Hall	09.01-RCH: Upgrade	2nd Floor South Wing		Open Office	518 \$T		Recessed	Recessed Downlight / Compact Fluorescent, 42W Triple, Vertical / N/A	13 L16H0	Retrofit Lamp	LED PL Bypass Lamp Upgrade, (1) Vertical mount lamps with Internal driver and remove existing ballast, 16.5W each, 1000 delivered lumens, GREEN CREATIVE: PL V 16.5W BYP	13 Recessed	LED Integral Driver	2 17	26 4693	0.6 0.2	2.684	1.007 0.36	4.3 1.67	8 0	-6 89 1,767 \$ 135
115 City Hall	09.01-RCH: Upgrade	2nd Floor South Wing		Offices	506 \$			Undercabinet / 25W Fluorescent, 3'-0" T8 / Electronic, T8	6 19	Retrofit Lamp	LED 3FT T8 Bypass Lamp Upgrade, (1) lamp, 12W (system), 1600+ delivered lumens, SYLVANIA	6 Surface	LED Integral	1 12	6 1564	0.2 0.1	244	113 0.08	1.0 13	1 0	0 7 138 \$ 16
	09.01-RCH: Upgrade	2nd Floor South Wing		Open Office	518 \$T		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 L2 DIM		LED 4FT 78 Lamp and Dimmable Driver Upgrade, (2) lamps with (1) 2-lamp driver, 30W (system), 4300+ delivered lumens SYLVANIA		LED Lamp and	2 22	4 400	0.1 0.1	501	300 0.06	1.0 1.	1 0	-1 16 306 \$ 23
116 City Hall	Lighting to LED 09.01-RCH: Upgrade							2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /		Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	2 Recessed	LED Lamp and	2 32	4 4095	0.1 0.1	591	0.06	0.7 25		
117 City Hall	09.01-RCH: Upgrade	2nd Floor South Wing		Open Office	518 \$T		2x4 Parabolic 32T802E	Electronic, T8 Undercabinet / 17W Fluorescent, 2'-0" T8 /	612	Lamp and Driver	LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system),		LED Integral	2 30	12 4693	0.4 0.2	1,774	845 0.20	2.4 92	9 0	-3 50 979 \$ 75
118 City Hall	09.01-RCH: Upgrade	2nd Floor South Wing		Offices	506 \$			Electronic, T8 Undercabinet / 25W Fluorescent, 3'-0" T8 /	1 L8	Retrofit Lamp	1100 delivered lumens, SYLVANIA LED 3FT T8 Bypass Lamp Upgrade, (1) lamp, 12W (system),	1 Surface	LED Integral	1 9	1 1564	0.0 0.0	28	14 0.01	0.1	4 0	
119 City Hall	Lighting to LED 09.01-RCH: Upgrade	2nd Floor South Wing	Open Office 222	Offices	506 \$		Undercabinet 25T801E	Electronic, T8 2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	8 L9	Retrofit Lamp	1600+ delivered lumens, SYLVANIA LED 4FT T8 Lamp and Dimmable Driver Upgrade, (2) lamps with (1) 2-lamp driver, 30W (system), 4300+ delivered lumens	8 Surface	Driver LED Lamp and	1 12	8 1564	0.2 0.1	325	150 0.11	1.3 17	5 0 .	-1 9 185 \$ 21
120 City Hall	Lighting to LED 09.01-RCH: Upgrade	2nd Floor South Wing	Open Office 222	Open Office	518 \$T		2x4 Parabolic 32T802E	Electronic, T8 2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	6 L2 DIM	Lamp and Driver	SYLVANIA LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	6 Recessed	Driver LED Lamp and	2 32	12 4693	0.4 0.2	1,774	901 0.19	2.2 87	3 0	3 47 919 \$ 70
121 City Hall	Lighting to LED 09.01-RCH: Upgrade	2nd Floor South Wing	Open Office 222	Open Office Kitchen , existing	518 \$T		2x4 Parabolic 32T802E	Electronic, T8 2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	6 L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/ LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	6 Recessed	Driver	2 30	12 4693	0.4 0.2	1,774	845 0.20	2.4 92	9 0	-3 50 979 \$ 75
122 City Hall		2nd Floor South Wing	Pantry	sensor	506 \$O		2x4 Parabolic 32T802E	Electronic, T8	1 12	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/	A 1 Recessed	Driver	2 30	2 1564	0.1 0.0	99	47 0.03	0.4 5	2 0	0 3 54 \$ 6
123 City Hall	Lighting to LED	2nd Floor South Wing	Private Office 218	Offices	506 \$		Undercabinet 17T801E	Undercabinet / 17W Fluorescent, 2'-0" T8 / Electronic, T8	2 L8	Retrofit Lamp	LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 delivered lumens, SYLVANIA	2 Surface	LED Integral Driver	1 9	2 1564	0.0 0.0	56	28 0.02	0.2 2	8 0	0 2 30 \$ 3
124 City Hall		2nd Floor South Wing	Private Office 218	Offices, existing sensor	508 \$O		2x4 Parabolic 32T802E		2 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/	A 2 Recessed	LED Lamp and Driver	2 30	4 2086	0.1 0.1	263	125 0.07	0.8 13	8 0 .	-1 7 145 \$ 15
125 City Hall		2nd Floor South Wing	Private Office 215	Offices	506 \$		Undercabinet 17T801E	Undercabinet / 17W Fluorescent, 2'-0" T8 / Electronic, T8	2 L8	Retrofit Lamp	LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 delivered lumens, SYLVANIA	2 Surface	LED Integral Driver	1 9	2 1564	0.0 0.0	56	28 0.02	0.2 2	8 0	0 2 30 \$ 3
126 City Hall	09.01-RCH: Upgrade Lighting to LED	2nd Floor South Wing	Private Office 215	Offices, existing sensor	508 \$O		2x4 Parabolic 32T802E		2 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/	A 2 Recessed	LED Lamp and Driver	2 30	4 2086	0.1 0.1	263	125 0.07	0.8 13	8 0	-1 7 145 \$ 15
127 City Hall	09.01-RCH: Upgrade Lighting to LED	2nd Floor South Wing	Private Office 214	Offices	506 \$		Undercabinet 17T801E	Undercabinet / 17W Fluorescent, 2'-0" T8 / Electronic, T8	2 L8	Retrofit Lamp	LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 delivered lumens, SYLVANIA	2 Surface	LED Integral Driver	1 9	2 1564	0.0 0.0	56	28 0.02	0.2 2	8 0	0 2 30 \$ 3
128 City Hall	09.01-RCH: Upgrade Lighting to LED	2nd Floor South Wing	Private Office 214	Offices, existing sensor	508 \$O		2x4 Parabolic 32T802E		2 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIJ LED PL Bypass Lamp Upgrade, (1) Vertical mount lamps with		LED Lamp and Driver	2 30	4 2086	0.1 0.1	263	125 0.07	0.8 13	8 0	-1 7 145 \$ 15
129 City Hall	09.01-RCH: Upgrade Lighting to LED	2nd Floor	Lobby Bridge 201	Halls & common areas	518 \$T		Recessed Downlight 42CFL01	Recessed Downlight / Compact Fluorescent, 42W Triple, Vertical / N/A	14 L16HO	Retrofit Lamp	Internal driver and remove existing ballast, 16.5W each, 1000 delivered lumens, GREEN CREATIVE: PL V 16.5W BYP	14 Recessed	LED Integral Driver	2 17	28 4693	0.6 0.2	2,891	1,084 0.39	4.6 1,80	7 0	-7 96 1,903 \$ 146
130 City Hall	09.01-RCH: Upgrade Lighting to LED	2nd Floor North Wing	Mens 204	Restrooms	518 \$T		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	3 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	A 3 Recessed	LED Lamp and Driver	2 30	6 4693	0.2 0.1	887	422 0.10	1.2 46	5 0	-2 25 489 \$ 37
131 City Hall	09.01-RCH: Upgrade Lighting to LED	2nd Floor North Wing	Womans 205	Restrooms, existing sensor	506 \$O		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	3 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/	A 3 Recessed	LED Lamp and Driver	2 30	6 1564	0.2 0.1	296	141 0.10	1.2 15	5 0	-1 8 163 \$ 19
132 City Hall	09.01-RCH: Upgrade Lighting to LED	2nd Floor South Wing	Electrical 222	Maintenance Areas - Inactive	501 \$		4' Strip 32T802E	4' Strip / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1 N	No Retrofit - Payback/Budget	No Retrofit Proposed	1	0 N/A	0 63	2 261	0.1 0.1	16	16 0.00	0.0	0 0	0 0 0 \$ -
133 City Hall	09.01-RCH: Upgrade Lighting to LED		Open office 314	Offices	506 \$		Undercabinet 25T801E	Undercabinet / 25W Fluorescent, 3'-0" T8 / Electronic, T8	2 L9	Retrofit Lamp	LED 3FT T8 Bypass Lamp Upgrade, (1) lamp, 12W (system), 1600+ delivered lumens, SYLVANIA	2 Surface	LED Integral Driver	1 12	2 1564	0.1 0.0	81	38 0.03	0.3 4	4 0	0 2 46 \$ 5
134 City Hall	09.01-RCH: Upgrade Lighting to LED		Open office 314	Open Office	518 \$T			2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	9 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	A 9 Recessed	LED Lamp and Driver	2 30	18 4693	0.6 0.3	2,661	1,267 0.30	3.6 1.39	4 0	-5 74 1,468 \$ 112
135 City Hall	09.01-RCH: Upgrade	3rd Floor	Work 311	Halls & common areas	510 \$0			2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	3 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA		LED Lamp and Driver	2 30	6 2607	0.2 0.1	493	235 0.10	1.2 25	8 0	-1 14 272 \$ 25
136 City Hall	09.01-RCH: Upgrade	3rd Floor	Conference 315	Conf. Room, existing	506 \$0		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	2 12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA		LED Lamp and Driver	2 30	4 1564	0.1 0.1	197	94 0.07	0.8 10	3 0	0 6 109 \$ 13
	09.01-RCH: Upgrade Lighting to LED		Private office 313	Offices	506 \$		Undercabinet 17T801E	Undercabinet / 17W Fluorescent, 2'-0" T8 /	1 1.8	Retrofit Lamp	LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 delivered lumens, SYLVANIA	1 Surface	LED Integral Driver	1 0	1 1564	0.0 0.0	- 20	14 0.01	0.1 1	4 0	
137 City Hall	09.01-RCH: Upgrade			Offices, existing				2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	212		LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-		LED Lamp and	2 20		0.0 0.0	20	14 0.01	0.8 13		0 1 15 \$ 2
138 City Hall	09.01-RCH: Upgrade	3rd Floor	Private office 313	Sensor	508 \$0			Electronic, T8 Undercabinet / 25W Fluorescent, 3'-0" T8 / Electronic, T8	2 12	Lamp and Driver	LED 3FT T8 Bypass Lamp Upgrade, (1) lamp, 12W (system),		LED Integral	2 30	4 2086	0.1 0.1	263		0.6 13		-1 7 145 \$ 15
139 City Hall	Ughting to LED 09.01-RCH: Upgrade		Office 310	Offices	506 \$			2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	6 19	Retrofit Lamp	1600+ delivered lumens, SYLVANIA LED 4FT T8 Lamp and Dimmable Driver Upgrade, (2) lamps with (1) 2-lamp driver, 30W (system), 4300+ delivered lumens	6 Surface	LED Lamp and	1 12	6 1564	0.2 0.1	244	113 0.08	1.0 13	1 0	0 7 138 \$ 16
140 City Hall	Ughting to LED	3rd Floor	Office 310	Offices	508 \$		2x4 Parabolic 32T802E	Electronic, T8 2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	4 L2 DIM	Lamp and Driver	SYLVANIA LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	4 Recessed	Driver LED Lamp and	2 32	8 2086	0.3 0.1	526	267 0.12	1.5 25	9 0	1 14 272 \$ 27
141 City Hall	Lighting to LED	3rd Floor	Office 310	Offices	508 \$		2x4 Parabolic 32T802E	Electronic, T8	5 L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVAND	A 5 Recessed	Driver	2 30	10 2086	0.3 0.2	657	313 0.17	2.0 34	4 0	1 18 362 \$ 37



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							Lamp &				Propos	Mounting (i different	if	Watts				Energy kW kWh	Heating Heating	g Cooling Net kWh Cost
ID Building	FIM Name	Floor/General Area	Room Name	ASHRAE Space Types Ti	me Code Switching	Fixture Schedule	Fixture Type	Description	# of Fixtures Fixture Code	Retrofit Type (Current Scope)	Description	# of from Fixtures existing)	Lamp Type	# of Lamps per per Fixture Fixture #	Operating of Lamps Hours	Existing Proposed kW kW Existi	Proposed kW Savi	ngs Savings Savings	per Penalty Penalty (kWh) (therm	
142 City Hall	09.01-RCH: Upgrade Lighting to LED	3rd Floor	Hall East	Halls & common areas	518 ST		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	412	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/	A 4 Recessed	LED Lamp and	2 30	8 4693	0.3 0.1	1 183 563	0.13 1.6	619 0	-2 33 652 \$ 50
143 City Hall	09.01-RCH: Upgrade	3rd Floor South Wing		Kitchen , existing	506 s0		2x4 Prismatic 32T802E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	112	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANJ		LED Lamp and	2 30	2 1564	0.1 0.0	99 47	0.03 0.4	52 0	0 3 54 5 6
	09.01-RCH: Upgrade			Conf. Room, existing				2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	212		LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-		LED Lamp and	2 30	4 1504	0.1 0.1		0.07 0.8	102 0	0 6 109 \$ 13
144 City Hall	09.01-RCH: Upgrade	3rd Floor South Wing		Sensor	506 \$0		2x4 Parabolic 32T802E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /	2 12	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANL/		Driver	2 30	4 1504	0.1 0.1			103 0	0 6 109 \$ 13
145 City Hall	09.01-RCH: Upgrade	3rd Floor South Wing		Storage Areas - Active	503 \$O		2x4 Prismatic 32T802E	Electronic, T8 2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /	2 N	Payback/Budget	No Retrofit Proposed LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	2 Recessed	N/A LED Lamp and	0 63	4 782	0.1 0.1	99 99	0.00 0.0	0 0	0 0 0 \$ -
146 City Hall	09.01-RCH: Upgrade	3rd Floor South Wing		Halls & common areas	510 \$0		2x4 Prismatic 32T802E	Undercabinet / 17W Fluorescent, 2'-0" T8 /	3 L2	Lamp and Driver	LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system),	A 3 Recessed	Driver	2 30	6 2607	0.2 0.1	493 235	0.10 1.2	258 0	-1 14 272 \$ 25
147 City Hall	Ughting to LED 09.01-RCH: Upgrade	3rd Floor South Wing	Private office 332	Offices Offices, existing	506 \$		Undercabinet 17T801E	Electronic, T8 2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	1 18	Retrofit Lamp	1100 delivered lumens, SYLVANIA LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	1 Surface	Driver LED Lamp and	1 9	1 1564	0.0 0.0	28 14	0.01 0.1	14 0	0 1 15 \$ 2
148 City Hall	Lighting to LED 09.01-RCH: Upgrade	3rd Floor South Wing	Private office 332	Sensor Conf. Room, existing	508 \$O		2x4 Parabolic 32T802E	Electronic, T8 2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	2 L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIJ LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	A 2 Recessed	Driver	2 30	4 2086	0.1 0.1	263 125	0.07 0.8	138 0	-1 7 145 \$ 15
149 City Hall	Ughting to LED 09.01-RCH: Upgrade	3rd Floor South Wing	Conference 333	Storage Areas,	506 \$O		2x4 Parabolic 32T802E	Electronic, T8 2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	2 L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVAND	A 2 Recessed	Driver	2 30	4 1564	0.1 0.1	197 94	0.07 0.8	103 0	0 6 109 \$ 13
150 City Hall	Lighting to LED	3rd Floor South Wing	Closet 319	existing sensor	502 \$O		2x4 Parabolic 32T802E	Electronic, T8	1 N	Payback/Budget	No Retrofit Proposed	1 Recessed	N/A	0 63	2 521	0.1 0.1	33 33	0.00 0.0	0 0	0 0 0 \$ -
151 City Hall		3rd Floor South Wing	Open office	Offices	506 \$		Undercabinet 17T801E	Undercabinet / 17W Fluorescent, 2'-0" T8 / Electronic, T8	3 L8	Retrofit Lamp	LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 delivered lumens, SYLVANIA	3 Surface	LED Integral Driver	1 9	3 1564	0.1 0.0	84 42	0.03 0.3	42 0	0 2 44 \$ 5
152 City Hall		3rd Floor South Wing	Open office	Offices	506 \$		Undercabinet 25T801E	Undercabinet / 25W Fluorescent, 3'-0" T8 / Electronic, T8	29 <mark>L9</mark>	Retrofit Lamp	LED 3FT T8 Bypass Lamp Upgrade, (1) lamp, 12W (system), 1600+ delivered lumens, SYLVANIA	29 Surface	LED Integral Driver	1 12	29 1564	0.8 0.3	1,179 544	0.41 4.9	635 0	-2 34 669 \$ 77
153 City Hall	09.01-RCH: Upgrade Lighting to LED	3rd Floor South Wing	Open office	Open Office	518 \$T		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	81 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	A 81 Recessed	LED Lamp and Driver	2 30	162 4693	5.1 2.4	23,948 11,404	2.67 32.1 1	2,544 0	-47 669 13,213 \$ 1,012
154 City Hall	09.01-RCH: Upgrade Lighting to LED	3rd Floor South Wing	Corner Conference	Offices	506 \$		Undercabinet 17T801E	Undercabinet / 17W Fluorescent, 2'-0" T8 / Electronic, T8	1 L8	Retrofit Lamp	LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 delivered lumens, SYLVANIA	1 Surface	LED Integral Driver	1 9	1 1564	0.0 0.0	28 14	0.01 0.1	14 0	0 1 15 \$ 2
155 City Hall	09.01-RCH: Upgrade Lighting to LED	3rd Floor South Wing	Corner Conference	Conf. Room, existing sensor	506 \$O		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/	A 2 Recessed	LED Lamp and Driver	2 30	4 1564	0.1 0.1	197 94	0.07 0.8	103 0	0 6 109 \$ 13
156 City Hall	09.01-RCH: Upgrade Lighting to LED	3rd Floor South Wing	Plotter 320	Hallways, existing sensor	510 \$O		2x4 Prismatic 32T802E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	A 2 Recessed	LED Lamp and Driver	2 30	4 2607	0.1 0.1	329 156	0.07 0.8	172 0	-1 9 181 \$ 17
157 City Hall	09.01-RCH: Upgrade Lighting to LED	3rd Floor South Wing	Computer 321	Offices	506 \$3		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	9 <mark>L2</mark>	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/	9 Recessed	LED Lamp and Driver	2 30	18 1564	0.6 0.3	887 422	0.30 3.6	465 0	-2 25 489 \$ 56
158 City Hall	09.01-RCH: Upgrade Lighting to LED	3rd Floor South Wing	Private office 317	Offices	506 \$		Undercabinet 17T801E	Undercabinet / 17W Fluorescent, 2'-0" T8 / Electronic, T8	1 L8	Retrofit Lamp	LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 delivered lumens, SYLVANIA	1 Surface	LED Integral Driver	1 9	1 1564	0.0 0.0	28 14	0.01 0.1	14 0	0 1 15 \$ 2
159 City Hall	09.01-RCH: Upgrade Lighting to LED	3rd Floor South Wing	Private office 317	Offices, existing sensor	508 \$O		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/	A 2 Recessed	LED Lamp and Driver	2 30	4 2086	0.1 0.1	263 125	0.07 0.8	138 0	-1 7 145 \$ 15
160 City Hall	09.01-RCH: Upgrade	3rd Floor South Wing	Conference 316	Conf. Room, existing sensor	506 \$O		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/	A 2 Recessed	LED Lamp and Driver	2 30	4 1564	0.1 0.1	197 94	0.07 0.8	103 0	0 6 109 \$ 13
161 City Hall	09.01-RCH: Upgrade	3rd Floor North Wing		Hallways, existing sensor	510 \$O		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1 12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/	1 Recessed	LED Lamp and Driver	2 30	2 2607	0.1 0.0	164 78	0.03 0.4	86 0	0 5 91 \$ 8
162 City Hall	09.01-RCH: Upgrade	3rd Floor North Wing		Offices	506 \$			Undercabinet / 17W Fluorescent, 2'-0" T8 / Electronic, T8	218	Retrofit Lamp	LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 delivered lumens, SYLVANIA	2 Surface	LED Integral	1 0	2 1564	0.0 0.0	56 28	0.02 0.2	28 0	0 2 30 5 7
163 City Hall	09.01-RCH: Upgrade		Private office 346	Offices, existing	508 \$O		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	212	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver. 30W (cystem). 4300+ drilword lumps. SY VANU	2 Bacaccad	LED Lamp and	2 20	4 2006	0.1 0.1	262 125	0.07 0.8	128 0	-1 7 145 \$ 15
	09.01-RCH: Upgrade			Conf. Room, existing				2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	2 12		LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	2 Recessed	LED Lamp and	2 50	4 2000	0.1 0.1	103 01	0.07 0.0	100 0	
164 City Hall	09.01-RCH: Upgrade	3rd Floor North Wing		sensor	506 \$O			Electronic, T8 2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /	2 12	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA		Driver	2 30	4 1564	0.1 0.1	197 94	0.07 0.8	103 0	
165 City Hall	09.01-RCH: Upgrade		Files 348	Storage Areas - Active Storage Areas,	503 \$O		2x4 Prismatic 32T802E	Electronic, T8 2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /	2 N	Payback/Budget	No Retrofit Proposed	2 Recessed	N/A	0 63	4 782	0.1 0.1		0.00 0.0	0 0	0 0 0 \$ -
166 City Hall	Ughting to LED 09.01-RCH: Upgrade	3rd Floor North Wing	Work Storage 356 HR	existing sensor	502 \$O		2x4 Prismatic 32T802E	Electronic, T8 Undercabinet / 17W Fluorescent, 2'-0" T8 /	5 N	Payback/Budget	No Retrofit Proposed LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system),	5 Recessed	N/A LED Integral	0 63	10 521	0.3 0.3	164 164	0.00 0.0	0 0	0 0 0 \$ -
167 City Hall	Ughting to LED 09.01-RCH: Upgrade	3rd Floor North Wing	Private office 358	Offices Offices, existing	506 \$		Undercabinet 17T801E	Electronic, T8 2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	2 L8	Retrofit Lamp	1100 delivered lumens, SYLVANIA LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	2 Surface	Driver LED Lamp and	1 9	2 1564	0.0 0.0	56 28	0.02 0.2	28 0	0 2 30 \$ 3
168 City Hall	Lighting to LED 09.01-RCH: Upgrade	3rd Floor North Wing	Private office 358	sensor	508 \$O		2x4 Parabolic 32T802E	Electronic, T8 Undercabinet / 17W Fluorescent, 2'-0" T8 /	2 L2	Lamp and Driver	LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system),	A 2 Recessed	Driver	2 30	4 2086	0.1 0.1	263 125	0.07 0.8	138 0	-1 7 145 \$ 15
169 City Hall	Lighting to LED 09.01-RCH: Upgrade	3rd Floor North Wing	Open Office Area	Offices	506 \$		Undercabinet 17T801E	Electronic, T8 Undercabinet / 25W Fluorescent, 3'-0" T8 /	2 L8	Retrofit Lamp	1100 delivered lumens, SYLVANIA LED 3FT T8 Bypass Lamp Upgrade, (1) lamp, 12W (system),	2 Surface	Driver	1 9	2 1564	0.0 0.0	56 28	0.02 0.2	28 0	0 2 30 \$ 3
170 City Hall	Lighting to LED	3rd Floor North Wing	Open Office Area	Offices	506 \$		Undercabinet 25T801E	Electronic, T8	26 L9	Retrofit Lamp	LED 3FT 18 Bypass Lamp opgrade, (1) lamp, 12W (system), 1600+ delivered lumens, SYLVANIA LED 4FT T8 Lamp and Dimmable Driver Upgrade, (2) lamps with (1) 2-lamp driver, 30W (system), 4300+ delivered lumens	26 Surface	Driver	1 12	26 1564	0.7 0.3	1,057 488	0.36 4.4	569 0	-2 30 600 \$ 69
171 City Hall		3rd Floor North Wing	Open Office Area	Open Office	518 \$T		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	28 L2 DIM	Lamp and Driver	SYLVANIA	28 Recessed	LED Lamp and Driver	2 32	56 4693	1.8 0.9	8,278 4,205	0.87 10.4	4,073 0	-15 217 4,291 \$ 329
172 City Hall		3rd Floor North Wing	Open Office Area	Open Office	518 \$T		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	31 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/	A 31 Recessed	LED Lamp and Driver	2 30	62 4693	2.0 0.9	9,165 4,364	1.02 12.3	4,801 0	-18 256 5,057 \$ 387
173 City Hall		3rd Floor North Wing	Vault 355	Hallways, existing sensor	510 \$O		2x4 Prismatic 32T802E		4 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	A 4 Recessed	LED Lamp and Driver	2 30	8 2607	0.3 0.1	657 313	0.13 1.6	344 0	-1 18 362 \$ 33
174 City Hall	09.01-RCH: Upgrade Lighting to LED	3rd Floor North Wing	Conference 354	Conf. Room, existing sensor	506 \$O		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	A 2 Recessed	LED Lamp and Driver	2 30	4 1564	0.1 0.1	197 94	0.07 0.8	103 0	0 6 109 \$ 13
175 City Hall	09.01-RCH: Upgrade Lighting to LED	3rd Floor North Wing	Private office 351	Offices	506 \$		Undercabinet 17T801E	Undercabinet / 17W Fluorescent, 2'-0" T8 / Electronic, T8	1 L8	Retrofit Lamp	LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 delivered lumens, SYLVANIA	1 Surface	LED Integral Driver	1 9	1 1564	0.0 0.0	28 14	0.01 0.1	14 0	0 1 15 \$ 2
176 City Hall	09.01-RCH: Upgrade Lighting to LED	3rd Floor North Wing	Private office 351	Offices, existing sensor	508 \$O		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/	A 2 Recessed	LED Lamp and Driver	2 30	4 2086	0.1 0.1	263 125	0.07 0.8	138 0	-1 7 145 \$ 15
177 City Hall	09.01-RCH: Upgrade Lighting to LED	3rd Floor North Wing	Pantry	Kitchen , existing sensor	506 \$O		2x4 Prismatic 32T802E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/	A 1 Recessed	LED Lamp and Driver	2 30	2 1564	0.1 0.0	99 47	0.03 0.4	52 0	0 3 54 \$ 6
178 City Hall	09.01-RCH: Upgrade Lighting to LED	3rd Floor North Wing	Conference 349	Conf. Room, existing sensor	506 \$O		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 <mark>L2</mark>	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/	A 2 Recessed	LED Lamp and Driver	2 30	4 1564	0.1 0.1	197 94	0.07 0.8	103 0	0 6 109 \$ 13
179 City Hall	09.01-RCH: Upgrade Lighting to LED	3rd Floor North Wing	Conference 344	Conf. Room, existing sensor	506 \$O		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/	A 2 Recessed	LED Lamp and Driver	2 30	4 1564	0.1 0.1	197 94	0.07 0.8	103 0	0 6 109 \$ 13
180 City Hall	09.01-RCH: Upgrade	3rd Floor North Wing		Offices	506 \$		Undercabinet 17T801E	Undercabinet / 17W Fluorescent, 2'-0" T8 / Electronic, T8	2 L8	Retrofit Lamp	LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 delivered lumens, SYLVANIA	2 Surface	LED Integral Driver	1 9	2 1564	0.0 0.0	56 28	0.02 0.2	28 0	0 2 30 \$ 3
181 City Hall	09.01-RCH: Upgrade	3rd Floor North Wing		Offices, existing sensor	508 \$O			2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/		LED Lamp and Driver	2 30	4 2086	0.1 0.1	263 125	0.07 0.8	138 0	-1 7 145 \$ 15
182 City Hall	09.01-RCH: Upgrade	3rd Floor North Wing		Halls & common areas	510 \$0		2x4 Prismatic 32T802E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /	3 12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/		LED Lamp and Driver	2 30	6 2607	0.2 0.1		0.10 1.2	258 0	-1 14 272 \$ 25
	09.01-RCH: Upgrade				506 \$			Undercabinet / 17W Fluorescent, 2'-0" T8 /	218		LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system),		LED Integral	1 0	2 1564			0.02 0.2	28 0	
183 City Hall	09.01-RCH: Upgrade	3rd Floor North Wing		Offices Offices, existing			Undercabinet 17T801E	Electronic, T8 2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 10	Retrofit Lamp	1100 delivered lumens, SYLVANIA LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIJ	2 Surface	LED Lamp and	9					120 0	
184 City Hall	09.01-RCH: Upgrade	3rd Floor North Wing		sensor	508 \$0			Undercabinet / 17W Fluorescent, 2'-0" T8 /	2 12	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANU LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 delivered lumens, SYLVANIA		LED Integral	2 30	4 2086			0.07 0.8	1.30 U	-1 7 145 \$ 15
185 City Hall	Ughting to LED	3rd Floor North Wing		Offices Offices, existing	506 \$			Electronic, T8 2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 1.8	Retrofit Lamp	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	2 Surface	LED Lamp and	1 9	2 1564	0.0 0.0	56 28	0.02 0.2	28 0	0 2 30 \$ 3
186 City Hall	Ughting to LED 09.01-RCH: Upgrade	3rd Floor North Wing		sensor	508 \$O			4' Strip / 32W Fluorescent, 4'-0" T8 /	2 L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	A 2 Recessed	Driver	2 30	4 2086	0.1 0.1	263 125	0.07 0.8	138 0	-1 7 145 \$ 15
187 City Hall	09.01-RCH: Upgrade	3rd Floor North Wing		Maintenance Areas Conf. Room, existing	502 \$			Electronic, T8 2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	3 N	Payback/Budget	No Retrofit Proposed LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	3 Chain	N/A LED Lamp and	0 63	6 521	0.2 0.2	99 99	0.00 0.0	0 0	0 0 0 \$ -
188 City Hall	Lighting to LED	3rd Floor North Wing	Conference 359	sensor	506 \$O		2x4 Parabolic 32T802E	Electronic, T8	2 L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVAND	A 2 Recessed	Driver	2 30	4 1564	0.1 0.1	197 94	0.07 0.8	103 0	0 6 109 \$ 13



							Existing				Propos	ed							Ener	av			
							Lamp &				Fropos.	Mounting (different	if	Watts					kW		ating Heating	Cooling Net kWh Cost	Energy
D Building	FIM Name	Floor/General Area	Room Name	ASHRAE Space	me Code Switching	Fixture Schedule	Fixture Type	Description	# of Fixtures Fixture Code	Retrofit Type (Current Scope)	Description	# of from Fixtures existing)		# of Lamps per per Fixture Fixture # of	Operating Lamps Hours	Existing Proposed	Existing kWh		avings Savings fonth per Year		nalty Penalty Wh) (therms)	Credit Savings per Savi (kWh) Year Year	
189 City Hall	09.01-RCH: Upgrade Lighting to LED	3rd Floor North Wing		Storage Areas, existing sensor	502 \$O		2x4 Prismatic 32T802E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 N	No Retrofit - Payback/Budget	No Retrofit Proposed	2 Recessed	N/A	0 63	4 521	0.1 0	1 6	5 66	0.00 0.0		0 0	0 0 5	
190 City Hall	09.01-RCH: Upgrade	3rd Floor North Wing		Offices	506 \$			Undercabinet / 17W Fluorescent, 2'-0" T8 / Electronic. T8	218	Retrofit Lamp	LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 delivered lumens, SYLVANIA	2 Surface	LED Integral Driver	1 0	2 1564	0.0 0	0 5	5 28	0.02 0.2	28	0 0	2 30 6	3
	09.01-RCH: Upgrade		Private office 362	Offices, existing				2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	212		LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-		LED Lamp and	2 20	4 2000	0.0	1 26	125	0.07 0.8	120		7 145 \$	15
191 City Hall	09.01-RCH: Upgrade			sensor	508 \$0		2x4 Parabolic 32T802E	Undercabinet / 17W Fluorescent, 2'-0" T8 /	2 12	Lamp and Driver	LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system),		LED Integral	2 30	4 2086	0.1 0.	1 20	5 125		136		7 145 \$	15
192 City Hall	09.01-RCH: Upgrade		Open office and Waiting area HR	Offices	506 \$			Electronic, T8 Undercabinet / 25W Fluorescent, 3'-0" T8 /	4 L8	Retrofit Lamp	1100 delivered lumens, SYLVANIA LED 3FT T8 Bypass Lamp Upgrade, (1) lamp, 12W (system),	4 Surface	LED Integral	1 9	4 1564	0.1 0.	0 11	3 56	0.04 0.4	56	0 0	3 59 \$	
193 City Hall	09.01-RCH: Upgrade		Open office and Waiting area HR	Offices	506 \$			Electronic, T8 2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	7 L9	Retrofit Lamp	1600+ delivered lumens, SYLVANIA LED 4FT T8 Lamp and Dimmable Driver Upgrade, (2) lamps with (1) 2-lamp driver, 30W (system), 4300+ delivered lumens,	7 Surface	LED Lamp and	1 12	7 1564	0.2 0.	1 28	5 131	0.10 1.2	153	0 -1	8 161 \$	19
194 City Hall	09.01-RCH: Upgrade		Open office and Waiting area HR	Open Office	518 \$T			Electronic, T8 2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	5 L2 DIM	Lamp and Driver	SYLVANIA LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	5 Recessed	LED Lamp and	2 32	10 4693	0.3 0.	2 1,47	8 751	0.16 1.9	727	0 -3	39 766 \$	59
195 City Hall	Lighting to LED 09.01-RCH: Upgrade	3rd Floor North Wing	Open office and Waiting area HR	Open Office	518 \$T		2x4 Parabolic 32T802E	Electronic, T8 Undercabinet / 17W Fluorescent, 2'-0" T8 /	14 L2	Lamp and Driver	Lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system),	14 Recessed	Driver LED Integral	2 30	28 4693	0.9 0.	4 4,13	9 1,971	0.46 5.5	2,168	0 -8	116 2,284 \$	175
196 City Hall	Lighting to LED 09.01-RCH: Upgrade	3rd Floor North Wing	Private office 364	Offices Offices, existing	506 \$		Undercabinet 17T801E	Electronic, T8 2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	2 L8	Retrofit Lamp	1100 delivered lumens, SYLVANIA LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	2 Surface	Driver	1 9	2 1564	0.0 0.	0 5	5 28	0.02 0.2	28	0 0	2 30 \$	3
197 City Hall	Lighting to LED 09.01-RCH: Upgrade	3rd Floor North Wing	Private office 364	sensor	508 \$O		2x4 Parabolic 32T802E	Electronic, T8 Undercabinet / 17W Fluorescent, 2'-0" T8 /	2 L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system),	2 Recessed	Driver LED Integral	2 30	4 2086	0.1 0.	1 26	3 125	0.07 0.8	138	0 -1	7 145 \$	15
198 City Hall	Lighting to LED 09.01-RCH: Upgrade	3rd Floor North Wing	Private office 363	Offices Offices, existing	506 \$		Undercabinet 17T801E	Electronic, T8 2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	2 L8	Retrofit Lamp	1100 delivered lumens, SYLVANIA LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	2 Surface	Driver	1 9	2 1564	0.0 0.	0 5	5 28	0.02 0.2	28	0 0	2 30 \$	3
199 City Hall	Ughting to LED 09.01-RCH: Upgrade	3rd Floor North Wing	Private office 363	sensor	508 \$O		2x4 Parabolic 32T802E	Electronic, T8 2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	2 12	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA LED 4FT T8 Lamp and Driver Upgrade. (2) lamps with (1) 2-	2 Recessed	Driver	2 30	4 2086	0.1 0.	1 26	3 125	0.07 0.8	138	0 -1	7 145 \$	15
200 City Hall	Lighting to LED	3rd Floor North Wing	Woman's restroom	Restrooms, existing sensor	506 \$O		2x4 Parabolic 32T802E	Electronic, T8	3 L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	3 Recessed	Driver	2 30	6 1564	0.2 0.	1 29	5 141	0.10 1.2	155	0 -1	8 163 \$	19
201 City Hall		3rd Floor North Wing	Men restroom	Restrooms, existing sensor	506 \$O		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	3 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA LED PL Bypass Lamp Upgrade, (1) Vertical mount lamps with	3 Recessed	LED Lamp and Driver	2 30	6 1564	0.2 0.	1 29	5 141	0.10 1.2	155	0 -1	8 163 \$	19
202 City Hall		3rd Floor North Wing	Elevator lobby n Vestibule	Halls & common areas	518 \$T		Recessed Downlight 42CFL01	Recessed Downlight / Compact Fluorescent, 42W Triple, Vertical / N/A	12 L16HO	Retrofit Lamp	internal driver and remove existing ballast, 16.5W each, 1000 delivered lumens, GREEN CREATIVE: PL V 16.5W BYP	12 Recessed	LED Integral Driver	2 17	24 4693	0.5 0.	2 2,47	8 929	0.33 4.0	1,549	0 -6	83 1,631 \$	125
203 City Hall	09.01-RCH: Upgrade Lighting to LED	3rd Floor North Wing	Elevator lobby n Vestibule	Halls & common areas	518 \$T		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	10 12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	10 Recessed	LED Lamp and Driver	2 30	20 4693	0.6 0.	3 2,95	7 1,408	0.33 4.0	1,549	0 -6	83 1,631 \$	125
204 City Hall	09.01-RCH: Upgrade Lighting to LED	3rd Floor North Wing	Conference 303	Conf. Room, existing sensor	506 \$O		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	6 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	6 Recessed	LED Lamp and Driver	2 30	12 1564	0.4 0.	2 59	1 282	0.20 2.4	310	0 -1	17 326 \$	38
205 City Hall	09.01-RCH: Upgrade Lighting to LED	3rd Floor North Wing	Conference 304	Conf. Room, existing sensor	506 \$O		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	4 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	4 Recessed	LED Lamp and Driver	2 30	8 1564	0.3 0.	1 39	4 188	0.13 1.6	206	0 -1	11 217 \$	25
206 City Hall	09.01-RCH: Upgrade Lighting to LED	3rd Floor North Wing	Conference 305	Conf. Room, existing sensor	506 \$O		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	4 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	4 Recessed	LED Lamp and Driver	2 30	8 1564	0.3 0.	1 39	4 188	0.13 1.6	206	0 -1	11 217 \$	25
207 City Hall	09.01-RCH: Upgrade Lighting to LED	3rd Floor North Wing	Electrical 310	Maintenance Areas - Inactive	501 \$		4' Strip 32T802E	4' Strip / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1 N	No Retrofit - Payback/Budget	No Retrofit Proposed	1 Chain	N/A	0 63	2 261	0.1 0.	1 1	5 16	0.00 0.0	0 0	0 0	0 0 \$	
208 City Hall	09.01-RCH: Upgrade Lighting to LED	3rd Floor South Wing	Electrical 322	Maintenance Areas - Inactive	501 \$		4' Strip 32T802E	4' Strip / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1 N	No Retrofit - Payback/Budget	No Retrofit Proposed	1 Chain	N/A	0 63	2 261	0.1 0.	1 1	5 16	0.00 0.0	0 0	0 0	0 0 \$	
209 City Hall	09.01-RCH: Upgrade Lighting to LED	4th Floor North Wing	Private office 437	Offices	506 \$		Undercabinet 17T801E	Undercabinet / 17W Fluorescent, 2'-0" T8 / Electronic, T8	2 L8	Retrofit Lamp	LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 delivered lumens, SYLVANIA	2 Surface	LED Integral Driver	1 9	2 1564	0.0 0.	0 5	5 28	0.02 0.2	28	0 0	2 30 \$	3
210 City Hall	09.01-RCH: Upgrade Lighting to LED	4th Floor North Wing	Private office 437	Offices, existing sensor	508 \$O		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	2 Recessed	LED Lamp and Driver	2 30	4 2086	0.1 0.	1 26	3 125	0.07 0.8	138	0 -1	7 145 \$	15
211 City Hall	09.01-RCH: Upgrade Lighting to LED	4th Floor North Wing	Office 448	Offices, existing sensor	508 \$O		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	2 Recessed	LED Lamp and Driver	2 30	4 2086	0.1 0.	1 26	3 125	0.07 0.8	138	0 -1	7 145 \$	15
212 City Hall	09.01-RCH: Upgrade	4th Floor North Wing	Files 446	Storage Areas - Active	504 \$		2x4 Prismatic 32T802E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	3 N	No Retrofit - Payback/Budget	No Retrofit Proposed	3 Recessed	N/A	0 63	6 1043	0.2 0.	2 19	7 197	0.00 0.0	0	0 0	0 0 \$	
213 City Hall	09.01-RCH: Upgrade Lighting to LED	4th Floor North Wing	Private office 445	Offices	506 \$		Undercabinet 17T801E	Undercabinet / 17W Fluorescent, 2'-0" T8 / Electronic, T8	2 L8	Retrofit Lamp	LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 delivered lumens, SYLVANIA	2 Surface	LED Integral Driver	1 9	2 1564	0.0 0.	0 5	5 28	0.02 0.2	28	0 0	2 30 \$	3
214 City Hall	09.01-RCH: Upgrade		Private office 445	Offices, existing	508 \$O		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	2 Recessed	LED Lamp and Driver	2 30	4 2086	0.1 0.	1 26	3 125	0.07 0.8	138	0 -1	7 145 \$	15
215 City Hall	09.01-RCH: Upgrade		Private office 433	Offices	506 \$			Undercabinet / 17W Fluorescent, 2'-0" T8 / Electronic, T8	2 18	Retrofit Lamp	LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 delivered lumens, SYLVANIA	2 Surface	LED Integral Driver	1 9	2 1564	0.0 0.	0 5	5 28	0.02 0.2	28	0 0	2 30 \$	3
216 City Hall	09.01-RCH: Upgrade	4th Floor North Wing	Private office 433	Offices, existing	508 \$O		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	2 Recessed	LED Lamp and Driver	2 30	4 2086	0.1 0.	1 26	3 125	0.07 0.8	138	0 -1	7 145 s	15
217 City Hall	09.01-RCH: Upgrade	4th Floor North Wing		Offices	506 \$			Undercabinet / 17W Fluorescent, 2'-0" T8 / Electronic, T8	218	Retrofit Lamp	LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 delivered lumens, SYLVANIA	2 Surface	LED Integral	1 9	2 1564	0.0 0.	0 5	5 28	0.02 0.2	28	0 0	2 30 \$	3
	09.01-RCH: Upgrade	4th Floor North Wing		Offices, existing	508 \$0			2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	212	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA		LED Lamp and Driver	2 30	4 2086	0.1 0	1 26	3 125	0.07 0.6	138	0 -1	7 145 \$	15
218 City Hall	09.01-RCH: Upgrade			Officer	506 #			Undercabinet / 17W Fluorescent, 2'-0" T8 /	212		LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 dolivered lumore, SYLVANIA		LED Integral	1 0	3 1564	0.0 0.	0 5	2 20	0.02 0.2	20	0 -1	2 20 6	- 15
219 City Hall	09.01-RCH: Upgrade	4th Floor North Wing 4th Floor North Wing		Offices, existing	508 \$0		Oudercabinet 1/1801E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	210	Retront Lamp	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	2 Surface	LED Lamp and Driver	2 20	2 1504	0.0 0.		125	0.02 0.2	120	0 0	7 145 \$	
220 City Hall	09.01-RCH: Upgrade			sensor			2x4 Parabolic 32T802E	Undercabinet / 17W Fluorescent, 2'-0" T8 /	2 12	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system),		LED Integral	2 30	4 2086	0.1 0.	1 20	5 125		138		7 145 \$	15
221 City Hall	09.01-RCH: Upgrade	4th Floor North Wing		Offices Offices, existing	506 \$		Undercabinet 17T801E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	0 18	Retrofit Lamp	1100 delivered lumens, SYLVANIA LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	0 Surface	LED Lamp and	1 9	0 1564	0.0 0.			0.00 0.0		0 0		-
222 City Hall	09.01-RCH: Upgrade	4th Floor North Wing		sensor	508 \$0		2x4 Parabolic 32T802E	Undercabinet / 17W Fluorescent, 2'-0" T8 /	2 12	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 delivered lumens, SYLVANIA		LED Integral	2 30	4 2086	0.1 0.	1 26	3 125	0.07 0.8	138	0 -1	7 145 \$	15
223 City Hall	Lighting to LED 09.01-RCH: Upgrade	4th Floor North Wing		Offices Offices, existing	506 \$			Electronic, T8 2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	1 L8	Retrofit Lamp	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	1 Surface	LED Lamp and	1 9	1 1564	0.0 0.	2	5 14	0.01 0.1	14	0 0	1 15 \$	2
224 City Hall	Ughting to LED 09.01-RCH: Upgrade	4th Floor North Wing		sensor	508 \$O		2x4 Parabolic 32T802E	Electronic, T8 2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 12	Lamp and Driver No Retrofit -	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA		Driver	2 30	4 2086	0.1 0.	1 26	3 125	0.07 0.8	138	0 -1	7 145 \$	15
225 City Hall	09.01-RCH: Upgrade	4th Floor North Wing		Storage Areas - Active	504 \$			2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	2 N	Payback/Budget	No Retrofit Proposed LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	2 Recessed	N/A LED Lamp and	0 63	4 1043	0.1 0.	1 13	1 131	0.00 0.0	0	0 0	0 0 \$	-
226 City Hall	Ughting to LED 09.01-RCH: Upgrade	4th Floor North Wing		Halls & common areas	510 \$0		2x4 Parabolic 32T802E	Electronic, T8 2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	2 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-		LED Lamp and	2 30	4 2607	0.1 0.	1 32	9 156	0.07 0.8	172	0 -1	9 181 \$	17
227 City Hall	Ughting to LED 09.01-RCH: Upgrade	4th Floor North Wing	Private office 465	Offices, existing	508 \$O		2x4 Parabolic 32T802E	Electronic, T8 2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	2 L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	2 Recessed	LED Lamp and	2 30	4 2086	0.1 0.	1 26	3 125	0.07 0.8	138	0 -1	7 145 \$	15
228 City Hall	09.01-RCH: Upgrade	4th Floor North Wing	Private office 463	sensor	508 \$O		2x4 Parabolic 32T802E	Electronic, T8 Undercabinet / 17W Fluorescent, 4-0 "T8 /	2 12	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system),	2 Recessed	LED Lamp and Driver	2 30	4 2086	0.1 0.	1 26	3 125	0.07 0.8	138	0 -1	7 145 \$	15
229 City Hall	Lighting to LED	4th Floor North Wing	Private office 462	Offices	506 \$		Undercabinet 17T801E	Electronic, T8	2 L8	Retrofit Lamp	1100 delivered lumens, SYLVANIA	2 Surface	Driver	1 9	2 1564	0.0 0.	0 5	5 28	0.02 0.2	28	0 0	2 30 \$	3
230 City Hall		4th Floor North Wing	Private office 462	Offices, existing sensor	508 \$O		2x4 Parabolic 32T802E		2 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	2 Recessed	LED Lamp and Driver	2 30	4 2086	0.1 0.	1 26	3 125	0.07 0.8	138	0 -1	7 145 \$	15
231 City Hall		4th Floor North Wing	Waiting Area/Open Office 454 455	Offices	506 \$		Undercabinet 25T801E		2 L9	Retrofit Lamp	LED 3FT T8 Bypass Lamp Upgrade, (1) lamp, 12W (system), 1600+ delivered lumens, SYLVANIA	2 Surface	LED Integral Driver	1 12	2 1564	0.1 0.	0 8	1 38	0.03 0.3	44	0 0	2 46 \$	5
232 City Hall		4th Floor North Wing	Waiting Area/Open Office 454 455	Open Office	518 \$T		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	15 12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	15 Recessed	LED Lamp and Driver	2 30	30 4693	0.9 0.	5 4,43	5 2,112	0.50 5.9	2,323	0 -9	124 2,447 \$	187
233 City Hall		4th Floor North Wing	Conf. Rm 453	Conf. Room, existing sensor	506 \$O		2x4 Parabolic 32T802E		3 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA		LED Lamp and Driver	2 30	6 1564	0.2 0.	1 29	5 141	0.10 1.2	155	0 -1	8 163 \$	19
234 City Hall		4th Floor North Wing	Mayor Conference Rm	Conf. Room, existing sensor	506 \$O		Direct/Indirect 32T806E		1 L6	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (6) lamps with (2) 3- lamp driver, 90W (system), 6000+ delivered lumens, SYLVANIA	1 Chain	LED Lamp and Driver	6 90	6 1564	0.2 0.	1 34	5 141	0.13 1.6	205	0 -1	11 216 \$	25
235 City Hall	09.01-RCH: Upgrade Lighting to LED	4th Floor North Wing	Mayor Conference Rm	Conf. Room, existing sensor	506 \$O		2x4 Parabolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	4 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	4 Recessed	LED Lamp and Driver	2 30	8 1564	0.3 0.	1 39	4 188	0.13 1.6	206	0 -1	11 217 \$	25



No.										Existing				Propos	ed							Energ	av.		
															Mounting	(if	Watts							ating Heating	
	ID Building	FIM Name	Floor/General Area	Room Name	ASHRAE Space Types	Time Code	le Switching	Fixture Schedule	Fixture Type		Description	# of Fixtures Fixture Code	Retrofit Type (Current Scope)	Description		Lamp Type	# of Lamps per		Existing Proposed	Existing kWh		avings Savings	Savings per Per	alty Penalty	Credit Savings per Savings p
	236 City Hall		4th Floor	Center Area Phone Pm Left 433	Conf. Room, existing	50	06 \$		2v4 Prismatic	32T802F		112	Lamp and Driver		1 Peressed		2 30	2 1564	0.1 0	0 99	47	0.03 0.4	52	0 0	3 54 6
Math		09.01-RCH: Upgrade									2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /			LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-			2 20	2 1564			47				
<form> Norma <t< td=""><td></td><td>09.01-RCH: Upgrade</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /</td><td>1 12</td><td></td><td>LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-</td><td></td><td>LED Lamp and</td><td>2 30</td><td>2 1504</td><td>0.1 0.</td><td>.0 99</td><td>47</td><td></td><td>52</td><td>0 0</td><td>¢ +C C</td></t<></form>		09.01-RCH: Upgrade									2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	1 12		LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-		LED Lamp and	2 30	2 1504	0.1 0.	.0 99	47		52	0 0	¢ +C C
	238 City Hall	09.01-RCH: Upgrade		Center Area Conf. Left 404		50	06 \$0		2x4 Parabolic	32T802E		2 L2	Lamp and Driver		A 2 Recessed	LED Lamp and	2 30	4 1564	0.1 0.	.1 197	94	0.07 0.8	103	0 0	
	239 City Hall	Lighting to LED	4th Floor	Center Area Conference Center 405	sensor	50	06 \$O		2x4 Parabolic	32T802E	Electronic, T8	4 L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	4 Recessed	Driver	2 30	8 1564	0.3 0	.1 394	188	0.13 1.6	206	0 -1	11 217 \$ 7
	240 City Hall	Lighting to LED	4th Floor	Center Area Conference Right 406	sensor	50	06 \$O		2x4 Parabolic	32T802E	Electronic, T8	2 L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	A 2 Recessed	Driver	2 30	4 1564	0.1 0	.1 197	94	0.07 0.8	103	0 0	6 109 \$
	241 City Hall	Lighting to LED	4th Floor	Center Area Conference Corner 432	sensor	50	06 \$O		2x4 Parabolic	32T802E	Electronic, T8	2 L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	A 2 Recessed	Driver	2 30	4 1564	0.1 0.	.1 197	94	0.07 0.8	103	0 0	6 109 \$
	242 City Hall		4th Floor South Wing	Work Copy 430	Halls & common areas	51	10 \$0		2x4 Prismatic	32T802E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	4 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	4 Recessed		2 30	8 2607	0.3 0	.1 657	313	0.13 1.6	344	0 -1	18 362 \$
Dista Dista <th< td=""><td>243 City Hall</td><td>09.01-RCH: Upgrade Lighting to LED</td><td>4th Floor South Wing</td><td>Studio 415</td><td>Storage Areas - Active</td><td>50</td><td>04 \$</td><td></td><td>4' Strip</td><td>32T802E</td><td>4' Strip / 32W Fluorescent, 4'-0" T8 / Electronic, T8</td><td>4 N</td><td></td><td>No Retrofit Proposed</td><td>4</td><td>0 N/A</td><td>0 63</td><td>8 1043</td><td>0.3 0</td><td>.3 263</td><td>263</td><td>0.00 0.0</td><td>0</td><td>0 0</td><td>0 0 \$</td></th<>	243 City Hall	09.01-RCH: Upgrade Lighting to LED	4th Floor South Wing	Studio 415	Storage Areas - Active	50	04 \$		4' Strip	32T802E	4' Strip / 32W Fluorescent, 4'-0" T8 / Electronic, T8	4 N		No Retrofit Proposed	4	0 N/A	0 63	8 1043	0.3 0	.3 263	263	0.00 0.0	0	0 0	0 0 \$
	244 City Hall		4th Floor South Wing	Private Office 419	Offices	50	06 \$		Undercabinet	17T801E		2 L8	Retrofit Lamp		2 Surface		1 9	2 1564	0.0 0.	.0 56	28	0.02 0.2	28	0 0	2 30 \$
	245 City Hall		4th Floor South Wing	Private Office 419		50	08 \$O		2x4 Parabolic	32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 L2	Lamp and Driver		2 Recessed	LED Lamp and Driver	2 30	4 2086	0.1 0	.1 263	125	0.07 0.8	138	0 -1	7 145 \$
	246 City Hall		4th Floor South Wing	Private Office 423	Offices	50	06 \$		Undercabinet	17T801E	Undercabinet / 17W Fluorescent, 2'-0" T8 / Electronic, T8	2 18	Retrofit Lamp	LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 delivered lumens, SYLVANIA	2 Surface	LED Integral Driver	1 9	2 1564	0.0 0	.0 56	28	0.02 0.2	28	0 0	2 30 \$
		09.01-RCH: Upgrade	4th Floor South Wing	Private Office 423		50	08 SO		2x4 Parabolic	32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	2 Recessed	LED Lamp and Driver	2 30	4 2086	0.1 0.	.1 263	125	0.07 0.8	138	0 -1	7 145 \$
		09.01-RCH: Unorade									Undercabinet / 17W Fluorescent, 2'-0" T8 /	21.8		LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 doliward lumons, SYLVANIA	2 Surface	LED Integral	1 0	3 1564	0.0 0	0 56	28		20	0 0	3 20 6
		09.01-RCH: Upgrade									2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	2 10		LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	2 Surface	LED Lamp and		2 1304	0.0 0.		20	0.02 0.12	20		
	249 City Hall	09.01-RCH: Upgrade			Maintenance Areas -	50	08 \$0				4' Strip / 32W Fluorescent, 4'-0" T8 /	2 L2	No Retrofit -		2 Recessed	Driver	2 30	4 2086	0.1 0.	.1 263	125	0.07 0.8	138	0 -1	7 145 \$ 1
Bit All All All All All All All All All Al	250 City Hall	Ughting to LED			Inactive	50	01 \$		4' Strip	32T802E		1 N		No Retrofit Proposed	1	0 N/A	0 63	2 261	0.1 0	.1 16	16	0.00 0.0	0	0 0	0 0 \$
Marce	251 City Hall	Lighting to LED	4th Floor South Wing	File Rm 429	Storage Areas - Active	50	03 \$O		2x4 Prismatic	32T802E	Electronic, T8	2 N	Payback/Budget		2 Recessed	N/A	0 63	4 782	0.1 0	.1 99	99	0.00 0.0	0	0 0	0 0 \$
Rine Gale Main No No No No No No	252 City Hall	Lighting to LED	4th Floor South Wing	Edit Room 414	Offices	50	06 \$		2x4 Prismatic	32T802E	Electronic, T8	1 L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	A 1 Recessed	Driver	2 30	2 1564	0.1 0	.0 99	47	0.03 0.4	52	0 0	3 54 \$
PAC MADA MADA MADA MADA MADA MADA MADA MADA </td <td>253 City Hall</td> <td>Lighting to LED</td> <td>4th Floor South Wing</td> <td>Edit Room 416</td> <td>Offices</td> <td>50</td> <td>06 \$</td> <td></td> <td>2x4 Prismatic</td> <td>32T802E</td> <td>Electronic, T8</td> <td>2 L2</td> <td></td> <td></td> <td>A 2 Recessed</td> <td>LED Lamp and Driver</td> <td>2 30</td> <td>4 1564</td> <td>0.1 0</td> <td>.1 197</td> <td>94</td> <td>0.07 0.8</td> <td>103</td> <td>0 0</td> <td>6 109 \$</td>	253 City Hall	Lighting to LED	4th Floor South Wing	Edit Room 416	Offices	50	06 \$		2x4 Prismatic	32T802E	Electronic, T8	2 L2			A 2 Recessed	LED Lamp and Driver	2 30	4 1564	0.1 0	.1 197	94	0.07 0.8	103	0 0	6 109 \$
Norm Norm Norm Norm No	254 City Hall		4th Floor South Wing	Vocal booth 412	Offices	50	02 \$		2x4 Prismatic	32T802E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1 N		No Retrofit Proposed	1 Recessed	N/A	0 63	2 521	0.1 0	.1 33	33	0.00 0.0	0	0 0	0 0 \$
Clar Mathic	255 City Hall	09.01-RCH: Upgrade Lighting to LED	4th Floor South Wing	Control Rm 411	Offices	50	02 \$		2x4 Prismatic	32T802E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 N	No Retrofit - Payback/Budget	No Retrofit Proposed	2 Recessed	N/A	0 63	4 521	0.1 0	.1 66	66	0.00 0.0	o	0 0	0 0 \$
C C C C C C C C C C C <	256 City Hall		4th Floor South Wing	Private Office EV	Offices	50	06 \$		Undercabinet	17T801E	Undercabinet / 17W Fluorescent, 2'-0" T8 / Electronic, T8	2 1.8	Retrofit Lamp	LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 delivered lumens, SYLVANIA	2 Surface	LED Integral Driver	1 9	2 1564	0.0 0	.0 56	28	0.02 0.2	28	0 0	2 30 \$
	257 City Hall	09.01-RCH: Upgrade Lighting to LED	4th Floor South Wing	Private Office EV	Offices, existing sensor	50	08 \$O		2x4 Parabolic	32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	A 2 Recessed	LED Lamp and Driver	2 30	4 2086	0.1 0.	.1 263	125	0.07 0.8	138	0 -1	7 145 \$
</td <td>258 City Hall</td> <td>09.01-RCH: Upgrade Lighting to LED</td> <td>4th Floor South Wing</td> <td>Private Office Pyle</td> <td>Offices</td> <td>50</td> <td>06 \$</td> <td></td> <td>Undercabinet</td> <td>17T801E</td> <td>Undercabinet / 17W Fluorescent, 2'-0" T8 / Electronic, T8</td> <td>2 L8</td> <td>Retrofit Lamp</td> <td>LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 delivered lumens, SYLVANIA</td> <td>2 Surface</td> <td>LED Integral Driver</td> <td>1 9</td> <td>2 1564</td> <td>0.0 0</td> <td>.0 56</td> <td>28</td> <td>0.02 0.2</td> <td>28</td> <td>0 0</td> <td>2 30 \$</td>	258 City Hall	09.01-RCH: Upgrade Lighting to LED	4th Floor South Wing	Private Office Pyle	Offices	50	06 \$		Undercabinet	17T801E	Undercabinet / 17W Fluorescent, 2'-0" T8 / Electronic, T8	2 L8	Retrofit Lamp	LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 delivered lumens, SYLVANIA	2 Surface	LED Integral Driver	1 9	2 1564	0.0 0	.0 56	28	0.02 0.2	28	0 0	2 30 \$
R R		09.01-RCH: Upgrade				50	08 SO		2x4 Parabolic	32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	2 Recessed	LED Lamp and Driver	2 30	4 2086	0.1 0.	.1 263	125	0.07 0.8	138	0 -1	7 145 \$
		09.01-RCH: Upgrade	4th Floor North Wing	Open Office S/W/N	Onen Office	50	06 \$		Undercabinet	17T801E	Undercabinet / 17W Fluorescent, 2'-0" T8 /	218		LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system),			1 9	2 1564	0.0 0	0 56	28	0.02 0.2	28	0 0	2 30 6
		09.01-RCH: Upgrade									Undercabinet / 25W Fluorescent, 3'-0" T8 /			LED 3FT T8 Bypass Lamp Upgrade, (1) lamp, 12W (system),				2 1304	0.0 0.		20		20		
Dirac Dira Dirac Dirac	261 City Hall	09.01-RCH: Upgrade									2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /			LED 4FT T8 Lamp and Dimmable Driver Upgrade, (2) lamps with (1) 2-lamp driver, 30W (system), 4300+ delivered lumens		LED Lamp and	1 12	27 1564	0.7 0.		507		591	0 -2	
	262 City Hall		4th Floor North Wing	Open Office S/W/N	Open Office	51	18 \$T		2x4 Parabolic	32T802E		22 L2 DIM	Lamp and Driver	SYLVANIA	22 Recessed	LED Lamp and	2 32	44 4693	1.4 0.	.7 6,504	3,304	0.68 8.2	3,201	0 -12	171 3,371 \$ 2
And the definition And the d	263 City Hall	Lighting to LED	4th Floor North Wing	Open Office S/W/N	Open Office	51	18 \$T		2x4 Parabolic	32T802E	Electronic, T8	25 L2			25 Recessed	Driver	2 30	50 4693	1.6 0	.8 7,391	3,520	0.83 9.9	3,872	0 -14	206 4,078 \$ 3
	264 City Hall	Lighting to LED	4th Floor North Wing	File Room		50	03 \$O		2x4 Prismatic	32T802E	Electronic, T8	2 N	Payback/Budget		2 Recessed	N/A	0 63	4 782	0.1 0	.1 99	99	0.00 0.0	0	0 0	0 0 \$
100 1 - 10 100 1 - 10 100 0 -	265 City Hall	Lighting to LED	4th Floor North Wing	Copy Rm	sensor	51	10 \$0		2x4 Prismatic	32T802E	Electronic, T8	2 L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	A 2 Recessed	Driver	2 30	4 2607	0.1 0.	.1 329	156	0.07 0.8	172	0 -1	9 181 \$
Displicit Displicit <t< td=""><td>266 City Hall</td><td></td><td>4th Floor North Wing</td><td>Copy Rm</td><td>Hallways, existing sensor</td><td>51</td><td>10 \$0</td><td></td><td>2x4 Prismatic</td><td>32T804E</td><td>Electronic, T8</td><td>1 L4</td><td>Lamp and Driver</td><td>LED 4FT T8 Lamp and Driver Upgrade, (4) lamps with (1) 4- lamp driver, 60W (system),8000+ delivered lumens, SYLVANIA</td><td>1 Recessed</td><td>LED Lamp and Driver</td><td>4 60</td><td>4 2607</td><td>0.1 0</td><td>.1 297</td><td>156</td><td>0.05 0.6</td><td>141</td><td>0 -1</td><td>8 148 \$</td></t<>	266 City Hall		4th Floor North Wing	Copy Rm	Hallways, existing sensor	51	10 \$0		2x4 Prismatic	32T804E	Electronic, T8	1 L4	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (4) lamps with (1) 4- lamp driver, 60W (system),8000+ delivered lumens, SYLVANIA	1 Recessed	LED Lamp and Driver	4 60	4 2607	0.1 0	.1 297	156	0.05 0.6	141	0 -1	8 148 \$
Normal	267 City Hall	09.01-RCH: Upgrade Lighting to LED	4th Floor South Wing	Pantry	Kitchen , existing sensor	50	06 \$O				Electronic, T8	1 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	A 1 Recessed		2 30	2 1564	0.1 0	.0 99	47	0.03 0.4	52	0 0	3 54 \$
20 1<	268 City Hall	09.01-RCH: Upgrade Lighting to LED	4th Floor North Wing	Mayor Office		50	08 \$O		2x4 Parabolic	32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	4 12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	4 Recessed	LED Lamp and Driver	2 30	8 2086	0.3 0	.1 526	250	0.13 1.6	275	0 -1	15 290 \$
Processe Processe Processe Processe Processe Processe Processe Processe Pro	269 City Hall	09.01-RCH: Upgrade Lighting to LED	4th Floor North Wing	Elevator Lobby	Halls & common areas	51	18 \$T		2x4 Parabolic	32T802E		8 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	A 8 Recessed		2 30	16 4693	0.5 0	.2 2,365	1,126	0.26 3.2	1,239	0 -5	66 1,305 \$ 1
1 </td <td>270 City Hall</td> <td>09.01-RCH: Upgrade Lighting to LED</td> <td>4th Floor North Wing</td> <td>Bathroom Vestibule</td> <td>Halls & common areas</td> <td>51</td> <td>18 \$T</td> <td></td> <td>2x4 Parabolic</td> <td>32T802E</td> <td>2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8</td> <td>2 L2</td> <td>Lamp and Driver</td> <td>lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA</td> <td>A 2 Recessed</td> <td></td> <td>2 30</td> <td>4 4693</td> <td>0.1 0.</td> <td>.1 591</td> <td>282</td> <td>0.07 0.8</td> <td>310</td> <td>0 -1</td> <td>17 326 \$</td>	270 City Hall	09.01-RCH: Upgrade Lighting to LED	4th Floor North Wing	Bathroom Vestibule	Halls & common areas	51	18 \$T		2x4 Parabolic	32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	A 2 Recessed		2 30	4 4693	0.1 0.	.1 591	282	0.07 0.8	310	0 -1	17 326 \$
2 And A	271 City Hall	09.01-RCH: Upgrade Lighting to LED	4th Floor	Meeting Area	Halls & common areas	51	18 \$T		2x4 Parabolic	32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	4 L2 DIM	Lamp and Driver	LED 4FT T8 Lamp and Dimmable Driver Upgrade, (2) lamps with (1) 2-lamp driver, 30W (system), 4300+ delivered lumens SYLVANIA	*		2 32	8 4693	0.3 0	.1 1,183	601	0.12 1.5	582	0 -2	31 613 \$
		09.01-RCH: Upgrade			Halls & common areas						2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	712		LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver 30W (system) 4300+ delivered lumens SVIVANI	7 Peressed		2 30	14 4693	0.4 0	2 2 070	986	0.23 2.8	1.084	0 -4	
2		09.01-RCH: Upgrade			Storage Areas,						2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /	2	No Retrofit -					4 531	0.1			0.00	-,		
1 </td <td></td> <td>09.01-RCH: Upgrade</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /</td> <td>2 N</td> <td></td> <td>LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-</td> <td></td> <td>LED Lamp and</td> <td>0 63</td> <td>4 521</td> <td>0.1 0</td> <td>.1 66</td> <td>66</td> <td>0.00 0.0</td> <td>0</td> <td>0 0</td> <td>0 0 5</td>		09.01-RCH: Upgrade									2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /	2 N		LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-		LED Lamp and	0 63	4 521	0.1 0	.1 66	66	0.00 0.0	0	0 0	0 0 5
222 227 27 100 100 100 100 2 2 100 2 2 100 100	274 City Hall		4th Floor South Wing	Pantry	sensor	50	06 \$0		2x4 Prismatic	32T802E		2 L2	Lamp and Driver		A 2 Recessed		2 30	4 1564	0.1 0.	.1 197	94	0.07 0.8	103	0 0	6 109 \$ 1
2/2 Cyr diplicity for LED <	275 City Hall	Lighting to LED	4th Floor South Wing	Private Office 422		50	06 \$		Undercabinet	17T801E	Electronic, T8	2 L8	Retrofit Lamp	1100 delivered lumens, SYLVANIA	2 Surface	Driver	1 9	2 1564	0.0 0.	.0 56	28	0.02 0.2	28	0 0	2 30 \$
277 C1y Updning to EDD dth Pior South Wing Open Office N & E Open Office N & E <t< td=""><td>276 City Hall</td><td>Lighting to LED</td><td>4th Floor South Wing</td><td>Private Office 422</td><td>sensor</td><td>50</td><td>08 \$O</td><td></td><td>2x4 Parabolic</td><td>32T802E</td><td>Electronic, T8</td><td>2 L2</td><td>Lamp and Driver</td><td>lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA LED 4FT T8 Lamp and Dimmable Driver Upgrade, (2) lamps</td><td></td><td>Driver</td><td>2 30</td><td>4 2086</td><td>0.1 0</td><td>1 263</td><td>125</td><td>0.07 0.8</td><td>138</td><td>0 -1</td><td>7 145 \$</td></t<>	276 City Hall	Lighting to LED	4th Floor South Wing	Private Office 422	sensor	50	08 \$O		2x4 Parabolic	32T802E	Electronic, T8	2 L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA LED 4FT T8 Lamp and Dimmable Driver Upgrade, (2) lamps		Driver	2 30	4 2086	0.1 0	1 263	125	0.07 0.8	138	0 -1	7 145 \$
Name	277 City Hall	Lighting to LED	4th Floor South Wing	Open Office N & E	Open Office	51	18 \$T		2x4 Parabolic		Electronic, T8	13 L2 DIM	Lamp and Driver	SYLVANIA	13 Recessed	Driver	2 32	26 4693	0.8 0	.4 3,843	1,952	0.40 4.8	1,891	0 -7	101 1,992 \$ 1
27 Cry Hail Updrage LED 4h Floor South Wing Open Office N & E <	278 City Hall	Lighting to LED	4th Floor South Wing	Open Office N & E	Open Office	51	18 \$T		2x4 Parabolic	32T802E	Electronic, T8	39 L2	Lamp and Driver		A 39 Recessed	Driver	2 30	78 4693	2.5 1	2 11,530	5,491	1.29 15.4	6,040	0 -22	322 6,362 \$ 4
220 (2x) (4x) (1) Updating to ED 4th Floor South Wing 0pen Office South 0p	279 City Hall	Lighting to LED	4th Floor South Wing	Open Office N & E	Open Office	50	06 \$		Undercabinet	25T801E	Undercabinet / 25W Fluorescent, 3'-0" T8 / Electronic, T8	29 L9	Retrofit Lamp	1600+ delivered lumens, SYLVANIA	29 Surface		1 12	29 1564	0.8 0	.3 1,179	544	0.41 4.9	635	0 -2	34 669 \$
ZEXI City Hall Upbring to LED 4th Pior South Wing Open Office S12 Mail <	280 City Hall	09.01-RCH: Upgrade Lighting to LED	4th Floor South Wing	Open Office South	Open Office	50	06 \$		Undercabinet	25T801E	Undercabinet / 25W Fluorescent, 3'-0" T8 / Electronic, T8	7 <mark>L9</mark>	Retrofit Lamp	1600+ delivered lumens, SYLVANIA	7 Surface	LED Integral Driver	1 12	7 1564	0.2 0	.1 285	131	0.10 1.2	153	0 -1	8 161 \$
242 Ctry Hall 09.01-6CH: Upgrade (2) Early Ming to LED 4/th Floor South Wing to LED 4/th Floor South Wi	281 City Hall	09.01-RCH: Upgrade Lighting to LED	4th Floor South Wing	Open Office South	Open Office	51	18 \$T		2x4 Parabolic	32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	11 L2 DIM	Lamp and Driver	with (1) 2-lamp driver, 30W (system), 4300+ delivered lumens SYLVANIA	11 Recessed		2 32	22 4693	0.7 0	.4 3,252	1,652	0.34 4.1	1,600	0 -6	85 1,686 \$?
	282 City Hall	09.01-RCH: Upgrade			Open Office	51	18 \$T		2x4 Parabolic	32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	12 12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	A 12 Recessed	LED Lamp and Driver	2 30	24 4693	0.8 0	.4 3,548	1,689	0.40 4.8	1,858	0 -7	99 1,957 \$:



									Existing					Propos	ed								Er	iergy			
									Lamp &						Mounting (different	if		Watts					kW	kWh	leating Heating	Cooling Net kWh	Net Energy Cost
ID Building	FIM Name	Floor/General Area	Room Name	ASHRAE Space Types	Time Coo	de Switching	Fixture Schedule		Ballast	Description Fix	of ixtures Fix	xture Code	Retrofit Type (Current Scope)	Description	# of from Fixtures existing)	Lamp Type	# of Lamps per Fixture	per Fixture # of Lamp		xisting Propo W kW	esed Existing k	Proposed Wh kWh	kW Savings Savin per Month per Y		enalty Penalty kWh) (therms)	Credit Savings per	r Savings per Year
283 City Hall	09.01-RCH: Upgrade Lighting to LED	4th Floor North Wing	Electrical Storage 410	Storage Areas - Active	e 5	04 \$		2x4 Parabolic	32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1 N		No Retrofit - Payback/Budget	No Retrofit Proposed	1 Recessed	N/A	0	63	2 1043	0.1	0.1	66 66	0.00	0.0 0	0	0 0	0\$-
284 City Hall	09.01-RCH: Upgrade Lighting to LED	4th Floor South Wing	Storage 410	Maintenance Areas - Inactive	5	01 \$		4' Strip	32T802E	4' Strip / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1 N		No Retrofit - Payback/Budget	No Retrofit Proposed	1	0 N/A	0	63	2 261	0.1	0.1	16 16	0.00	0.0 0	0	0 0	0\$-
285 City Hall	09.01-RCH: Upgrade Lighting to LED	4th Floor North Wing	Mens 404	Restrooms, existing sensor	5	06 \$O		2x4 Parabolic	32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	3 <mark>L2</mark>		Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	3 Recessed	LED Lamp and Driver	2	30	6 1564	0.2	0.1	296 141	0.10	1.2 155	0	1 8 16	53 \$ 19
286 City Hall	09.01-RCH: Upgrade	4th Floor North Wing	Womans 405	Restrooms, existing sensor	5	06 \$O		2x4 Parabolic	32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	3 L2		Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA		LED Lamp and Driver	2	30	6 1564	0.2	0.1	296 141	0.10	1.2 155	0	-1 8 163	i3 \$ 19
273 City Hall	09.01-RCH: Upgrade Lighting to LED	1st Floor	Parking Lot	Outside Areas	7	18 sT		Area	LED	Area / LED Fixture / LED Driver	9 N		No Retrofit - LED	No Retrofit Proposed	9 Pole	N/A	0	50	9 6570	0.5	0.5	2.957 2.957	0.00	0.0 0	0	0 0	0 \$ -
288 City Hall	09.01-RCH: Upgrade	Stairs	Center Stair case	Halls & common areas	5 5	18 \$T		Wall Bracket	I FD	Wall Bracket / LED Fixture / LED Driver	7 N		No Retrofit - LED	No Retrofit Proposed	7 Wall	N/A	0	12	7 4693	0.1	0.1	394 394	0.00	0.0 0	0	0 0	0.5 -
	09.01-RCH: Upgrade	Reaf	Roof top Mech	Maintenance Areas - Inactive		01 \$			32T802E	4' Strip / 32W Fluorescent, 4'-0" T8 / Electronic, T8	0 1		No Retrofit -	No Retrofit Proposed		0 N/A		62	19 261	0.6	0.6	149 149	0.00		0		
289 City Hall	09.01-RCH: Upgrade	Chalan				18 \$T		Direct/Indirect		Direct/Indirect / LED Fixture / LED Driver	5 11		Payback/Budget	No Retrofit Proposed	5	0 N/A	0	12	5 4693	0.0	0.0	202 202	0.00	0.0 0			
290 City Hall	Ughting to LED	Stdirs	Stairs South corner	Halls & common areas							5 11		No Retrofit - LED				0	12		0.1	0.1	202 202		0.0 0	0		1 2 -
291 City Hall	09.01-RCH: Upgrade	Stairs	Stairs South corner	Halls & common areas		18 \$T			LED	General / LED Fixture / LED Driver 4' Strip / 32W Fluorescent, 4'-0" T8 /	5 N		No Retrofit - LED	No Retrofit Proposed LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	5	0 N/A	0	12	5 4693	0.1	0.1	282 282	0.00	0.0 0	0	0 0)\$ -
292 City Hall	Lighting to LED	Exterior	Loading Dock 126	Warehouse	5	12 \$		4' Strip	32T802E	Electronic, T8	8 L2		Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA LED PAR30 Bypass Lamp Upgrade, (1) E26 base lamp with internal driver, 10W each, 800+ delivered lumens, Sylvania:	8	0 Driver	2	30	16 3129	0.5	0.2	1,577 751	0.26	3.2 826	0	-3 44 870	J \$ 75
294 Main Building	09.01-RTC	1st Floor	Rec. Studio Instrument Storage	Storage Areas - Active	e 5	02 \$		Track	50PAR01	Track / Incandescent, PAR lamp / N/A Cylinder / Compact Fluorescent, 26W Triple /	1 119	9	Retrofit Lamp	Par30 10W DIM LED PL Bypass Lamp Upgrade, (2) Horizontal mount lamp with Internal driver and remove existing ballast, 8W each, 900	1 Track	LED Integral	1	10	1 521	0.1	0.0	26 5	0.04	0.5 21	0	0 1 22	2 \$ 5
295 Main Building	09.01-RTC	1st Floor	Rec. Studio Instrument Storage	Storage Areas - Active	e 5	02 \$		Cylinder	26CFL02	N/A	1 11	5	Retrofit Lamp	delivered lumens, GREEN CREATIVE: PL H 8W BYP LED PAR30 Bypass Lamp Upgrade, (1) E26 base lamp with	1 Surface	Driver	2	16	2 521	0.1	0.0	31 8	0.04	0.5 23	0	0 1 24	\$ 6
296 Main Building	09.01-RTC	1st Floor	Rec. Studio Main booth	Storage Areas - Active	e 5	02 \$		Track	50PAR01	Track / Incandescent, PAR lamp / N/A	5 L19	9	Retrofit Lamp	Internal driver, 10W each, 800+ delivered lumens, Sylvania: Par30 10W DIM LED PL Bypass Lamp Upgrade, (2) Horizontal mount lamp with	5 Track	LED Integral Driver	1	10	5 521	0.3	0.1	130 26	0.20	2.4 104	0	0 6 110	10 \$ 25
297 Main Building	09.01-RTC	1st Floor	Rec. Studio Main booth	Storage Areas - Active	e 5	02 \$		Cylinder	26CFL02	Cylinder / Compact Fluorescent, 26W Triple / N/A	2 11	5	Retrofit Lamp	Internal driver and remove existing ballast, 8W each, 900 delivered lumens, GREEN CREATIVE: PL H 8W BYP LED PAR30 Bypass Lamp Upgrade, (1) E26 base lamp with	2 Surface	LED Integral Driver	2	16	4 521	0.1	0.0	63 17	0.09	1.1 46	0	0 2 48	18 \$ 11
298 Main Building	09.01-RTC	1st Floor	Rec. Studio Vocal booth	Storage Areas - Active	e 5	02 \$		Track	50PAR01	Track / Incandescent, PAR lamp / N/A	2 L1	9	Retrofit Lamp	Internal driver, 10W each, 800+ delivered lumens, Sylvania: Par30 10W DIM LED PL Bypass Lamp Upgrade, (2) Horizontal mount lamp with	2 Track	LED Integral Driver	1	10	2 521	0.1	0.0	52 10	0.08	1.0 42	0	0 2 44	4 \$ 10
299 Main Building	09.01-RTC	1st Floor	Rec. Studio Vocal booth	Storage Areas - Active	e 5	02 \$		Cylinder	26CFL02	Cylinder / Compact Fluorescent, 26W Triple / N/A	1 [1]	5	Retrofit Lamp	Internal driver and remove existing ballast, 8W each, 900 delivered lumens, GREEN CREATIVE: PL H 8W BYP LED PAR30 Bypass Lamp Upgrade, (1) E26 base lamp with	1 Surface	LED Integral Driver	2	16	2 521	0.1	0.0	31 8	0.04	0.5 23	0	0 1 24	4 \$ 6
300 Main Building	09.01-RTC	1st Floor	Rec. Studio Storage	Storage Areas - Active	e 5	02 \$		Track	50PAR01	Track / Incandescent, PAR lamp / N/A	3 L19	9	Retrofit Lamp	Internal driver, 10W each, 800+ delivered lumens, Sylvania: Par30 10W DIM LED PL Bypass Lamp Upgrade, (2) Horizontal mount lamp with	3 Track	LED Integral Driver	1	10	3 521	0.2	0.0	78 16	0.12	1.4 63	0	0 3 61	6 \$ 15
301 Main Building	09.01-RTC	1st Floor	Rec. Studio Storage	Storage Areas - Active	e 5	02 \$		Cylinder	26CFL02	Cylinder / Compact Fluorescent, 26W Triple / N/A	1 11	5	Retrofit Lamp	LED PAR30 Bypass Lamp Upgrade, (1) Fabilitation and the more existing ballast, 8W each, 900 delivered lumens, GREEN CREATIVE: PL H 8W BYP LED PAR30 Bypass Lamp Upgrade, (1) E26 base lamp with	1 Surface	LED Integral Driver	2	16	2 521	0.1	0.0	31 8	0.04	0.5 23	0	0 1 2	24 \$ 6
302 Main Building	09.01-RTC	1st Floor	Recording Studio Control Room	Storage Areas - Active	e 5	02 \$		Track	50PAR01	Track / Incandescent, PAR lamp / N/A	5 L19	9	Retrofit Lamp	internal driver, 10W each, 800+ delivered lumens, Sylvania: Par30 10W DIM	5 Track	LED Integral Driver	1	10	5 521	0.3	0.1	130 26	0.20	2.4 104	0	0 6 11(10 \$ 25
303 Main Building	09.01-RTC	1st Floor	Recording Studio Control Room	Storage Areas - Active	e 5	02 \$3		Cylinder	26CFL02	Cylinder / Compact Fluorescent, 26W Triple / N/A	3 L1!	5	Retrofit Lamp	LED PL Bypass Lamp Upgrade, (2) Horizontal mount lamp with internal driver and remove existing ballast, 8W each, 900 delivered lumens, GREEN CREATIVE: PL H 8W BYP	3 Surface	LED Integral Driver	2	16	6 521	0.2	0.0	94 25	0.13	1.6 69	0	0 4 7	72 \$ 17
304 Main Building	09.01-RTC	1st Floor	Multi Purpose Bathroom	Restrooms	7	04 \$		Downlight	50PAR01	Downlight / Incandescent, PAR lamp / N/A	2 11	9	Retrofit Lamp	LED PAR30 Bypass Lamp Upgrade, (1) E26 base lamp with internal driver, 10W each, 800+ delivered lumens, Sylvania: Par30 10W DIM	2 Recessed	LED Integral Driver	1	10	2 1460	0.1	0.0	146 29	0.08	1.0 117	0	0 6 12	23 \$ 15
305 Main Building	09.01-RTC	1st Floor	Program Rm 117	Offices	5	06 \$		4' Acrylic Wrap (Wide)	32T804E	4' Acrylic Wrap (Wide) / 32W Fluorescent, 4'-0" T8 / Electronic, T8	3 L4		Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (4) lamps with (1) 4- lamp driver, 60W (system),8000+ delivered lumens, SYLVANIA	3 Chain	LED Lamp and Driver	4	60	12 1564	0.3	0.2	535 282	0.16	1.9 253	0	1 14 26	57 \$ 31
306 Main Building	09.01-RTC	1st Floor	Kitchen 116	Kitchen	5	05 \$		4' Acrylic Wrap (Wide)	32T802E	4' Acrylic Wrap (Wide) / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1 <mark>L2</mark>		Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	1 Surface	LED Lamp and Driver	2	30	2 1304	0.1	0.0	82 39	0.03	0.4 43	0	0 2 4	5\$6
307 Main Building	09.01-RTC	1st Floor	Program Rm 115	Halls & common areas	s 7	08 \$3		4' Acrylic Wrap	32T804E	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	9 L4		Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (4) lamps with (1) 4- lamp driver, 60W (system),8000+ delivered lumens, SYLVANIA	9 Recessed	LED Lamp and Driver	4	60	36 2920	1.0	0.5	2,996 1,577	0.49	5.8 1,419	0	-5 76 1,495	5 \$ 132
308 Main Building	09.01-RTC	1st Floor	Program Rm 115	Halls & common areas	s 7	08 \$3		4' Acrylic Wrap	32T802E	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 L2		Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	2 Surface	LED Lamp and Driver	2	30	4 2920	0.1	0.1	368 175	0.07	0.8 193	0	-1 10 203	J3 \$ 18
309 Main Building	09.01-RTC	1st Floor	Office 112	Offices	5	06 \$		4' Acrylic Wrap		4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	212		Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	2 Pendant	LED Lamp and	2	30	4 1564	0.1	0.1	197 94	0.07	0.8 103	0	0 6 10	09 \$ 13
										8' Strip / 32W Fluorescent, 4'-0" T8 /		·	No Retrofit -														
310 Main Building	09.01-RTC	1st Floor	Prog 111	Storage Areas	5	01 \$		8' Strip	32T804E	Electronic, T8 4' Strip / 32W Fluorescent, 4'-0" T8 /	1 N		Payback/Budget	No Retrofit Proposed	1 Chain	N/A	0	114	4 261	0.1	0.1	30 30	0.00	0.0 0	0	0 0	J \$ -
311 Main Building	09.01-RTC	1st Floor	STG 118	Storage Areas	5	01 \$		4' Strip	32T802E	Electronic, T8 2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /	1 N		Payback/Budget	No Retrofit Proposed LED 4FT T8 Lamp and Driver Upgrade, (4) lamps with (1) 4-	1 Chain	N/A	0	63	2 261	0.1	0.1	16 16	0.00	0.0 0	0	<u>) 0 0</u>	<u>) \$ -</u>
312 Main Building	09.01-RTC	1st Floor	Game Rm. 110	Halls & common areas	s 7	08 \$		2x4 Prismatic	32T804E	Electronic, T8	12 <mark>L4</mark>		Lamp and Driver	lamp driver, 60W (system),8000+ delivered lumens, SYLVANIA	12 Recessed	Driver	4	60	48 2920	1.4	0.7	3,995 2,102	0.65	7.8 1,892	0	-7 101 1,993	3 \$ 176
313 Main Building	09.01-RTC	1st Floor	Equipment Rm 109	Storage Areas	5	01 \$		4' Acrylic Wrap	32T804E	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 N		No Retrofit - Payback/Budget	No Retrofit Proposed	2	0 N/A	0	114	8 261	0.2	0.2	59 59	0.00	0.0 0	0	o o r	0 s -
314 Main Building	09.01-RTC	1st Floor	Office 103 STG 108	Offices	5	06 \$		Porcelain Socket	23CFL01SI	Porcelain Socket / Compact Fluorescent, 23W SI / N/A	1 Re	move	Remove	Remove	1 Surface	Remove	0	0	0 1564	0.0	0.0	36 0	0.02	0.3 36	0	0 2 31	38 \$ 4
315 Main Building	09.01-RTC	1st Floor	Office 103 STG 108	Offices	5	06 \$		4' Strip	32T802E	4' Strip / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1 L2	1	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	1 Chain	LED Lamp and Driver	2	30	2 1564	0.1	0.0	99 47	0.03	0.4 52	0	0 3 5	54 \$ 6
316 Main Building	09.01-RTC	1st Floor	Office 102 Safe 107	Offices	5	06 \$		4' Acrylic Wrap	32T802E	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1 L2		Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	1 Surface	LED Lamp and Driver	2	30	2 1564	0.1	0.0	99 47	0.03	0.4 52	0	0 3 5	54 \$ 6
317 Main Building	09.01-RTC	1st Floor	Office 102	Offices	5	06 s		4' Accylic Wran	32T804F	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 14		Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (4) lamps with (1) 4- lamp driver, 60W (system),8000+ delivered lumens, SYLVANIA	2 Surface	LED Lamp and Driver	4	60	8 1564	0.2	0.1	357 188	0.11	1.3 169	0	-1 9 17	/8 \$ 21
								4' Acrylic Wrap		4' Acrylic Wrap (Wide) / 32W Fluorescent, 4'-0" T8 / Electronic, T8		·		LED 4ET T8 Lamp and Driver Upgrade. (4) lamps with (1) 4-		LED Lamp and											
318 Main Building	09.01-RTC	1st Floor	Office 103	Offices	5	06 \$		(Wide) 4' Acrylic Wrap		18 / Electronic, 18 4' Acrylic Wrap (Wide) / 32W Fluorescent, 4'-0"	2 L4	•	Lamp and Driver	lamp driver, 60W (system),8000+ delivered lumens, SYLVANIA LED 4FT T8 Lamp and Driver Upgrade, (4) lamps with (1) 4-	2 Surface	LED Lamp and	4	60	8 1564	0.2	0.1	357 188	0.11	1.3 169	0	1 9 178	78 \$ 21
319 Main Building	09.01-RTC	1st Floor	Foyer 121	Halls & common areas	s 7	08 \$3		(Wide)	32T804E	T8 / Electronic, T8	3 L4		Lamp and Driver	lamp driver, 60W (system),8000+ delivered lumens, SYLVANIA LED 4FT T8 Lamp and Driver Upgrade, (4) lamps with (1) 4-	3 Surface	Driver	4	60	12 2920	0.3	0.2	999 526	0.16	1.9 473	0	2 25 498	98 \$ 44
320 Main Building	09.01-RTC	1st Floor	Office 101	Offices	5	06 \$				4' Acrylic Wrap (Wide) / 32W Fluorescent, 4'-0" T8 / Electronic, T8	3 L4		Lamp and Driver	lamp driver, 60W (system),8000+ delivered lumens, SYLVANIA	3 Surface	LED Lamp and Driver	4	60	12 1564	0.3	0.2	535 282	0.16	1.9 253	0	1 14 267	57 \$ 31
321 Main Building	09.01-RTC	1st Floor	Office 104	Offices	5	06 \$				4' Acrylic Wrap (Wide) / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1 L4		Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (4) lamps with (1) 4- lamp driver, 60W (system),8000+ delivered lumens, SYLVANIA LED A19 Bypass Lamp Upgrade, (1) E26 base lamp with	1 Surface	LED Lamp and Driver	4	60	4 1564	0.1	0.1	178 94	0.05	0.6 84	0	0 5 89	39 \$ 10
322 Main Building	09.01-RTC	1st Floor	Boys Bathroom	Restrooms	7	04 \$		Recessed Downlight	23CFL01SI	Recessed Downlight / Compact Fluorescent, 23W SI / N/A	2 11	8	Retrofit Lamp	internal driver, 12W each, 1100+ delivered lumens, Sylvania: A19 12W DIM	2 Recessed	LED Integral Driver	1	12	2 1460	0.0	0.0	67 35	0.02	0.3 32	0	0 2 3	4 \$ 4
323 Main Building	09.01-RTC	1st Floor	Boys Bathroom	Restrooms	7	04 \$		Recessed Downlight	50PAR01	Recessed Downlight / Incandescent, PAR lamp / N/A	1 11	9	Retrofit Lamp	LED PAR30 Bypass Lamp Upgrade, (1) E26 base lamp with internal driver, 10W each, 800+ delivered lumens, Sylvania: Par30 10W DIM	1 Recessed	LED Integral Driver	1	10	1 1460	0.1	0.0	73 15	0.04	0.5 58	0	0 3 6	52 \$ 7
324 Main Building	09.01-RTC	1st Floor	Boys Bathroom	Restrooms	7	04 \$		Vanity	32T802E	Vanity / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1 L2		Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	1 Wall	LED Lamp and Driver	2	30	2 1460	0.1	0.0	92 44	0.03	0.4 48	0	0 3 5	51 \$ 6
	09.01-RTC	1st Floor	Girls Bathroom			04 \$		Recessed		Recessed Downlight / Compact Fluorescent, 23W SI / N/A	2 L11	8	Retrofit Lamp	LED A19 Bypass Lamp Upgrade, (1) E26 base lamp with internal driver, 12W each, 1100+ delivered lumens, Sylvania: A19 12W DIM	2 Recessed	LED Integral Driver		12	2 1460	0.0	0.0	67	0.02	0.3 22	0	0 2	4 5 4
325 Main Building				Restrooms	/			Recessed			2 11	-				oa	1			0.0	0.0	35				39	-
326 Main Building	09.01-RTC	1st Floor	Girls Bathroom	Restrooms	7	U4 \$			LED	Recessed Downlight / LED Fixture / LED Driver Vanity / 32W Fluorescent, 4'-0" T8 / Electronic,	1 N		No Retrofit - LED	No Retrofit Proposed LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	1 Recessed	N/A LED Lamp and	0	12	1 1460	0.0	0.0	18 18		0.0 0	0	0 0	J \$ -
327 Main Building	09.01-RTC	1st Floor	Girls Bathroom	Restrooms	7	04 \$		Vanity	32T802E	T8 8' Strip / 95W Fluorescent, 8'-0" T12, H0 /	1 L2		Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	1 Wall	Driver	2	30	2 1460	0.1	0.0	92 44	0.03	0.4 48	0	3 51	51 \$ 6
328 Main Building	09.01-RTC	1st Floor	Tower 106	Storage Areas	5	01 \$		8' Strip	95T1202HO	Standard Magnetic, T12	1 N		Payback/Budget	No Retrofit Proposed	1	0 N/A	0	227	2 261	0.2	0.2	59 59	0.00	0.0 0	0	0 0 C)\$-



									Existin	a				Proposed									Ene	av			
									Lamp &						Mounting different	(if		Watts					kW		eating Heating		Net Energy Cost
ID Building	FIM Name	Floor/General Area	Room Name	ASHRAE Space Types	Time Cod	de Switching	Fixture Schedule	Fixture Type	Ballast	# Description F	f of ixtures	Fixture Code	Retrofit Type (Current Scope)		of from xtures existing)	Lamp Type	# of Lamps			sting Proposed kW	Existing kWh		Savings Savings Month per Yea	Savings per Pe	enalty Penalty	Credit Savings per	r Savings per Year
329 Main Building	09.01-RTC	1st Floor	Tower 105	Storage Areas	50	01 \$		8' Strip	95T1202H	8' Strip / 95W Fluorescent, 8'-0" T12, HO / Standard Magnetic, T12	1	N	No Retrofit - Payback/Budget	No Retrofit Proposed	1	0 N/A	0	227	2 261	0.2 0	.2 5	59	0.00 0.	0	0	0 0 0	0\$-
330 Main Building	09.01-RTC	1st Floor	Multipurpose Room	Halls & common areas	70	08 \$		4' Industrial w/reflectors	32T804F	4' Industrial w/reflectors / 32W Fluorescent, 4'- 0" T8 / Electronic, T8	10	14	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (4) lamps with (1) 4- lamp driver, 60W (system),8000+ delivered lumens, SYLVANIA	10 Surface	LED Lamp and	4	60	40 2920	1.1 0	.6 3,32	1,752	0.54 6.	1.577	0	-6 84 1,661	1 \$ 147
											61		No Retrofit -												_		
331 Main Building	09.01-RTC	1st Floor	Exterior	Outside Areas	71	11 \$T		Wallpack	175MH01	Wallpack / MH 175W / HID Magnetic	61	N	Payback/Budget	No Retrofit Proposed	6 Wall	N/A	0	210	6 4015	1.3 1	.3 5,05	5,059	0.00 0.	0	0	0 0 0)\$ -
332 Main Building	09.01-RTC	1st Floor	Exterior	Outside Areas	71	11 PC		General	50MH01	General / MH 50W / HID Magnetic	2 1	N	Payback/Budget	No Retrofit Proposed	2 Surface	N/A	0	62	2 4015	0.1 0	.1 49	498	0.00 0.	0	0	0 0 0)\$ -
333 Main Building	09.01-RTC	1st Floor	Exterior	Outside Areas	71	11 PC		Flood	22CFL01	Flood / Compact Fluorescent, 22W / N/A	4 1	N	Payback/Budget	No Retrofit Proposed	4 Surface	N/A	0	22	4 4015	0.1 0	.1 35	353	0.00 0.	0	0	0 0 0) \$ -
334 Main Building	09.01-RTC	1st Floor	Exterior	Outside Areas	71	11 PC		Area	250MH01	Area / MH 250W / HID Magnetic	1	N	No Retrofit - Payback/Budget	No Retrofit Proposed	1 Pole	N/A	0	295	1 4015	0.3 0	.3 1,18	1,184	0.00 0.	0	0	0 0 0	J \$ -
335 Main Building	09.01-RTC	1st Floor	Exterior	Outside Areas	71	11 PC		Flood	250HPS01	Flood / HPS 250W / HID Magnetic	2	N	No Retrofit - Payback/Budget	No Retrofit Proposed	2 Pole	N/A	0	295	2 4015	0.6 0	.6 2,36	2,369	0.00 0.	0	0	0 0 0	0 \$ -
337 Building 2	09.01-MOC [Interior]	1st Floor	Center office storage	Storage Areas	506L-S	ş		8' Industrial w/reflectors	60T1202H	8' Industrial w/reflectors / 60W Fluorescent, 4- 0" T12, HO / Standard Magnetic, T12, No PCB's	3 1	N	No Retrofit - Payback/Budget	No Retrofit Proposed	3 Chain	N/A	0	131	6 1564	0.4 0	.4 61	615	0.00 0.	0	0	0 0 C	0\$-
338 Building 2	09.01-MOC [Interior]	1st Floor	East	Maintenance Areas	50	04 \$		4' Acrylic Wra (Wide)	9 34T1204E	4' Acrylic Wrap (Wide) / 34W Fluorescent, 4'-0" T12 / Electronic, T12	6 1	N	No Retrofit - Payback/Budget	No Retrofit Proposed	6 Surface	N/A	0	120	24 1043	0.7 0	.7 75	751	0.00 0.		0	0 0 r	0\$-
339 Building 2	09.01-MOC [Interior]	1st Floor	Fact	Maintenance Areas	50	04 \$		8' Industrial w/reflectors	95712020	8' Industrial w/reflectors / 95W Fluorescent, 8'- 0" T12, HO / Standard Magnetic, T12	1.0	N	No Retrofit - Payback/Budget	No Retrofit Proposed	1 Chain	N/A	0	227	2 1043	0.2 0	.2 23	237	0.00 0.		0	0 0	0.5
			E .					4' Industrial	0070005	4' Industrial w/reflectors / 32W Fluorescent, 4'- 0" T8 / Flectronic, T8			No Retrofit -	No Retrofit Proposed													
340 Building 2	09.01-MOC [Interior]		East	Maintenance Areas	50	04 \$		w/reflectors 4' Industrial		4' Industrial w/reflectors / 34W Fluorescent, 4'-	21	N	Payback/Budget		2 Chain	N/A	0	63	4 1043	0.1 0	.1 13	131	0.00 0.	0	0	0 0 0	J \$ -
341 Building 2	09.01-MOC [Interior]	1st Floor	East	Maintenance Areas	50	04 \$		w/reflectors 4' Industrial	34T1202M	0" T12 / Standard Magnetic, T12 4' Industrial w/reflectors / 34W Fluorescent, 4'-	4 1	N	Payback/Budget	No Retrofit Proposed	4 Surface	N/A	0	82	8 1043	0.3 0	.3 34	342	0.00 0.	0	0	0 0 0)\$ -
342 Building 2	09.01-MOC [Interior]	1st Floor	Shop area	Maintenance Areas	50	04 \$		w/reflectors	34T1202M	0" T12 / Standard Magnetic, T12	1	N	Payback/Budget	No Retrofit Proposed	1 Surface	N/A	0	82	2 1043	0.1 0	.1 8	86	0.00 0.	0	0	0 0 0)\$ -
343 Building 2	09.01-MOC [Interior]	1st Floor	Shop area	Maintenance Areas	50	04 \$		4' Strip	LED	4' Strip / LED Fixture / LED Driver	4 1	N	No Retrofit - LED	No Retrofit Proposed	4 Surface	N/A	0	12	4 1043	0.0 0	.0 5	50	0.00 0.	0	0	0 0 0	<u>)</u> \$ -
344 Building 2	09.01-MOC [Interior]	1st Floor	Shop area	Maintenance Areas	50	04 \$		4' Industrial w/reflectors	32T802E	4' Industrial w/reflectors / 32W Fluorescent, 4'- 0" T8 / Electronic, T8	6 1	N	No Retrofit - Payback/Budget	No Retrofit Proposed	6 Chain	N/A	0	63	12 1043	0.4 0	.4 39	394	0.00 0.	0	0	0 0 0	0\$-
345 Building 2	09.01-MOC [Interior]	1st Floor	Sign shop West	Maintenance Areas	50	04 \$		Vapor-tight	32T802E	Vapor-tight / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1	N	No Retrofit - Payback/Budget	No Retrofit Proposed	1 Surface	N/A	0	63	2 1043	0.1 0	.1 6	66	0.00 0.	0	0	0 0 C	0\$-
346 Building 2	09.01-MOC [Interior]	1st Floor	Sign shop West	Maintenance Areas	50	04 \$		8' Strip	95T1202H	8' Strip / 95W Fluorescent, 8'-0" T12, HO / D Standard Magnetic, T12	1	N	No Retrofit - Payback/Budget	No Retrofit Proposed	1 Chain	N/A	0	227	2 1043	0.2 0	.2 23	237	0.00 0.	0 0	0	0 0 C	0\$-
347 Building 2	09.01-MOC [Interior]	1st Floor	Sign shop West	Maintenance Areas	50	04 \$		High bay	1000MH01	High bay / MH 1000W / HID Magnetic	3 1	N	No Retrofit - Payback/Budget	No Retrofit Proposed	3 Chain	N/A	0	1080	3 1043	3.2 3	.2 3,37	3,379	0.00 0.	0	0	0 0 1	0\$-
348 Building 3	09.01-MOC [Interior]	1st Floor	Break room	Halls & common areas	512I-B	5		2x4 Prismatic	34T1202M	2x4 Prismatic / 34W Fluorescent, 4'-0" T12 / Standard Magnetic, T12	3	12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	3 Recessed	LED Lamp and	2	30	6 3021	0.2 0	.1 74	272	0.16 1.	471	0	-2 25 490	96 \$ 43
										2x4 Prismatic / 34W Fluorescent, 4'-0" T12 /				LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-		LED Lamp and			0 5021	0.2							
349 Building 3	09.01-MOC [Interior]	1st Floor	Corner office		511L-PO	\$		2x4 Prismatic	3411202M	2x4 Prismatic / 34W Fluorescent, 4'-0" T12 /	21		Lamp and Driver	Iamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	2 Recessed	LED Lamp and	2	30	4 2868	0.2 0	.1 47	172	0.10 1.	298	0	1 16 314	4 \$ 28
350 Building 3	09.01-MOC [Interior]	1st Floor	LeAnn Office	Offices	511L-PO	\$		2x4 Prismatic	34T1202M	Standard Magnetic, T12 2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /	2 [L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (4) lamps with (1) 4-	2 Recessed	LED Lamp and	2	30	4 2868	0.2 0	.1 47	172	0.10 1.	298	0	-1 16 314	4 \$ 28
351 Building 3	09.01-MOC [Interior]	1st Floor	Main office area	Open Office	512L-00	\$		2x4 Prismatic	32T804E	Electronic, T8 2x4 Prismatic / 34W Fluorescent, 4'-0" T12 /	12	L4	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	12 Recessed	LED Lamp and	4	60	48 3125	1.4 0	.7 4,27	2,250	0.65 7.	8 2,025	0	-8 108 2,133	3 \$ 184
352 Building 3	09.01-MOC [Interior]	1st Floor	Mens	Restrooms	714L-R	\$		2x4 Prismatic	34T1202M	Standard Magnetic, T12	1 L	L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	1 Recessed	Driver	2	30	2 5110	0.1 0	.0 41	153	0.05 0.	266	0	-1 14 280) \$ 21
353 Building 3	09.01-MOC [Interior]	1st Floor	Woman	Restrooms	714L-R	\$		2x4 Prismatic	34T1202M		1	L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	1 Recessed	LED Lamp and Driver	2	30	2 5110	0.1 0	.0 41	153	0.05 0.	266	0	-1 14 280	\$ 21
354 Building 4	09.01-MOC [Interior]	1st Floor	Back open storage	Storage Areas	506L-S	\$		8' Strip	95T1202H	8' Strip / 95W Fluorescent, 8'-0" T12, HO / Standard Magnetic, T12	3 1	N	No Retrofit - Payback/Budget	No Retrofit Proposed	3 Chain	N/A	0	227	6 1564	0.7 0	.7 1,06	1,065	0.00 0.	0	0	0 0 0	0 \$ -
355 Building 4	09.01-MOC [Interior]	1st Floor	East 2 Bays	Storage Areas	506L-S	\$		4' Industrial w/reflectors	32T802E	4' Industrial w/reflectors / 32W Fluorescent, 4'- 0" T8 / Electronic, T8	4	N	No Retrofit - Payback/Budget	No Retrofit Proposed	4 Chain	N/A	0	63	8 1564	0.3 0	.3 39	394	0.00 0.	0	0	0 0 0	0\$-
356 Building 4	09.01-MOC [Interior]	1st Floor	East 2 Bays	Storage Areas	506L-S	\$		4' Strip	LED	4' Strip / LED Fixture / LED Driver	3 1	N	No Retrofit - LED	No Retrofit Proposed	3 Chain	N/A	0	12	3 1564	0.0 0	.0 5	56	0.00 0.	0 0	0	<u> </u>	0\$-
357 Building 4	09.01-MOC [Interior]	1st Floor	West Bay	Storage Areas	506L-S	\$		8' Industrial w/reflectors	95T1202H	8' Industrial w/reflectors / 95W Fluorescent, 8'- 0 " T12, H0 / Standard Magnetic, T12	3 1	N	No Retrofit - Payback/Budget	No Retrofit Proposed	3 Chain	N/A	0	227	6 1564	0.7 0	.7 1,06	1,065	0.00 0.	0	0	0 0 C	0\$-
358 Building 4	09.01-MOC [Interior]	1st Floor	West Bay	Storage Areas	506L-S	s		4' Acrylic Wra	p 32T802E	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2	N	No Retrofit - Payback/Budget	No Retrofit Proposed	2 Surface	N/A	0	63	4 1564	0.1 0	.1 19	197	0.00 0.	0	0	0 0 (0\$-
359 Building 4	09.01-MOC [Interior]		West Center		506L-S	c		8' Industrial	95712020	8' Industrial w/reflectors / 95W Fluorescent, 8'- 0" T12, HO / Standard Magnetic, T12	2	N	No Retrofit - Payback/Budget	No Retrofit Proposed	2 Chain	N/A	0	227	4 1564	0.5 0	.5 71	710	0.00 0.		0	0 0 0	0\$-
										4' Acrylic Wrap / 34W Fluorescent, 4'-0" T12 / Standard Magnetic, T12				LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA		LED Lamp and				0.5		710					
360 Building 5	09.01-MOC [Interior]		Foyer	Halls & common areas		12 \$3		4' Industrial		4' Industrial w/reflectors / 32W Fluorescent, 4'-	2 [12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	2 Surface	LED Lamp and	2	30	4 3129	0.2 0	.1 51	188	0.10 1.	325	0	-1 17 343	
361 Building 5	09.01-MOC [Interior]	1st Floor	Garage bay	Warehouse	51	10 \$		w/reflectors	32T802E	0" T8 / Electronic, T8 4' Acrylic Wrap / 34W Fluorescent, 4'-0" T12 /	2 L	L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	2 Chain	LED Lamp and	2	30	4 2607	0.1 0	.1 32	156	0.07 0.	172	0	-1 9 181	\$1 \$ 17
362 Building 5	09.01-MOC [Interior]	1st Floor	Garage bay	Warehouse	51	10 \$,	p 34T1202M	Standard Magnetic, T12	1	L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	1 Wall	Driver	2	30	2 2607	0.1 0	.0 21	78	0.05 0.	5 136	0	-1 7 143	13 \$ 13
363 Building 5	09.01-MOC [Interior]	1st Floor	Garage bay	Warehouse	51	10 \$		4' Industrial w/reflectors	32T804E	4' Industrial w/reflectors / 32W Fluorescent, 4'- 0" T8 / Electronic, T8	12	L4	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (4) lamps with (1) 4- lamp driver, 60W (system),8000+ delivered lumens, SYLVANIA	12 Surface	LED Lamp and Driver	4	60	48 2607	1.4 0	.7 3,56	1,877	0.65 7.	8 1,689	0	-6 90 1,780	\$0 \$ 164
364 Building 5	09.01-MOC [Interior]	1st Floor	Garage bay	Warehouse	51	10 \$3		8' Industrial w/reflectors	95T1202H	8' Industrial w/reflectors / 95W Fluorescent, 8'- 0 "T12, HO / Standard Magnetic, T12	2	L42	New Fixture	LED (2) 4FT Strip Fixture, surface/chain mounting, 94W, 12000+ delivered lumen	2 Surface	LED Fixture	2	94	4 2607	0.5 0	.2 1,18	490	0.27 3.	. 694	0	-3 37 730	30 \$ 67
365 Building 5	09.01-MOC [Interior]	1st Floor	Parts storage	Storage Areas	506L-S	\$		4' Industrial w/reflectors	32T804E	4' Industrial w/reflectors / 32W Fluorescent, 4'- 0" T8 / Electronic, T8	3 1	N	No Retrofit - Payback/Budget	No Retrofit Proposed	3 Surface	N/A	0	114	12 1564	0.3 0	.3 53	535	0.00 0.	0	0	0 0 C	0\$-
366 Building 5	09.01-MOC [Interior]	1st Floor	Victor office	Offices	511L-PO	\$		2x4 Prismatic	32T803E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	4 L	13	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (3) lamps with (1) 3- lamp driver, 45W (system), 6000+ delivered lumens, SYLVANIA	4 Recessed	LED Lamp and Driver	3	45	12 2868	0.3 0	.2 98	516	0.16 2.	470	0	-2 25 495	95 \$ 44
367 Building 5	09.01-MOC [Interior]	1st Floor	Warehouse	Warehouse	51	10 \$3		4' Industrial w/reflectors	32T804E	4' Industrial w/reflectors / 32W Fluorescent, 4'- 0" T8 / Electronic, T8	8 L	L4	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (4) lamps with (1) 4- lamp driver, 60W (system),8000+ delivered lumens, SYLVANIA	8 Surface	LED Lamp and Driver	4	60	32 2607	0.9 0	.5 2,37	1,251	0.43 5.	2 1,126	0	-4 60 1,186	36 \$ 109
368 Building 5	09.01-MOC [Interior]	1st Floor	Warehouse Restroom	Restrooms, private	50	04 \$		General	13CFL01	General / Compact Fluorescent, 13W PL / N/A	1	N	No Retrofit - Payback/Budget	No Retrofit Proposed	1 Recessed	N/A	0	14	1 1043	0.0 0	.0 1	15	0.00 0.	0	0	0 0 (0\$-
369 Building 6	09.02-MOC [Exterior]		Bidg 6	Outside Areas		04 \$		Canopy		Canopy / Compact Fluorescent, 42W Triple, Vertical / N/A	4	N	No Retrofit - Payback/Budget	No Retrofit Proposed	4 Surface	N/A	0	44	4 1043	0.2 0	.2 18	184	0.00 0.		0	0 0	0 \$
											4		No Retrofit -				0										
370 Building 6	09.02-MOC [Exterior]		Bldg 6	Outside Areas		04 \$				Canopy / MH 175W / HID Magnetic	5	N	Payback/Budget	No Retrofit Proposed	5 Surface	N/A	0	210	5 1043	1.1 1	.1 1,09		0.00 0.	0	0	0 0 0	J \$ -
371 Building 7	09.02-MOC [Exterior]	1st Floor	Bidg 7	Outside Areas	50	04 \$		Flood 4' Industrial	300T301	Flood / Quartz Lamp / N/A 4' Industrial w/reflectors / 32W Fluorescent, 4'-	5 1	N	Payback/Budget	No Retrofit Proposed	5 Surface	N/A	0	300	5 1043	1.5 1	.5 1,56	1,564	0.00 0.	0	0	0 0 0	1\$ -
372 Covered Storage	09.01-MOC [Interior]	1st Floor	Covered storage	Outside Areas	71	12 \$0		w/reflectors	32T802E	4' Industrial W/reflectors / 32W Fluorescent, 4'- 0" T8 / Electronic, T8	24	N	Payback/Budget	No Retrofit Proposed	24 Surface	N/A	0	63	48 4380	1.5 1	.5 6,62	6,623	0.00 0.	0	0	0 0 0	J\$ -



								Existing				Propos	ed						Energ	ay		
				ASHRAE Space				Lamp & Ballast		# of	Retrofit Type		Mounting different # of from		Watts amps per	Operating Exist	ing Proposed	Proposed kW	kW	kWh Heatin Savings per Penalt	ty Penalty Cre	poling Net kWh Cost redit Savings per Savings per
ID Building	FIM Name	Floor/General Area	Room Name	Types Tin	ne Code Switching	Fixture Schedu	le Fixture Type	Туре	Description	Fixtures Fixture Code	(Current Scope)	Description	Fixtures existing)	Lamp Type per Fix	ture Fixture # of Lamp	s Hours kW	kW Existi	ng kWh kWh pe	er Month per Year	Year (kWh)) (therms) (kW	Nh) Year Year
373 Decant	09.01-MOC [Interior]	1st Floor	Decant	Outside Areas	711 \$T		Canopy	175MH01	Canopy / MH 175W / HID Magnetic	9 N	Payback/Budget	No Retrofit Proposed	9 Surface	N/A	0 210	9 4015	1.9 1.9	7,588 7,588	0.00 0.0	0	0 0	0 0 \$ -
374 Decant	09.01-MOC [Interior]	1st Floor	Decant	Outside Areas	711 \$T		Canopy	250MH01	Canopy / MH 250W / HID Magnetic	9 N	Payback/Budget	No Retrofit Proposed	9 Surface	N/A	0 295	9 4015	2.7 2.7	10,660 10,660	0.00 0.0	0	0 0	0 0 \$ -
375 Decant	09.01-MOC [Interior]	1st Floor	Decant	Outside Areas	711 \$T		Canopy	250MH01	Canopy / MH 250W / HID Magnetic	9 N	No Retrofit - Payback/Budget	No Retrofit Proposed	9 Surface	N/A	0 295	9 4015	2.7 2.7	10,660 10,660	0.00 0.0	0	0 0	0 0 \$ -
376 Decant	09.01-MOC [Interior]	1st Floor	Laundry	Maintenance Areas - Inactive	502 \$		4' Industrial w/reflectors	32T802E	4' Industrial w/reflectors / 32W Fluorescent, 4'- 0" T8 / Electronic, T8	1 N	No Retrofit - Payback/Budget	No Retrofit Proposed	1 Chain	N/A	0 63	2 521	0.1 0.1	33 33	0.00 0.0	0	0 0	0 0 \$ -
377 Decant	09.01-MOC [Interior]	1st Floor	Office	Offices 511	IL-PO \$		4' Industrial w/reflectors	32T802E	4' Industrial w/reflectors / 32W Fluorescent, 4'- 0" T8 / Electronic, T8	2 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/	A 2	LED Lamp and 0 Driver	2 30	4 2868	0.1 0.1	361 172	0.07 0.8	189	0 -1	10 199 \$ 1
378 Decant	09.01-MOC [Interior]	1st Floor	Storage	Storage Areas 506	5L-S \$		4' Industrial w/reflectors	32T802E	4' Industrial w/reflectors / 32W Fluorescent, 4'- 0" T8 / Electronic, T8	2 N	No Retrofit - Payback/Budget	No Retrofit Proposed	2 Chain	N/A	0 63	4 1564	0.1 0.1	197 197	0.00 0.0	0	0 0	0 0 \$ -
379 Main Admin Bldg	09.01-MOC [Interior]	1st Floor	104	Storage Areas 506	5L-S \$		Porcelain Socket	13CFL01SI	Porcelain Socket / Compact Fluorescent, 13W Screw In / N/A	1 N	No Retrofit - Payback/Budget	No Retrofit Proposed	1 Surface	N/A	0 14	1 1564	0.0 0.0	22 22	0.00 0.0	0	0 0	0 0 \$ -
			Admin 102		IL-PO \$		2x4 Prismatic	32T804F	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	414	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (4) lamps with (1) 4- lamp driver, 60W (system),8000+ delivered lumens, SYLVANIA	4 Recessed	LED Lamp and	4 50	16 2868	0.5 0.2	1 308 688	0.22 2.6	619	0 -2	33 653 \$ 50
380 Main Admin Bldg				Offices, existing					2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /			LED 4FT T8 Lamp and Driver Upgrade, (4) lamps with (1) 4-		LED Lamp and	4 00 .	2000	0.3 0.2	1,500 000	0.22	015	0 -2	12 237 \$ 24
381 Main Admin Bldg			Admin 103	sensor	508 \$O		2x4 Prismatic		Electronic, T8 2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /	2 L4	Lamp and Driver	lamp driver, 60W (system),8000+ delivered lumens, SYLVANIA LED 4FT T8 Lamp and Driver Upgrade, (4) lamps with (1) 4-		LED Lamp and	4 60	8 2086	0.2 0.1	476 250	0.11 1.3	225	-1	
382 Main Admin Bldg	09.01-MOC [Interior]	1st Floor	Admin 105	Offices 511 Offices, existing	IL-PO \$		2x4 Prismatic	32T804E	Electronic, T8 2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	2 L4	Lamp and Driver	lamp driver, 60W (system),8000+ delivered lumens, SYLVANIA LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	2 Recessed	LED Lamp and	4 60	8 2868	0.2 0.1	654 344	0.11 1.3	310	0 -1	17 326 \$ 29
383 Main Admin Bldg	09.01-MOC [Interior]	1st Floor	Admin 121	sensor	508 \$O		2x4 Parabolic	32T802E	Electronic, T8	6 L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/	A 6 Surface	Driver	2 30 :	12 2086	0.4 0.2	788 375	0.20 2.4	413	0 -2	22 435 \$ 44
384 Main Admin Bldg	09.01-MOC [Interior]	1st Floor	Corridor 107	Halls & common areas 711	LL-H \$3		2x4 Prismatic	32T804E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	3 L4	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (4) lamps with (1) 4- lamp driver, 60W (system),8000+ delivered lumens, SYLVANIA	3 Recessed	LED Lamp and Driver	4 60 3	12 3925	0.3 0.2	1,342 707	0.16 1.9	636	0 -2	34 670 \$ 54
385 Main Admin Bldg	09.01-MOC [Interior]	1st Floor	Corridor 116	Halls & common areas 711	IL-H \$		4' Industrial w/reflectors	32T802E	4' Industrial w/reflectors / 32W Fluorescent, 4'- 0" T8 / Electronic, T8	3 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	A 3 Surface	LED Lamp and Driver	2 30	6 3925	0.2 0.1	742 353	0.10 1.2	389	0 -1	21 409 \$ 33
386 Main Admin Bldg	09.01-MOC [Interior]	1st Floor	Corridor 116	Halls & common areas 711	1L-H \$3		4' Acrylic Wrap	32T802E	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	11 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/	A 11	LED Lamp and 0 Driver	2 30 2	22 3925	0.7 0.3	2,720 1,295	0.36 4.4	1,425	0 -5	76 1,501 \$ 12
387 Main Admin Bldg	09.01-MOC [Interior]	1st Floor	Corridor 117	Halls & common areas 711	IL-H \$		4' Acrylic Wrap	32T802E	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	3 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/	A 3	LED Lamp and 0 Driver	2 30	6 3925	0.2 0.1	742 353	0.10 1.2	389	0 -1	21 409 \$ 33
388 Main Admin Bldg	09.01-MOC [Interior]	1st Floor	Eq. 140	Storage Areas 506	5L-S \$		Vapor-tight	32T802E	Vapor-tight / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1 N	No Retrofit - Payback/Budget	No Retrofit Proposed	1	0 N/A	0 63	2 1564	0.1 0.1	99 99	0.00 0.0	0	0 0	0 0 \$ -
389 Main Admin Bldg	09.01-MOC [Interior]	1st Floor	Janitor 123	Janitor Closet	502 \$		Porcelain		Porcelain Socket / Compact Fluorescent, 13W Screw In / N/A	1 N	No Retrofit - Payback/Budget	No Retrofit Proposed	1 Surface	N/A	0 14	1 521	0.0 0.0	7 7	0.00 0.0	0	0 0	0 0 \$ -
			Lobby 100	Halls & common areas	512 \$		Strip	32T801E	Strip / 32W Fluorescent, 4'-0" T8 / Electronic, T8	411	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (1) lamp with (1) 1- lamp driver, 15W (system), 2100+ delivered lumens, SYLVANIA:	4 Surface	LED Lamp and Driver	1 15	4 3129	0.1 0.1	375 188	0.06 0.7	188	0 -1	10 198 \$ 1
390 Main Admin Bldg																	0.1 0.1	373 100				
391 Main Admin Bldg			Lobby 100	Halls & common areas	512 \$			LED	Downlight / LED Fixture / LED Driver 4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 /	4 N	No Retrofit - LED	No Retrofit Proposed LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	4 Recessed	LED Lamp and	0 12	4 3129	0.0 0.0	150 150	0.00 0.0	0	0 0	0 0 \$ -
392 Main Admin Bldg	09.01-MOC [Interior]	1st Floor	Lobby 100	Halls & common areas	512 \$		4' Acrylic Wrap :	32T802E	Electronic, T8 2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /	2 L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANL/ LED 4FT T8 Lamp and Driver Upgrade, (4) lamps with (1) 4-	A 2 Pendant	LED Lamp and	2 30	4 3129	0.1 0.1	394 188	0.07 0.8	206	0 -1	11 217 \$ 19
393 Main Admin Bldg	09.01-MOC [Interior]	1st Floor	Lunch 136	Halls & common areas 512	2L-B \$		2x4 Prismatic	32T804E	Electronic, T8	10 L4	Lamp and Driver	lamp driver, 60W (system),8000+ delivered lumens, SYLVANIA	10 Recessed	Driver	4 60 4	40 3021	1.1 0.6	3,444 1,813	0.54 6.5	1,631	0 -6	87 1,718 \$ 15
394 Main Admin Bldg	09.01-MOC [Interior]	1st Floor	Maintenance Office 129	Open Office 512	2L-00 \$		2x4 Prismatic	32T804E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	4 L4	Lamp and Driver	lamp driver, 60W (system),8000+ delivered lumens, SYLVANIA	4 Recessed	LED Lamp and Driver	4 60 :	16 3125	0.5 0.2	1,425 750	0.22 2.6	675	0 -3	36 711 \$ 6
395 Main Admin Bldg	09.01-MOC [Interior]	1st Floor	Maintenance shop 130	Maintenance Areas	510 \$		4' Industrial w/reflectors	32T802E	4' Industrial w/reflectors / 32W Fluorescent, 4'- 0" T8 / Electronic, T8	2 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/	A 2 Wall	LED Lamp and Driver	2 30	4 2607	0.1 0.1	329 156	0.07 0.8	172	0 -1	9 181 \$ 1
396 Main Admin Bldg	09.01-MOC [Interior]	1st Floor	Maintenance shop 130	Maintenance Areas	510 \$		4' Industrial w/reflectors	32T802E	4' Industrial w/reflectors / 32W Fluorescent, 4'- 0" T8 / Electronic, T8	42 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/	A 42 Surface	LED Lamp and Driver	2 30 8	84 2607	2.6 1.3	6,899 3,285	1.39 16.6	3,614	0 -13	193 3,806 \$ 35
397 Main Admin Bldg	09.01-MOC [Interior]	1st Floor	Maintenance shop 130	Maintenance Areas	510 \$		4' Industrial w/reflectors	32T806E	4' Industrial w/reflectors / 32W Fluorescent, 4'- 0" T8 / Electronic, T8	7 L6	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (6) lamps with (2) 3- lamp driver, 90W (system), 6000+ delivered lumens, SYLVANI/	A 7 Chain	LED Lamp and Driver	6 90 4	42 2607	1.5 0.6	4,033 1,643	0.92 11.0	2,391	0 -9	128 2,518 \$ 23
398 Main Admin Bldg	09.01-MOC [Interior]	1st Floor	Maintenance shop 130	Maintenance Areas	510 \$		4' Industrial w/reflectors	32T802E	4' Industrial w/reflectors / 32W Fluorescent, 4'- 0" T8 / Electronic, T8	1 12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIJ	A 1	LED Lamp and 0 Driver	2 30	2 2607	0.1 0.0	164 78	0.03 0.4	86	0 0	5 91 \$
399 Main Admin Bldg	09.01-MOC [Interior]	1st Floor	Maintenance shop 130	Maintenance Areas	510 \$		4' Industrial w/reflectors	32T802E	4' Industrial w/reflectors / 32W Fluorescent, 4'- 0" T8 / Electronic, T8	2 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/	A 2 Surface	LED Lamp and Driver	2 30	4 2607	0.1 0.1	329 156	0.07 0.8	172	0 -1	9 181 \$ 1
400 Main Admin Bldg		1st Floor	Men 126	Restrooms 714	1L-R \$3		4' Acrylic Wrap	32T802E	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	4 12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/	A 4	LED Lamp and 0 Driver	2 30	8 5110	0.3 0.1	1.288 613	0.13 1.6	675	0 -3	36 710 \$ 55
									4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 /	412		LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-		LED Lamp and	2 20			788 375				
	09.01-MOC [Interior]		Mens locker 127	Gym lockers	512 \$3				Electronic, T8 2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /	• L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANL/ LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-		0 Driver	2 30	8 3129	0.3 0.1	700 375	0.13 1.6	413	-2	22 435 \$ 31
	09.01-MOC [Interior]		Office 101		IL-PO \$O		4' Industrial		Electronic, T8 4' Industrial w/reflectors / 32W Fluorescent, 4'- 0' T8 / Electronic, T8	4 12	Lamp and Driver No Retrofit -	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANL/		Driver	2 30	8 2868	0.3 0.1	723 344	0.13 1.6	379	U -1	20 399 \$ 3
403 Main Admin Bldg	09.01-MOC [Interior]	1st Floor	Parts Storage 133	Storage Areas 506 Maintenance Areas -	5L-S \$		w/reflectors	32T802E	0" T8 / Electronic, T8 Porcelain Socket / Compact Fluorescent, 23W	9 N	Payback/Budget	No Retrofit Proposed	9 Surface	N/A	0 63 3	18 1564	0.6 0.6	887 887	0.00 0.0	0	0 0	0 0 \$ -
404 Main Admin Bldg	09.01-MOC [Interior]	1st Floor	Shop 131	Inactive	504 \$		Socket	23CFL01SI	SI / N/A	1 N	Payback/Budget	No Retrofit Proposed	1 Surface	N/A	0 23	1 1043	0.0 0.0	24 24	0.00 0.0	0	0 0	0 0 \$ -
405 Main Admin Bldg	09.01-MOC [Interior]	1st Floor	Shop 131	Maintenance Areas - Inactive	504 \$		4' Industrial w/reflectors	32T802E	4' Industrial w/reflectors / 32W Fluorescent, 4'- 0" T8 / Electronic, T8	2 N	No Retrofit - Payback/Budget	No Retrofit Proposed	2 Surface	N/A	0 63	4 1043	0.1 0.1	131 131	0.00 0.0	0	0 0	0 0 \$ -
406 Main Admin Bldg	09.01-MOC [Interior]	1st Floor	Shop 131	Maintenance Areas - Inactive	504 \$		Canopy	250HPS01	Canopy / HPS 250W / HID Magnetic	2 N	No Retrofit - Payback/Budget	No Retrofit Proposed	2 Pendant	N/A	0 295	2 1043	0.6 0.6	615 615	0.00 0.0	0	0 0	0 0 \$ -
407 Main Admin Bldg	09.01-MOC [Interior]	1st Floor	Shop 131	Maintenance Areas - Inactive	504 \$		4' Industrial w/reflectors	32T802E	4' Industrial w/reflectors / 32W Fluorescent, 4'- 0" T8 / Electronic, T8	6 N	No Retrofit - Payback/Budget	No Retrofit Proposed	6 Surface	N/A	0 63 3	12 1043	0.4 0.4	394 394	0.00 0.0	0	0 0	0 0 \$ -
408 Main Admin Bldg	09.01-MOC [Interior]	1st Floor	Shower 124	Gym lockers	510 \$		Jelly Jar 3	23CFL01SI	Jelly Jar / Compact Fluorescent, 23W SI / N/A	1 L18	Retrofit Lamp	LED A19 Bypass Lamp Upgrade, (1) E26 base lamp with internal driver, 12W each, 1100+ delivered lumens, Sylvania: A19 12W DIM	1 Surface	LED Integral Driver	1 12	1 2607	0.0 0.0	60 31	0.01 0.1	29	0 0	2 30 \$
409 Main Admin Bldg	09.01-MOC [Interior]	1st Floor	Sign shop 119	Storage Areas - Active 506	5L-S \$3		4' Industrial w/reflectors	32T802E	4' Industrial w/reflectors / 32W Fluorescent, 4'- 0" T8 / Electronic, T8	2 N	No Retrofit - Payback/Budget	No Retrofit Proposed	2 Surface	N/A	0 63	4 1564	0.1 0.1	197 197	0.00 0.0	0	0 0	0 0 \$ -
410 Main Admin Bldg			Sign shop 119	Storage Areas - Active 506	5L-S \$3		4' Industrial w/reflectors		4' Industrial w/reflectors / 32W Fluorescent, 4'- 0" T8 / Electronic, T8	8 N	No Retrofit - Payback/Budget	No Retrofit Proposed	8 Surface	N/A	0 63	16 1564	0.5 0.5	788 788	0.00 0.0	0	0 0	0 0 \$.
411 Main Admin Bldg			St Water Super 115A		IL-PO \$		4' Industrial w/reflectors		4' Industrial w/reflectors / 32W Fluorescent, 4'- 0" T8 / Electronic, T8	212	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/		LED Lamp and Driver	2 30	4 2868	0.1 0.1	361 172	0.07 0.8	189	0 -1	10 199 \$ 18
							4' Industrial		4' Industrial w/reflectors / 32W Fluorescent, 4'-			LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANJ		LED Lamp and	2 30		0.1	101				
	09.01-MOC [Interior]		St. Lead 115B		LL-PO \$		w/reflectors 3		0" T8 / Electronic, T8 4' Industrial w/reflectors / 34W Fluorescent, 4'-	1 12	Lamp and Driver			Driver	2 30	2 2868	0.0	181 86	0.03 0.4	95	0 0	5 100 \$
413 Main Admin Bldg	09.01-MOC [Interior]	1st Floor	Storage 132	Storage Areas 506	5L-S \$		w/reflectors		0" T12 / Standard Magnetic, T12 4' Acrylic Wran / 32W Eluorescent, 4'-0" T8 /	2 N	Payback/Budget	No Retrofit Proposed LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	2 Surface	N/A LED Lamp and	0 82	4 1564	0.2 0.2	256 256	0.00 0.0	0	0 0	0 0 \$ -
414 Main Admin Bldg	09.01-MOC [Interior]	1st Floor	Transport 109	Open Office 512	21-00 \$3		4' Acrylic Wrap	32T802E	Electronic, T8	2 L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/	A 2 Surface	Driver	2 30	4 3125	0.1 0.1	394 188	0.07 0.8	206	0 -1	11 217 \$ 19
415 Main Admin Bldg	09.01-MOC [Interior]	1st Floor	Vestibule 125	Halls & common areas 711	IL-H \$		4' Acrylic Wrap	32T802E	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	A 1 Surface	LED Lamp and Driver	2 30	2 3925	0.1 0.0	247 118	0.03 0.4	130	0 0	7 136 \$ 1



							Existin	a				Pronos	ed							Fn	rav			
							Lamp &	9				Propos	Mounting	(if		Watts				kw	rgy	ating Heating	Cooling Net kWh	Net Energy Cost
ID Building	FIM Name	Floor/General Area Room Name	ASHRAE Space Types	Time Co	de Switching Fixtu	ure Schedule Fixture	Ballast	# Description F	# of Fixtures F	Fixture Code	Retrofit Type (Current Scope)	Description	# of from Fixtures existing)	Lamp Type	# of Lamps		Operating Existin Hours kW		Proposed sting kWh kWh		Savings per Pe	ating Heating nalty Penalty Wh) (therms	Credit Savings per (kWh) Year	er Savings per Year
416 Main Admin Bldg	09.01-MOC [Interior]	1st Floor Waste water 114/115	Open Office	512L-00		4' Indust	tial ors 32T802E	4' Industrial w/reflectors / 32W Fluorescent, 4'- 0" T8 / Electronic, T8	21	2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANL	3 Surface	LED Lamp and Driver	2	20	6 3125	0.2 0.1	501 21	0.10	2 200	0	1 17 2	26 \$ 28
						4' Indust	ial	4' Industrial w/reflectors / 32W Fluorescent, 4'-	10			LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-		LED Lamp and					1.969 9			_		
417 Main Admin Bldg	09.01-MOC [Interior]	1st Floor Waste water 114/115	Open Office	512L-00	\$3	w/reflect	ors 32T802E	0" T8 / Electronic, T8 4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 /			Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	10 Surface	LED Lamp and	2	. 30 .	0 3125	0.6 0.3	1,969 93	18 0.33 4	0 1,031	U	-4 55 1,08	186 \$ 94
418 Main Admin Bldg	09.01-MOC [Interior]	1st Floor Waste water 114/115	Open Office	512L-00	\$3	4' Acrylic 4' Indust	Wrap 32T802E	Electronic, T8 4' Industrial w/reflectors / 32W Fluorescent, 4'-	1 L	.2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	1 Surface	Driver	2	30	2 3125	0.1 0.0	197	4 0.03 0	4 103	0	0 6 10	.09 \$ 9
419 Main Admin Bldg	09.01-MOC [Interior]	1st Floor Water lab 111	Open Office	512L-00	\$	w/reflect	ors 32T802E	0" T8 / Electronic, T8	5 L	.2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANL	5 Surface	LED Lamp and Driver	2	30	0 3125	0.3 0.2	984 44	9 0.17	0 516	0	-2 28 54	i43 \$ 47
420 Main Admin Bldg	09.01-MOC [Interior]	1st Floor Water Ops 112/113	Open Office	512L-00	\$3	4' Indust w/reflect	rial ors 32T802E	4' Industrial w/reflectors / 32W Fluorescent, 4'- 0" T8 / Electronic, T8	16 L	.2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANL	16 Surface	LED Lamp and Driver	2	30	3125	1.0 0.5	3,150 1,50	0 0.53 6	3 1,650	0	-6 88 1,73	38 \$ 150
421 Main Admin Bldg	09.01-MOC [Interior]	1st Floor Water super 112A	Offices	511L-PO	\$3	4' Indust w/reflect	ial ors 32T802E	4' Industrial w/reflectors / 32W Fluorescent, 4'- 0" T8 / Electronic, T8	4 L	.2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANL	4 Surface	LED Lamp and Driver	2	30	8 2868	0.3 0.1	723 34	4 0.13	6 379	0	-1 20 39	199 \$ 35
422 Oil Storage	09.01-MOC [Interior]	1st Floor Oil Storage	Storage Areas	506L-S	\$	8' Strip	60T1202H	8' Strip / 60W Fluorescent, 4-0" T12, HO / Standard Magnetic, T12, No PCB's	1	N	No Retrofit - Payback/Budget	No Retrofit Proposed	1 Surface	N/A	c	131	2 1564	0.1 0.1	205 20	15 0.00 0	0 0	0	0 0	0\$-
423 Park Ops	09.01-MOC [Interior]	1st Floor Dry room	Storage Areas	506L-S	s	Vapor-tic	ht 32T802E	Vapor-tight / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2	v	No Retrofit - Payback/Budget	No Retrofit Proposed	2 Surface	N/A	c	63	4 1564	0.1 0.1	197 19	0.00		0	0 0	0\$-
424 Park Ops	09.01-MOC [Interior]		Maintenance Areas - Inactive		02 \$		Wrap 32T802E	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1		No Retrofit - Payback/Budget	No Retrofit Proposed		0 N/A		62	2 521		22	3 0.00		0		0.0
						Porcelain					No Retrofit -							0.1 0.1						
425 Park Ops	09.01-MOC [Interior]	1st Floor Hall Amp closet	Storage Areas Maintenance Areas -	506L-S	\$	Socket	75A01	Porcelain Socket / Incandescent, A lamp / N/A 4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 /	1 1	v	Payback/Budget	No Retrofit Proposed	1 Surface	N/A	C	75	1 1564	0.1 0.1	117 1	.7 0.00 0	0 0	0	0 0	0 \$ -
426 Park Ops	09.01-MOC [Interior]	1st Floor Hall electrical closet	Inactive	5	02 \$	4' Acrylic	Wrap 32T802E	Electronic, T8	1 1	N	Payback/Budget	No Retrofit Proposed LED PL Bypass Lamp Upgrade, (2) Horizontal mount lamp with	1	0 N/A	C	63	2 521	0.1 0.1	33	3 0.00 0	0 0	0	0 0	0 \$ -
427 Park Ops	09.01-MOC [Interior]	1st Floor Halls	Halls & common area	s 711L-H	\$	Sconce	13CFL02	Sconce / Compact Fluorescent, 13W PL / N/A	1 L	.12	Retrofit Lamp	internal driver and remove existing ballast, 5.5W each, 550 delivered lumens, GREEN CREATIVE: PL H 5.5W HYBM	1 Wall	LED Integral Driver	2	11	2 3925	0.0 0.0	110 -	0.02 0	2 67	0	0 4 7	70 \$ 6
428 Park Ops	09.01-MOC [Interior]	1st Floor Halls	Halls & common areas	s 711L-H	\$	2x4 Prisr	atic 32T802E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	6 L	.2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANL	6 Recessed	LED Lamp and Driver	2	30	2 3925	0.4 0.2	1,484 7	0.20	4 777	0	-3 41 81	\$ 66
429 Park Ops	09.01-MOC [Interior]	1st Floor Halls	Halls & common areas	s 711L-H	\$	Vapor-tig	ht 32T802E	Vapor-tight / 32W Fluorescent, 4'-0" T8 / Electronic, T8	3 L	.2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANL	3 Surface	LED Lamp and Driver	2	30	6 3925	0.2 0.1	742 3	i3 0.10 :	2 389	0	-1 21 40	09 \$ 33
430 Park Ops	09.01-MOC [Interior]	1st Floor Halls	Halls & common areas	s 711L-H	\$	2x4 Para	oolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1 L	.2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANL	1 Surface	LED Lamp and Driver	2	30	2 3925	0.1 0.0	247 1	.8 0.03 0	4 130	0	0 7 1:	36 \$ 11
431 Park Ops	09.01-MOC [Interior]	1st Floor Janitors	Janitor Closet		02 \$	Porcelain Socket	13CFL01S	Porcelain Socket / Compact Fluorescent, 13W Screw In / N/A	1	v	No Retrofit - Payback/Budget	No Retrofit Proposed	1 Wall	N/A	c	14	1 521	0.0 0.0	7	7 0.00 0		0	0 0	0\$-
432 Park Ops	09.01-MOC [Interior]		Janitor Closet		02 \$	Porcelain Socket	60A01	Porcelain Socket / Incandescent, A lamp / N/A	1		No Retrofit - Payback/Budget	No Retrofit Proposed	1 Surface	N/A		60	1 521		21			0		0.0
								2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /		•		LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-		LED Lamp and			1 521	5.1 0.1				0		
433 Park Ops	09.01-MOC [Interior]	1st Floor Lead Work Room	Open Office	512L-00	\$3	2x4 Prisr	atic 32T802E	Electronic, T8 Vanity / 32W Fluorescent, 4'-0" T8 / Electronic,	5 L	.2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANL LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	5 Recessed	LED Lamp and	2	30	0 3125	0.3 0.2	984 41	0.17	0 516	0	-2 28 54	43 \$ 47
434 Park Ops	09.01-MOC [Interior]	1st Floor Mens restroom	Restrooms	714L-R	\$	Vanity	32T802E	T8 Vapor-tight / 32W Fluorescent, 4'-0" T8 /	3 L	.2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANL LED 4FT T8 Lamp and Driver Upgrade, (1) lamp with (1) 1-	3 Surface	Driver	2	30	6 5110	0.2 0.1	966 44	0 0.10	2 506	0	-2 27 53	33 \$ 40
435 Park Ops	09.01-MOC [Interior]	1st Floor Mens restroom	Restrooms	714L-R	\$	Vapor-tig	ht 32T801E	Electronic, T8	2 L	.1	Lamp and Driver	lamp driver, 15W (system), 2100+ delivered lumens, SYLVANIA:	2 Surface	LED Lamp and Driver	1	15	2 5110	0.1 0.0	307 1	i3 0.03 (4 153	0	-1 8 16	.61 \$ 12
436 Park Ops	09.01-MOC [Interior]	1st Floor Mens restroom	Restrooms	714L-R	\$	2x4 Prisr	atic 32T802E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	6 L	.2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANL LED 4FT T8 Lamp and Driver Upgrade, (1) lamp with (1) 1-	6 Surface	LED Lamp and Driver	2	30	2 5110	0.4 0.2	1,932 9	0 0.20	4 1,012	0	-4 54 1,06	166 \$ 80
437 Park Ops	09.01-MOC [Interior]	1st Floor Multi 1.1	Kitchen		07 \$	Undercal	inet 32T801E	Undercabinet / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 L	.1	Lamp and Driver	lamp driver, 15W (system), 2100+ delivered lumens, SYLVANIA:	2 Surface	LED Lamp and Driver	1	15	2 1825	0.1 0.0	110	i5 0.03 0	4 55	0	0 3 5	58 \$ 6
438 Park Ops	09.01-MOC [Interior]	1st Floor Multi 1.1	Kitchen	5	07 \$3	2x4 Para	oolic 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	12 L	.2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANL	12 Recessed	LED Lamp and Driver	2	30	4 1825	0.8 0.4	1,380 6	7 0.40 4	8 723	0	-3 39 7f	61 \$ 82
439 Park Ops	09.01-MOC [Interior]	1st Floor Office support	Offices	511L-PO	\$	2x4 Prisr	atic 32T802E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 L	.2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANL	2 Recessed	LED Lamp and Driver	2	. 30	4 2868	0.1 0.1	361 1	2 0.07 0	8 189	0	-1 10 15	.99 \$ 18
440 Park Ops	09.01-MOC [Interior]	1st Floor Shop 118	Warehouse		10 \$	4' Indust w/reflect	ial ors 32T802E	4' Industrial w/reflectors / 32W Fluorescent, 4'- 0" T8 / Electronic, T8	14	2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANL	14 Chain	LED Lamp and Driver	2	30	8 2607	0.9 0.4	2,300 1.0	0.46	5 1.205	0	-4 64 1.2/	269 \$ 117
					10 \$	4' Indust	ial	4' Industrial w/reflectors / 32W Fluorescent, 4'-		•		LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-		LED Lamp and										
441 Park Ops	09.01-MOC [Interior]		Warehouse			w/reflect		0" T8 / Electronic, T8 2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	/ L	.2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-		LED Lamp and		30	4 2607	0.4 0.2	1,150 54	0.23	8 602	U	-2 32 63	34 \$ 58
442 Park Ops	09.01-MOC [Interior]	Stairs Stairs	Halls & common areas	s s	10 \$T	2x4 Para	oolic 32T802E	Electronic, T8	1 L	.2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANL LED PL Bypass Lamp Upgrade, (2) Horizontal mount lamp with Internal driver and remove existing ballact. 5 SW each 550	1 Surface	LED Integral	2	30	2 2607	0.1 0.0	164	18 0.03 0	4 86	0	0 5 9	1 \$ 8
443 Park Ops	09.01-MOC [Interior]	2nd Floor Open Area	Open Office	512L-00	\$	Sconce	13CFL02	Sconce / Compact Fluorescent, 13W PL / N/A	2 L	.12	Retrofit Lamp	internal driver and remove existing ballast, 5.5W each, 550 delivered lumens, GREEN CREATIVE: PL H 5.5W HYBM	2 Wall	Driver	2	11	4 3125	0.1 0.0	175	9 0.03 0	4 106	0	0 6 11	.12 \$ 10
444 Park Ops	09.01-MOC [Interior]	2nd Floor Copy room	Halls & common areas	s s	12 \$	4' Acrylic	Wrap 32T802E	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 L	.2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANL	2	LED Lamp and Driver	2	30	4 3129	0.1 0.1	394 1	18 0.07 0	8 206	0	-1 11 21	17 \$ 19
445 Park Ops	09.01-MOC [Interior]	2nd Floor Halls	Halls & common area	s 711L-H	\$	4' Acrylic	Wrap 32T802E	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	4 L	.2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANL	4	LED Lamp and 0 Driver	2	30	8 3925	0.3 0.1	989 4	1 0.13	6 518	0	-2 28 54	46 \$ 44
446 Park Ops	09.01-MOC [Interior]	2nd Floor Justin miniken	Offices	511L-PO	\$	4' Acrylic	Wrap 32T802E	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	3 L	.2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANL	3	LED Lamp and 0 Driver	2	30	6 2868	0.2 0.1	542 2	i8 0.10 :	2 284	0	-1 15 25	99 \$ 27
447 Park Ops	09.01-MOC [Interior]	2nd Floor Left Office	Offices	511L-PO	\$	4' Acrylic	Wrap 32T802E	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	4 L	.2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANL	4 Surface	LED Lamp and Driver	2	30	8 2868	0.3 0.1	723 34	4 0.13	6 379	0	-1 20 39	199 \$ 35
448 Park Ops	09.01-MOC [Interior]	2nd Floor Supers office	Offices	511L-PO	s	4' Acrylic	Wrap 32T802E	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	5 L	.2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANL	5 Surface	LED Lamp and Driver	2	30	0 2868	0.3 0.2	903 4:	0 0.17	0 473	0	-2 25 4	98 \$ 44
449 Park Ops	09.01-MOC [Interior]		Maintenance Areas - Inactive		02 \$		Wrap 32T802E	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1	u	No Retrofit - Payback/Budget	No Retrofit Proposed	1 Chain	N/A		63	2 521	0.1 0.1	33	3 0.00 0	0 0	0	0 0	0.5 -
						Decoration	e	Decorative Pendant / Compact Fluorescent.				LED PLL Bypass Lamp Upgrade, (4) Horizontal mount lamp with Internal driver and remove existing ballast, 16W, 1900 delivered lumens, GREEN CREATIVE: PLL 16 BYP		LED Integral				0.1 0.1						
450 Park Ops	09.01-MOC [Interior]	2nd Floor Open office	Open Office	512L-00	\$	Pendant	36CFL04	36W PLL / Electronic, Compact Fluorescent 4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 /	5 L	.45	Retrofit Lamp	delivered lumens, GREEN CREATIVE: PLL 16 BYP	5 Pendant	Driver	4	16	0 3125	0.7 0.1	2,250 2	0 0.64	7 2,000	0	-7 107 2,10	.07 \$ 182
451 Park Ops	09.01-MOC [Interior]	2nd Floor Teresa Office CLOSET	Storage Areas	506L-S	\$	4' Acrylic	Wrap 32T802E	Electronic, T8	1 N	N	Payback/Budget	No Retrofit Proposed LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	1 Surface	N/A	C	63	2 1564	0.1 0.1	99 9	9 0.00 0	0 0	0	0 0	0 \$ -
452 Park Ops	09.01-MOC [Interior]	2nd Floor Teresa Office	Offices	511L-PO	\$	4' Acrylic	Wrap 32T802E		3 L	.2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANL		LED Lamp and Driver	2	30	6 2868	0.2 0.1	542 2	8 0.10	2 284	0	-1 15 29	99 \$ 27
453 Park Ops	09.01-MOC [Interior]	2nd Floor Upper (back) open office	Open Office	512L-00	\$	4' Acrylic	Wrap 32T802E	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	6 L	.2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	6 Chain	LED Lamp and Driver	2	30	2 3125	0.4 0.2	1,181 5	i3 0.20 2	4 619	0	-2 33 65	52 \$ 56
454 Park Ops	09.01-MOC [Interior]	1st Floor Womans restroom	Restrooms	714L-R	\$	Vanity	32T802E	Vanity / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 L	2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANL	2 Surface	LED Lamp and Driver	2	30	4 5110	0.1 0.1	644 3	0.07	8 337	0	-1 18 35	155 \$ 27
455 Park Ops	09.01-MOC [Interior]	1st Floor Womans restroom	Restrooms	714L-R	\$	2x4 Prisr	atic 32T802E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1 L	.2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANL	1 Surface	LED Lamp and Driver	2	30	2 5110	0.1 0.0	322 1	i3 0.03 (4 169	0	-1 9 1	.78 \$ 13
456 Park Ops	09.01-MOC [Interior]	1st Floor Womans restroom	Restrooms	714L-R	\$	4' Acrylic	Wrap 32T802E	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1	2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANL	1 Surface	LED Lamp and Driver	2	30	2 5110	0.1 0.0	322 1	i3 0.03 (4 169	0	-1 9 1'	.78 \$ 13
457 Park Ops	09.01-MOC [Interior]		Restrooms	714L-R	s		ht 32T802E	Vapor-tight / 32W Fluorescent, 4'-0" T8 / Electronic, T8	21	2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANL		LED Lamp and Driver		30	4 5110	0.1 0.1	644 31	0.07	8 337	0	-1 18 3	155 \$ 27
								Vapor-tight / 32W Fluorescent, 4'-0" T8 /	2 4			LED 4FT T8 Lamp and Driver Upgrade, (1) lamp with (1) 1- lamp driver, 15W (system), 2100+ delivered lumens,		LED Lamp and			5110	0.1	202					
458 Park Ops	09.01-MOC [Interior]	1st Floor Womans restroom	Restrooms	714L-R	\$	Vapor-tig	ht 32T801E	Electronic, T8	2 L	.1	Lamp and Driver	SYLVANIA:	2 Surface	Driver	1	15	2 5110	0.1 0.0	307 1	i3 0.03 (4 153	0	-1 8 16	.61 \$ 12



							Existing				Proposed								Energy			
				ASHRAE Space			Lamp & Ballast		# of	Retrofit Type	# of	Mounting different from	(if	# of Lamps per	Operating Exis	ting Proposed	Proposed		W kWh	Heating Heating Heating Heating Heating	ating Cooling Net kWh nalty Credit Savings p	Net Energy Cost per Savings per
ID Building	FIM Name	Floor/General Area	Room Name	Types	Time Code Switching	Fixture Schedule	Fixture Type Type	Description 2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	Fixtures	Fixture Code (Current Scope)	LED 4FT T8 Lamp and Driver Upgrade, (3) lamps with (1) 3-	ures existing)	Lamp Type	per Fixture Fixture		kW	Existing kWh kWh		er Year Year	(kWh) (th	erms) (kWh) Year	Year
459 Trinity Bldg	09.01-MOC [Interior]	2nd Floor	Halls	Halls & common areas	s 711L-H \$		2x4 Parabolic 32T803E	Electronic, T8 2x4 Prismatic / 34W Fluorescent, 4'-0" T12 /	5	L3 Lamp and Driver Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps that (2) StUANIA LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, Back-up	5 Recessed	LED Lamp and	3 45	15 3925	0.4 0.2	1,688 883	0.21	2.5	805 0	-3 43 8	848 \$ 68
460 Trinity Bldg	09.01-MOC [Interior]	2nd Floor	Back stairs	Halls & common areas	s 512 \$		2x4 Prismatic 34T1202M	Standard Magnetic, T12	2	L2B (Battery)	battery, SYLVANIA	2 Recessed	Driver	2 30	4 3129	0.2 0.1	513 188	0.10	1.2	325 0	-1 17 3	343 \$ 30
461 Trinity Bldg	09.01-MOC [Interior]	2nd Floor	Copy rm	Halls & common areas	s 512 \$		2x4 Parabolic 32T803E		2	L3 Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (3) lamps with (1) 3- lamp driver, 45W (system), 6000+ delivered lumens, SYLVANIA	2 Recessed	LED Lamp and Driver	3 45	6 3129	0.2 0.1	538 282	0.08	1.0	257 0	-1 14 2	270 \$ 23
462 Trinity Bldg	09.01-MOC [Interior]	2nd Floor	Inc Commander	Offices	511L-PO \$		2x4 Parabolic 32T803E		1	L3 Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (3) lamps with (1) 3- lamp driver, 45W (system), 6000+ delivered lumens, SYLVANIA	1 Recessed	LED Lamp and Driver	3 45	3 2868	0.1 0.0	247 129	0.04	0.5	118 0	0 6 1	124 \$ 11
463 Trinity Bldg	09.01-MOC [Interior]	2nd Floor	Logistics	Offices	511L-PO \$		2x4 Parabolic 32T803E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	4	L3 Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (3) lamps with (1) 3- lamp driver, 45W (system), 6000+ delivered lumens, SYLVANIA	4 Recessed	LED Lamp and Driver	3 45	12 2868	0.3 0.2	987 516	0.16	2.0	470 0	-2 25 4	495 \$ 44
464 Trinity Bldg	09.01-MOC [Interior]	2nd Floor	Men	Restrooms	714L-R \$		2x4 Prismatic 32T803E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1	L3 Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (3) lamps with (1) 3- lamp driver, 45W (system), 6000+ delivered lumens, SYLVANIA	1 Recessed	LED Lamp and Driver	3 45	3 5110	0.1 0.0	439 230	0.04	0.5	210 0	-1 11 2	221 \$ 17
465 Trinity Bldg	09.01-MOC [Interior]	2nd Floor	Open office	Open Office	512L-00 \$3		2x4 Parabolic 32T803E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	16	L3 Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (3) lamps with (1) 3- lamp driver, 45W (system), 6000+ delivered lumens, SYLVANIA	16 Recessed	LED Lamp and Driver	3 45	48 3125	1.4 0.7	4,300 2,250	0.66	7.9	,050 0	-8 109 2,1	,159 \$ 186
466 Trinity Bldg	09.01-MOC [Interior]	2nd Floor	Planning	Open Office	512L-00 \$		2x4 Parabolic 32T803E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	3	L3 Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (3) lamps with (1) 3- lamp driver, 45W (system), 6000+ delivered lumens, SYLVANIA	3 Recessed	LED Lamp and Driver	3 45	9 3125	0.3 0.1	806 422	0.12	1.5	384 0	-1 21 4	405 \$ 35
467 Trinity Bldg	09.01-MOC [Interior]	2nd Floor	Public info officer	Restrooms, private	502 \$		2x4 Parabolic 32T803E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2	No Retrofit - Payback/Budget	No Retrofit Proposed	2 Recessed	N/A	0 86	6 521	0.2 0.2	90 90	0.00	0.0	0 0	0 0	0\$-
468 Trinity Bidg	09.01-MOC [Interior]	2nd Floor	Roof access	Halls & common areas	s 510 \$		2x4 Parabolic 32T803E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1	L3 Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (3) lamps with (1) 3- lamp driver, 45W (system), 6000+ delivered lumens, SYLVANIA	1 Recessed	LED Lamp and Driver	3 45	3 2607	0.1 0.0	224 117	0.04	0.5	107 0	0 6 3	113 \$ 10
469 Trinity Bldg	09.01-MOC [Interior]	2nd Floor	Safety	Storage Areas	506L-S \$		2x4 Parabolic 32T803E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2	No Retrofit - Payback/Budget	No Retrofit Proposed	2 Recessed	N/A	0 86	6 1564	0.2 0.2	269 269	0.00	0.0	0 0	0 0	0\$-
470 Trinity Bldg	09.01-MOC [Interior]	2nd Floor	Womans	Restrooms	714L-R \$		2x4 Prismatic 32T803E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1	L3 Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (3) lamps with (1) 3- lamp driver, 45W (system), 6000+ delivered lumens, SYLVANIA	1 Recessed	LED Lamp and Driver	3 45	3 5110	0.1 0.0	439 230	0.04	0.5	210 0	-1 11 7	221 \$ 17
471 Trinity Bldg	09.01-MOC [Interior]	1st Floor	Classroom	Classrooms	504 \$		4' Acrylic Wrap 32T802E	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2	No Retrofit - Payback/Budget	No Retrofit Proposed	2	0 N/A	0 63	4 1043	0.1 0.1	131 131	0.00	0.0	0 0	0 0	0\$-
472 Trinity Bldg	09.01-MOC [Interior]	1st Floor	Classroom	Classrooms	504 \$3		2x4 Parabolic 32T803E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	18	No Retrofit - N Payback/Budget	No Retrofit Proposed	18 Recessed	N/A	0 86	54 1043	1.5 1.5	1,614 1,614	0.00	0.0	0 0	0 0	0\$-
473 Trinity Bldg	09.01-MOC [Interior]	1st Floor	Corridor	Halls & common areas	s 711L-H \$3		2x4 Parabolic 32T803E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2	L3 Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (3) lamps with (1) 3- lamp driver, 45W (system), 6000+ delivered lumens, SYLVANIA	2 Recessed	LED Lamp and Driver	3 45	6 3925	0.2 0.1	675 353	0.08	1.0	322 0	-1 17	339 \$ 27
474 Trinity Bldg	09.01-MOC [Interior]		Unisex bath	Restrooms	714L-R \$0			2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /	1	L3 Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (3) lamps with (1) 3- lamp driver, 45W (system), 6000+ delivered lumens, SYLVANIA	1 Recessed	LED Lamp and Driver	3 45	3 5110	0.1 0.0	439 230	0.04	0.5	210 0	-1 11 ;	221 \$ 17
475 Trinity Bldg	09.01-MOC [Interior]		Dry Room	Storage Areas - Active			2x4 Parabolic 32T803E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	3	No Retrofit - Payback/Budget	No Retrofit Proposed	3 Recessed	N/A	0 86	9 1564	0.3 0.3	404 404	0.00	0.0	0 0	0 0	0.5
			Closet	Storage Areas	506L-S \$		4' Industrial w/reflectors 32T801E	4' Industrial w/reflectors / 32W Fluorescent, 4'- 0" T8 / Electronic, T8		No Retrofit -	No Retrofit Proposed	1	0 N/A	0 20	1 1564	0.0 0.0	47 47	0.00	0.0	0 0		0.0
476 Trinity Bidg	09.01-MOC [Interior]		Closet				4' Industrial w/reflectors 32T802E	4' Industrial w/reflectors / 32W Fluorescent, 4'-		N Payback/Budget		1 Chain	N/A	0	2 1564	0.1 0.1		0.00	0.0	0 0		
477 Trinity Bldg	09.01-MOC [Interior]			Storage Areas	506L-S \$			0" T8 / Electronic, T8 4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 /		N Payback/Budget	No Retrofit Proposed LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	i chain	LED Lamp and	0 03	2 1504	0.1 0.1	197 94		0.4	100 0		109 \$ 9
478 Trinity Bldg	09.01-MOC [Interior]		LODDY	Halls & common areas			4' Acrylic Wrap 32T802E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	1	L2 Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA LED 4FT T8 Lamp and Driver Upgrade, (3) lamps with (1) 3-		0 Driver	2 30	2 3129	0.1 0.0		0.03		103 0		
479 Trinity Bldg	09.01-MOC [Interior]		Locker rm	Gym lockers	512 \$3		2x4 Parabolic 32T803E	Electronic, T8 4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 /	6	L3 Lamp and Driver	lamp driver, 45W (system), 6000+ delivered lumens, SYLVANIA LED 4FT T8 Lamp and Driver Upgrade, (4) lamps with (1) 4-	6 Recessed	LED Lamp and	3 45	18 3129	0.5 0.3	1,614 845	0.25	3.0	770 0		811 \$ 70
480 Trinity Bldg	09.01-MOC [Interior]		Main garage	Warehouse	510 \$		4' Acrylic Wrap 32T804E		5 1	L4 Lamp and Driver	lamp driver, 60W (system),8000+ delivered lumens, SYLVANIA LED HIBAY Fixture, Standard configuration, pendant mount,	5 Surface	Driver	4 60	20 2607	0.6 0.3	1,486 782	0.27	3.2	704 0		741 \$ 68
481 Trinity Bidg	09.01-MOC [Interior]		Main garage	Warehouse	510 \$			High bay / MH 1000W / HID Magnetic 4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 /	41		300W, 30,000 lumen, refractor and bottom lens.	41 Chain	LED Fixture	1 300	41 2607	44.3 12.3	115,444 32,068		383.8 8	,376 0	-310 4,447 87,8	,823 \$ 8,092
482 Trinity Bldg	09.01-MOC [Interior]	1st Floor	Mens rm	Restrooms	714L-R \$O		4' Acrylic Wrap 32T802E	Electronic, T8 4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 /	2	L2 Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	2	0 Driver	2 30	4 5110	0.1 0.1	644 307	0.07	0.8	337 0	-1 18 3	355 \$ 27
483 Trinity Bldg	09.01-MOC [Interior]	1st Floor	Old IT	Storage Areas	506L-S \$O		4' Acrylic Wrap 32T802E	Electronic, T8	2	N Payback/Budget	No Retrofit Proposed	2	0 N/A	0 63	4 1564	0.1 0.1	197 197	0.00	0.0	0 0	0 0	0 \$ -
484 Trinity Bldg	09.01-MOC [Interior]	1st Floor	Riser rm	Storage Areas	506L-S \$0		4' Acrylic Wrap 32T802E	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8 4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 /	2	N Payback/Budget	No Retrofit Proposed LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	2	0 N/A	0 63	4 1564	0.1 0.1	197 197	0.00	0.0	0 0	0 0	0 \$ -
485 Trinity Bldg	09.01-MOC [Interior]	1st Floor	Womans	Restrooms	714L-R \$O		4' Acrylic Wrap 32T802E	Electronic, T8	1	L2 Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamp min (2) 2 LED 4FT T8 Lamp and Driver Upgrade, (3) lamps with (1) 3-	1	0 Driver	2 30	2 5110	0.1 0.0	322 153	0.03	0.4	169 0	-1 9 1	178 \$ 13
486 Trinity Bldg	09.01-MOC [Interior]	1st Floor	Workout rm	Gyms	512 \$		2x4 Parabolic 32T803E		2	L3 Lamp and Driver	lamp driver, 45W (system), 6000+ delivered lumens, SYLVANIA	2 Recessed	LED Lamp and Driver	3 45	6 3129	0.2 0.1	538 282	0.08	1.0	257 0	-1 14 2	270 \$ 23
487 Trinity Bldg	09.01-MOC [Interior]	1st Floor	Workout rm	Gyms	512 \$				2	L3 Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (3) lamps with (1) 3- lamp driver, 45W (system), 6000+ delivered lumens, SYLVANIA	2 Recessed	LED Lamp and Driver	3 45	6 3129	0.2 0.1	538 282	0.08	1.0	257 0	-1 14 2	270 \$ 23
488 Welding Bldg 9	09.01-MOC [Interior]	1st Floor	Welding Bldg 9	Warehouse	504 \$		4' Industrial w/reflectors 32T802E	4' Industrial w/reflectors / 32W Fluorescent, 4'- 0" T8 / Electronic, T8	7	No Retrofit - N Payback/Budget	No Retrofit Proposed	7 Surface	N/A	0 63	14 1043	0.4 0.4	460 460	0.00	0.0	0 0	0 0	0 \$ -
489 Parking & Area Exte	erior 09.02-MOC [Exterior]	Property	Whole area	Outside Areas	712 \$T		Shoebox 400MH01	Shoebox / MH 400W / HID Magnetic	10	No Retrofit - Payback/Budget	No Retrofit Proposed	10 Pole	N/A	0 458	10 4380	4.6 4.6	20,060 20,060	0.00	0.0	0 0	0 0	0\$-
490 Parking & Area Exte	erior 09.02-MOC [Exterior]	Property	Whole area	Outside Areas	712		Shoebox 400MH01	Shoebox / MH 400W / HID Magnetic	10	No Retrofit - Payback/Budget	No Retrofit Proposed	10 Pole	N/A	0 458	10 4380	4.6 4.6	20,060 20,060	0.00	0.0	0 0	0 0	0 \$ -
491 Parking & Area Exte	erior 09.02-MOC [Exterior]	Property	Whole area	Outside Areas	712		Shoebox 250MH01	Shoebox / MH 250W / HID Magnetic	9	No Retrofit - Payback/Budget	No Retrofit Proposed	9 Pole	N/A	0 295	9 4380	2.7 2.7	11,629 11,629	0.00	0.0	0 0	0 0	0\$-
492 Parking & Area Exte	erior 09.02-MOC [Exterior]	Property	Whole area	Outside Areas	712		Shoebox 175MH01	Shoebox / MH 175W / HID Magnetic	2	No Retrofit - Payback/Budget	No Retrofit Proposed	2 Pole	N/A	0 210	2 4380	0.4 0.4	1,840 1,840	0.00	0.0	0 0	0 0	0 \$ -
493 Parking & Area Exte	erior 09.02-MOC [Exterior]	Property	Whole area	Outside Areas	712		Cobrahead 70HPS01	Cobrahead / HPS 70W / HID Magnetic	2	No Retrofit - Payback/Budget	No Retrofit Proposed	2 Pole	N/A	0 86	2 4380	0.2 0.2	753 753	0.00	0.0	0 0	0 0	0\$-
494 Parking & Area Exte	erior 09.02-MOC [Exterior]	Property	Admin & Parks bldg's	Outside Areas	712		Shoebox 250MH01	Shoebox / MH 250W / HID Magnetic	7	No Retrofit - Payback/Budget	No Retrofit Proposed	7 Pole	N/A	0 295	7 4380	2.1 2.1	9,045 9,045	0.00	0.0	0 0	0 0	0 \$ -
495 Parking & Area Exte	erior 09.02-MOC [Exterior]	1st Floor	Admin Wash Bay	Outside Areas	712		Wallpack LED	Wallpack / LED Fixture / LED Driver	5	N No Retrofit - LED	No Retrofit Proposed	5 Wall	N/A	0 12	5 4380	0.1 0.1	263 263	0.00	0.0	0 0	0 0	0\$-
496 Parking & Area Exte	erior 09.02-MOC [Exterior]	1st Floor	Admin Loading docks	Outside Areas	710 \$T		Vapor-tight 32T802E	Vapor-tight / 32W Fluorescent, 4'-0" T8 / Electronic, T8	5	No Retrofit - Payback/Budget	No Retrofit Proposed	5 Surface	N/A	0 63	10 3650	0.3 0.3	1,150 1,150	0.00	0.0	0 0	0 0	0\$-
497 Parking & Area Exte	erior 09.02-MOC [Exterior]	1st Floor	Admin Main Entry	Outside Areas	712		Wallpack LED	Wallpack / LED Fixture / LED Driver	1	No Retrofit - LED	No Retrofit Proposed	1 Surface	N/A	0 12	1 4380	0.0 0.0	53 53	0.00	0.0	0 0	0 0	0\$-
498 Parking & Area Exte	erior 09.02-MOC [Exterior]	1st Floor	Bidg 2 & 4	Outside Areas	712		Cobrahead 70HPS01	Cobrahead / HPS 70W / HID Magnetic	2	No Retrofit - Payback/Budget	No Retrofit Proposed	2 Pipe Mount	N/A	0 86	2 4380	0.2 0.2	753 753	0.00	0.0	0 0	0 0	0\$-
499 Parking & Area Exte	erior 09.02-MOC [Exterior]	1st Floor	Bldg 3	Outside Areas	712		Wallpack LED	Wallpack / LED Fixture / LED Driver	3 1	N No Retrofit - LED	No Retrofit Proposed	3 Wall	N/A	0 12	3 4380	0.0 0.0	158 158	0.00	0.0	0 0	0 0	0\$-
	erior 09.02-MOC [Exterior]		Bldg 4	Outside Areas	712		Wallpack LED	Wallpack / LED Fixture / LED Driver	1	N No Retrofit - LED	No Retrofit Proposed	1 Wall	N/A	0 12	1 4380	0.0 0.0	53 53	0.00	0.0	0 0	0 0	0\$-
	erior 09.02-MOC [Exterior]		Trinity Bldg	Outside Areas	712		Wallpack LED	Wallpack / LED Fixture / LED Driver	3 1		No Retrofit Proposed	3 Wall	N/A	0 12	3 4380	0.0 0.0	158 158	0.00	0.0	0 0	0 0	0\$-



							Existi	ng			Propos	ed				En	ergy	
ID Building	FIM Name	Floor/General Area	Room Name	ASHRAE Space	e Code Switching	Fixture Schedule	Lamp & Ballast Fixture Type	Description	# of Fixtures Fixture Code	Retrofit Type (Current Scope)	Description	Mounting different # of from Fixtures existing)	# of Lamps per	Operating	Existing Proposed KW KW Existing KV	kW	kWh Heating Heat s Savings per Penalty Pena	ting Cooling Net kWh Cost alty Credit Savings per Savings per rms) (kWh) Year Year
Follow Hunder				Outside Areas	712	Theore Benedate		Wellergh (UDC 150W (UDD Managhia		No Retrofit -	No Retrofit Proposed			170 5 4380	0.9 0.9 3			
	cterior 09.02-MOC [Exteri		Trinity Bldg		/12			Wallpack / HPS 150W / HID Magnetic	5 N	Payback/Budget		5 Wall	N/A U				0.0 0	
503 Parking & Area E	kterior 09.02-MOC [Exteri	ior] 1st Floor	Trinity Bldg	Outside Areas	712		Flood 250MH0	Flood / MH 250W / HID Magnetic	6 N	Payback/Budget	No Retrofit Proposed	6 Pipe Mount	N/A 0 2	295 6 4380	1.8 1.8 7,	753 7,753 0.00	0.0 0 0	0 0 0 \$ -
504 Parking & Area E	kterior 09.02-MOC [Exteri	ior] 1st Floor	Decant	Outside Areas	711 \$T		Wallpack 175MH0	Wallpack / MH 175W / HID Magnetic	2 N	Payback/Budget	No Retrofit Proposed	2 Wall	N/A 0	210 2 4015	0.4 0.4 1,	.686 1,686 0.00	0.0 0 0	0 0 0 \$ -
505 Parking & Area E	kterior 09.02-MOC [Exteri	ior] 1st Floor	Fuel Depot	Outside Areas	712		Wallpack LED	Wallpack / LED Fixture / LED Driver	4 N	No Retrofit - LED	No Retrofit Proposed	4 Wall	N/A 0	12 4 4380	0.0 0.0	210 210 0.00	0.0 0 0	0 0 0 \$ -
506 Parking & Area E	kterior 09.02-MOC [Exteri	ior] 1st Floor	Covered storage Bldg	Outside Areas	712		Wallpack 100MH0	Wallpack / MH 100W / HID Magnetic	3 N	No Retrofit - Payback/Budget	No Retrofit Proposed	3 Wall	N/A 0	3 4380	0.4 0.4 1,	.695 1,695 0.00	0.0 0 0	0 0 0 \$ -
507 Parking & Area E	cterior 09.02-MOC [Exteri	ior] 1st Floor	Bldg 9	Outside Areas	712		Canopy LED	Canopy / LED Fixture / LED Driver	1 N	No Retrofit - LED	No Retrofit Proposed	1 Surface	N/A 0	12 1 4380	0.0 0.0	53 53 0.00	0.0 0 0	0 0 0 \$ -
508 Parking & Area E	cterior 09.02-MOC [Exteri	ior] 1st Floor	Parks Operations	Outside Areas	712		General 50HPS01	General / HPS 50W / HID Magnetic	1 N	No Retrofit - Payback/Budget	No Retrofit Proposed	1	0 N/A 0	68 1 4380	0.1 0.1	298 298 0.00	0.0 0 0	0 0 0 \$ -
509 Parking & Area E	cterior 09.02-MOC [Exteri	ior] 1st Floor	Parks Operations	Outside Areas	712		Wallpack 70HPS01	Wallpack / HPS 70W / HID Magnetic	1 N	No Retrofit - Payback/Budget	No Retrofit Proposed	1 Wall	N/A 0	86 1 4380	0.1 0.1	377 377 0.00	0.0 0 0	0 0 0 \$ -
	kterior 09.02-MOC [Exteri		Parks Operations	Outside Areas	712		Canopy 100MH0:	Canopy / MH 100W / HID Magnetic	6 N	No Retrofit - Payback/Budget	No Retrofit Proposed	6 Surface	N/A 0	6 4380	0.8 0.8 3,	.390 3,390 0.00	0.0 0 0	0 0 0 \$ -
	kterior 09.02-MOC [Exteri		Parks Operations	Outside Areas	712		Wallpack 100MH0	Wallpack / MH 100W / HID Magnetic	1 N	No Retrofit - Pavback/Budget	No Retrofit Proposed	1 Wall	N/A 0	129 1 4380	0.1 0.1	565 565 0.00	0.0 0 0	0 0 0 s -
	kterior 09.02-MOC [Exteri		Parks Operations	Outside Areas	71.0			Downlight / Compact Fluorescent, 26W Triple /		No Retrofit - Payback/Budget	No Retrofit Proposed			(0) () (200	0.2 0.2	700 700 0.00		
512 Parking & Area E	(terior 09.02-MOC [Exteri	lorj Ist ridor	Parks Operations	Outside Areas	/12		Downlight 26CFL02	Vapor-tight 4' / 34W Fluorescent, 4'-0" T12 /	3 N	Payback/ Budget	LED 4FT T8 Lamp and Driver Upgrade. (2) lamps with (1) 2-	3	0 N/A 0	60 6 4380	0.2 0.2	788 788 0.00		
514 Main Building	09.01-FS14	1st Floor	Main Garage	Warehouse	702 \$			1 Standard Magnetic, T12	4 L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVAND	A 4 Surface	Driver 2	30 8 730	0.3 0.1	239 88 0.21	2.5 152 0	-1 8 160 \$ 29
515 Main Building	09.01-FS14	1st Floor	Main Garage	24 Hour Areas	713 \$		8' Industrial w/reflectors 95T1202	8' Industrial w/reflectors / 95W Fluorescent, 8'- 0" T12, HO / Standard Magnetic, T12	18 L43	New Fixture	Low Bay Replacements 19'-20' AFF	18 Channel	LED Fixture 1	175 18 4745	4.1 3.2 19,	388 14,947 0.94 1	1.2 4,441 0	-16 237 4,678 \$ 357
516 Main Building	09.01-FS14	1st Floor	Chief office	Offices	705 \$		2x4 Prismatic 34T1202	2x4 Prismatic / 34W Fluorescent, 4'-0" T12 / Standard Magnetic, T12	1 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	A 1 Recessed	LED Lamp and Driver 2	30 2 1825	0.1 0.0	150 55 0.05	0.6 95 0	0 5 100 \$ 11
517 Main Building	09.01-FS14	1st Floor	Chief office	Offices	705 \$		2x4 Prismatic 40T1204	2x4 Prismatic / 40W Fluorescent, 4'-0" T12 / Standard Magnetic, T12	1 L4	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (4) lamps with (1) 4- lamp driver, 60W (system),8000+ delivered lumens, SYLVANIA	1 Recessed	LED Lamp and Driver 4	60 4 1825	0.2 0.1	350 110 0.13	1.6 241 0	-1 13 254 \$ 27
518 Main Building	09.01-FS14	1st Floor	Open office	Open Office	705 \$		2x4 Prismatic 40T1204	2x4 Prismatic / 40W Fluorescent, 4'-0" T12 / Standard Magnetic, T12	1 L4	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (4) lamps with (1) 4- lamp driver, 60W (system),8000+ delivered lumens, SYLVANIA	1 Recessed	LED Lamp and Driver 4	60 4 1825	0.2 0.1	350 110 0.13	1.6 241 0	-1 13 254 \$ 27
519 Main Building	09.01-FS14	1st Floor	Open office	Open Office	705 \$\$		2x4 Prismatic 40T1204	2x4 Prismatic / 40W Fluorescent, 4'-0" T12 / Standard Magnetic, T12	5 L4 Bi-Level	Lamp and Driver	LED 4FT T8 Lamp and Bi-Level Driver/Ballast Upgrade, (4) lamps with (1) 4-lamp driver, 60W (system),8000+ delivered lumens, SYLVANIA	5 Recessed	LED Lamp and Driver 4	60 20 1825	1.0 0.3 1	.752 548 0.66	7.9 1,205 0	-4 64 1,269 \$ 136
520 Main Building	09.01-FS14	1st Floor	Electrical Room	Maintenance Areas - Inactive	501 \$		2x4 Prismatic 34T1202	2x4 Prismatic / 34W Fluorescent, 4'-0" T12 / Standard Magnetic, T12	1 N	No Retrofit - Payback/Budget	No Retrofit Proposed	1 Recessed	N/A 0	82 2 261	0.1 0.1	21 21 0.00	0.0 0 0	0 0 0 \$ -
	09.01-FS14	1st Floor	Janitor Closet	Janitor Closet	501 e			4' Acrylic Wrap / 34W Fluorescent, 4'-0" T12 / Standard Magnetic, T12	1 1	No Retrofit - Payback/Budget	No Retrofit Proposed	1 Surface	NA	82 2 261	0.1 0.1	21 21 0.00	0.0 0 0	
521 Main Building					501 \$			4' Acrylic Wrap / 34W Fluorescent, 4'-0" T12 /			LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-		LED Lamp and	02 2 201	0.1 0.1			
522 Main Building	09.01-FS14	1st Floor	Laundry	Storage Areas Bedroom, Housing	702 \$3		4' Acrylic Wrap 34T1202	1 Standard Magnetic, T12	2 L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/ LED PAR30 Bypass Lamp Upgrade, (1) E26 base lamp with internal driver, 10W each, 800+ delivered lumens, Sylvania:	A 2 Surface	Driver 2	30 4 730	0.2 0.1	120 44 0.10	1.2 76 0	0 4 80 \$ 15
523 Main Building	09.01-FS14	1st Floor	Sleeping Room 6	Authority Bedroom, Housing	701 \$D		Wall Bracket 65PAR01	Wall Bracket / Incandescent, PAR lamp / N/A 2x4 Prismatic / 34W Fluorescent, 4'-0" T12 /	1 L19	Retrofit Lamp	Par30 10W DIM LED 4FT T8 Lamp and Driver Upgrade, (4) lamps with (1) 4-	1 Wall	Driver 1 LED Lamp and	10 1 365	0.1 0.0	24 4 0.06	0.7 20 0	0 1 21 \$ 6
524 Main Building	09.01-FS14	1st Floor	Sleeping Room 6	Authority	702 \$		2x4 Prismatic 34T1204	Standard Magnetic, T12	1 L4	Lamp and Driver	lamp driver, 60W (system),8000+ delivered lumens, SYLVANIA LED PAR30 Bypass Lamp Upgrade, (1) E26 base lamp with	1 Recessed	Driver 4	60 4 730	0.2 0.1	120 44 0.10	1.2 76 0	0 4 80 \$ 15
525 Main Building	09.01-FS14	1st Floor	Sleeping Room 5	Bedroom, Housing Authority	701 \$D		Wall Bracket 65PAR01	Wall Bracket / Incandescent, PAR lamp / N/A	1 L19	Retrofit Lamp	Internal driver, 10W each, 800+ delivered lumens, Sylvania: Par30 10W DIM	1 Wall	LED Integral Driver 1	10 1 365	0.1 0.0	24 4 0.06	0.7 20 0	0 1 21 \$ 6
526 Main Building	09.01-FS14	1st Floor	Sleeping Room 5	Bedroom, Housing Authority	702 \$		2x4 Prismatic 34T1204	2x4 Prismatic / 34W Fluorescent, 4'-0" T12 / Standard Magnetic, T12	1 L4	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (4) lamps with (1) 4- lamp driver, 60W (system),8000+ delivered lumens, SYLVANIA LED PAR30 Bypass Lamp Upgrade, (1) E26 base lamp with	1 Recessed	LED Lamp and Driver 4	60 4 730	0.2 0.1	120 44 0.10	1.2 76 0	0 4 80 \$ 15
527 Main Building	09.01-FS14	1st Floor	Sleeping Room 4	Bedroom, Housing Authority	702 \$		Wall Bracket 65PAR01	Wall Bracket / Incandescent, PAR lamp / N/A	1 L19	Retrofit Lamp	internal driver, 10W each, 800+ delivered lumens, Sylvania: Par30 10W DIM	1 Wall	LED Integral Driver 1	10 1 730	0.1 0.0	47 7 0.06	0.7 40 0	0 2 42 \$ 8
528 Main Building	09.01-FS14	1st Floor	Sleeping Room 4	Bedroom, Housing Authority	702 \$		2x4 Prismatic 34T1204	2x4 Prismatic / 34W Fluorescent, 4'-0" T12 / Standard Magnetic, T12	1 L4	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (4) lamps with (1) 4- lamp driver, 60W (system),8000+ delivered lumens, SYLVANIA	1 Recessed	LED Lamp and Driver 4	60 4 730	0.2 0.1	120 44 0.10	1.2 76 0	0 4 80 \$ 15
529 Main Building	09.01-FS14	1st Floor	Sleeping Room 3	Bedroom, Housing Authority	701 \$D		Wall Bracket 65PAR01	Wall Bracket / Incandescent, PAR lamp / N/A	1 L19	Retrofit Lamp	LED PAR30 Bypass Lamp Upgrade, (1) E26 base lamp with internal driver, 10W each, 800+ delivered lumens, Sylvania: Par30 10W DIM	1 Wall	LED Integral Driver 1	10 1 365	0.1 0.0	24 4 0.06	0.7 20 0	0 1 21 \$ 6
530 Main Building	09.01-FS14	1st Floor	Sleeping Room 3	Bedroom, Housing Authority	702 \$		2x4 Prismatic 34T1204	2x4 Prismatic / 34W Fluorescent, 4'-0" T12 / Standard Magnetic, T12	114	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (4) lamps with (1) 4- lamp driver, 60W (system),8000+ delivered lumens, SYLVANIA	1 Recessed	LED Lamp and Driver 4	60 4 730	0.2 0.1	120 44 0.10	1.2 76 0	0 4 80 \$ 15
				Bedroom, Housing	701 SD				1 L19		LED PAR30 Bypass Lamp Upgrade, (1) E26 base lamp with internal driver, 10W each, 800+ delivered lumens, Sylvania: Par30 10W DIM	1 Wall	LED Integral	10 1 275	0.1 0.0	24 4 9 7		
531 Main Building	09.01-FS14	1st Floor	Sleeping Room 2	Authority Bedroom, Housing				Wall Bracket / Incandescent, PAR lamp / N/A 2x4 Prismatic / 34W Fluorescent, 4'-0" T12 /		Retrofit Lamp	LED 4FT T8 Lamp and Driver Upgrade, (4) lamps with (1) 4-		Driver 1 LED Lamp and	10 1 365		24 4 0.06	20 0	0 1 21 \$ 6
532 Main Building	09.01-FS14	1st Floor	Sleeping Room 2	Authority Bedroom, Housing	702 \$			1 Standard Magnetic, T12	1 L4	Lamp and Driver	lamp driver, 60W (system),8000+ delivered lumens, SYLVANIA LED PAR30 Bypass Lamp Upgrade, (1) E26 base lamp with internal driver, 10W each, 800+ delivered lumens, Sylvania:	1 Recessed	Driver 4 LED Integral	60 4 730	0.2 0.1	120 44 0.10	1.2 76 0	0 4 80 \$ 15
533 Main Building	09.01-FS14	1st Floor	Sleeping rm 1	Authority	701 \$D		Wall Bracket 65PAR01	Wall Bracket / Incandescent, PAR lamp / N/A 2x4 Prismatic / 34W Fluorescent, 4'-0" T12 /	1 L19	Retrofit Lamp	Par30 10W DIM LED 4FT T8 Lamp and Driver Upgrade, (4) lamps with (1) 4-	1 Wall	Driver 1	10 1 365	0.1 0.0	24 4 0.06	0.7 20 0	0 1 21 \$ 6
534 Main Building	09.01-FS14	1st Floor	Sleeping rm 1	Bedroom, Housing Authority	702 \$			1 Standard Magnetic, T12	1 L4	Lamp and Driver	LED 4F1 18 Lamp and Driver Upgrade, (4) lamps with (1) 4- lamp driver, 60W (system),8000+ delivered lumens, SYLVANIA	1 Recessed	LED Lamp and Driver 4	60 4 730	0.2 0.1	120 44 0.10	1.2 76 0	0 4 80 \$ 15
535 Main Building	09.01-FS14	1st Floor	Womans Bath/Shower	Restrooms, private	501 \$		Pendant 60A01	Decorative Pendant / Incandescent, A lamp / N/A	3 N	No Retrofit - Payback/Budget	No Retrofit Proposed	3 Pendant	N/A 0	60 3 261	0.2 0.2	47 47 0.00	0.0 0 0	0 0 0 \$ -
536 Main Building	09.01-FS14	1st Floor	Womans Bath/Shower	Restrooms, private	501 \$		4' Acrylic Wrap 34T1202	4' Acrylic Wrap / 34W Fluorescent, 4'-0" T12 / Standard Magnetic, T12	1 N	No Retrofit - Payback/Budget	No Retrofit Proposed	1 Surface	N/A 0	82 2 261	0.1 0.1	21 21 0.00	0.0 0 0	0 0 0 \$ -
537 Main Building	09.01-FS14	1st Floor	Womans Bath/Shower	Restrooms, private	501 \$		1x4 Paracube 34T1202	1x4 Paracube / 34W Fluorescent, 4'-0" T12 / Standard Magnetic, T12	1 N	No Retrofit - Payback/Budget	No Retrofit Proposed	1 Surface	N/A 0	82 2 261	0.1 0.1	21 21 0.00	0.0 0 0	0 0 0 \$ -
538 Main Building	09.01-FS14	1st Floor	Mens bath/showers	Restrooms	703 \$		Downlight 18CFL01	Downlight / Compact Fluorescent, 18W PL / N/A	3 L14	Retrofit Lamp	LED PL Bypass Lamp Upgrade, (1) Horizontal mount lamp with internal driver and remove existing ballast, 8W each, 900 delivered lumens, GREEN CREATIVE: PL H 8W BYP	3 Recessed	LED Integral Driver 1	8 3 1095	0.1 0.0	62 26 0.03	0.4 36 0	0 2 38 \$ 5
539 Main Building	09.01-FS14	1st Floor	Mens bath/showers	Restrooms	703 \$		Decorative Pendant 60A02	Decorative Pendant / Incandescent, A lamp / N/A	1 121	Retrofit Lamp	LED A19 Bypass Lamp Upgrade, (2) E26 base lamp with Internal driver, 9W each, 800+ delivered lumens, Sylvania: A19 9W DIM	1 Surface	LED Integral Driver 2	24 2 1095	0.1 0.0	131 26 0.10	1.2 105 0	0 6 111 \$ 16
540 Main Building	09.01-FS14	1st Floor	Mens bath/showers	Restrooms	703 s			4' Acrylic Wrap / 34W Fluorescent, 4'-0" T12 / Standard Magnetic, T12	212	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/		LED Lamp and Driver 2	30 4 1005	0.2 0.1	180 66 0.10	1.2 114 0	0 6 120 \$ 17
					702 ¢			1x4 Paracube / 34W Fluorescent, 4'-0" T12 /	2.12		LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-		LED Lamp and Driver 2	20	0.2 0.1			
541 Main Building	09.01-FS14	1st Floor	Mens bath/showers	Restrooms	703 \$			Standard Magnetic, T12 2x4 Prismatic / 40W Fluorescent, 4'-0" T12 /	2 12	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIJ LED 4FT T8 Lamp and Driver Upgrade, (4) lamps with (1) 4- lamp driver, 60W (system),8000+ delivered lumens, SYLVANIA		LED Lamp and	30 4 1095	0.2 0.1	180 66 0.10	114 0	0 6 120 \$ 17
542 Main Building	09.01-FS14	1st Floor	Workout	Gyms	704 \$		2x4 Prismatic 40T1204	1 Standard Magnetic, T12 2x4 Prismatic / 40W Fluorescent, 4'-0" T12 /	1 L4	Lamp and Driver	LED 4FT T8 Lamp and Bi-Level Driver/Ballast Upgrade, (4) lamps with (1) 4-lamp driver, 60W (system),8000+ delivered	1 Recessed	Driver 4	60 4 1460	0.2 0.1	280 88 0.13	1.6 193 0	-1 10 203 \$ 24
543 Main Building	09.01-FS14	1st Floor	Workout	Gyms	704 \$\$		2x4 Prismatic 40T1204	A Standard Magnetic, T12 Decorative Pendant / 34W Fluorescent, 4'-0"	3 L4 Bi-Level	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	3 Recessed	LED Lamp and LED Lamp and	60 12 1460	0.6 0.2	841 263 0.40	4.8 578 0	-2 31 609 \$ 73
544 Main Building	09.01-FS14	1st Floor	Kitchen Lounge	Halls & common areas	706 \$		Pendant 34T1202	1 T12 / Standard Magnetic, T12	6 L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/		Driver 2	30 12 2190	0.5 0.2 1,	077 394 0.31	3.7 683 0	-3 36 720 \$ 71
545 Main Building	09.01-FS14	1st Floor	Kitchen Lounge	Halls & common areas	706 \$		Pendant 34T1202	Decorative Pendant / 34W Fluorescent, 4'-0" T12 / Standard Magnetic, T12	6 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI/	A 6 Pendant	LED Lamp and Driver 2	30 12 2190	0.5 0.2 1	077 394 0.31	3.7 683 0	-3 36 720 \$ 71



					· · · · · ·		Existing					Propos	ad				Energy
							Lamp &						Mounting	(if	W	atts	kW kWh Heating Heating Cooling Net kWh Cost
ID Building	FIM Name	Floor/General Area	Room Name	ASHRAE Space Types Time	e Code Switching	Fixture Schedule	Fixture Type Ballast	Description	# of Fixtures F		trofit Type urrent Scope)	Description	# of from Fixtures existing)	Lamp Type	# of Lamps pe	r Operating Existing Proposed	Proposed kW Savings Savings Savings per Penalty Penalty Credit Savings per Savings kWh kWh per Month per Year Year (kWh) (therms) (kWh) Year Year
546 Main Building	09.01-FS14	1st Floor	Kitchen Lounge	Cafeteria	708 \$		Undercabinet 8T501PH	Undercabinet / 8W Fluorescent, T5 Preheat / Preheat	1	N Retr	rofit Lamp	No Retrofit Proposed	1 Surface	N/A	0	12 1 2920 0.0 0.0	35 35 0.00 0.0 0 0 0 0 \$
547 Main Building	09.01-FS14	1st Floor	Kitchen Lounge	Cafeteria	708 \$		Undercabinet 8T501PH	Undercabinet / 8W Fluorescent, T5 Preheat / Preheat	3 1	N Retr	rofit Lamp	No Retrofit Proposed	3 Surface	N/A	0	12 3 2920 0.0 0.0	105 105 0.00 0.0 0 0 0 0 \$
548 Main Building	09.01-FS14	1st Floor	Kitchen Lounge	24 Hour Areas	708 ¢		Acordic Wrap 34T1204M	Acrylic Wrap / 34W Fluorescent, 4'-0" T12 / Standard Magnetic, T12	1	4 Iam	np and Driver	LED 4FT T8 Lamp and Driver Upgrade, (4) lamps with (1) 4- lamp driver, 60W (system),8000+ delivered lumens, SYLVANIA	A 1 Surface	LED Lamp and Driver	4	60 4 2020 0.2 0.1	479 175 0.10 1.2 304 0 -1 16 320 \$
					700 \$			Acrylic Wrap / 34W Fluorescent, 4'-0" T12 /				LED 4FT T8 Lamp and Driver Upgrade, (4) lamps with (1) 4-		LED Lamp and			
549 Main Building	09.01-FS14	1st Floor	Kitchen Lounge	Cafeteria	708 \$		Acrylic Wrap 34T1204M	Standard Magnetic, T12 2x4 Prismatic / 34W Fluorescent, 4'-0" T12 /	3 L	_4 Lam	np and Driver	lamp driver, 60W (system),8000+ delivered lumens, SYLVANIA LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	A 3 Surface	LED Lamp and	4	60 12 2920 0.5 0.2	1,437 526 0.31 3.7 911 03 49 960 \$
550 Main Building	09.01-FS14	1st Floor	Rear Hallway	Halls & common areas	706 \$		2x4 Prismatic 34T1202M	Standard Magnetic, T12 2x4 Prismatic / 34W Fluorescent, 4'-0" T12 /	6 L	.2 Lam	np and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	A 6 Recessed	LED Lamp and	2	30 12 2190 0.5 0.2	1,077 394 0.31 3.7 683 0 -3 36 720 \$
551 Main Building	09.01-FS14	1st Floor	Rear Hallway	24 Hour Areas	708 \$		2x4 Prismatic 34T1202M	Standard Magnetic, T12	5 L			lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	A 5 Recessed	Driver	2	30 10 2920 0.4 0.2	1,197 438 0.26 3.1 759 0 -3 40 800 \$
552 Main Building	09.01-FS14	1st Floor	Public restroom 2	Restrooms, private	501 \$		1x4 Paracube 34T1202M	1x4 Paracube / 34W Fluorescent, 4'-0" T12 / Standard Magnetic, T12	2 N		Retrofit - back/Budget	No Retrofit Proposed	2 Surface	N/A	0	82 4 261 0.2 0.2	43 43 0.00 0.0 0 0 0 0 \$
553 Main Building	09.01-FS14	1st Floor	Public restroom	Restrooms, private	501 \$		1x4 Paracube 34T1202M	1x4 Paracube / 34W Fluorescent, 4'-0" T12 / Standard Magnetic, T12	2 N		Retrofit - back/Budget	No Retrofit Proposed LED PAR30 Bypass Lamp Upgrade, (1) E26 base lamp with	2 Surface	N/A	0	82 4 261 0.2 0.2	43 43 0.00 0.0 0 0 0 0 0 \$
554 Main Building	09.01-FS14	1st Floor	Large conference	Conf. Room	701 \$D		Downlight 75PAR01	Downlight / Incandescent, PAR lamp / N/A	2 L	.19HO Retr	rofit Lamp	internal driver, 13W each, 1050+ delivered lumens, Sylvania: Par30 13W DIM	2 Recessed	LED Integral Driver	1	13 2 365 0.2 0.0	55 9 0.12 1.5 45 0 0 2 48 \$
555 Main Building	09.01-FS14	1st Floor	Large conference	Conf. Room	701 \$D		Downlight 75PAR01	Downlight / Incandescent, PAR lamp / N/A	6 L	.19HO Retr		LED PAR30 Bypass Lamp Upgrade, (1) E26 base lamp with internal driver, 13W each, 1050+ delivered lumens, Sylvania: Par30 13W DIM	6 Recessed	LED Integral Driver	1	13 6 365 0.5 0.1	164 28 0.37 4.5 136 0 -1 7 143 \$
556 Main Building	09.01-FS14	1st Floor	Large conference	Conf. Room	701 \$3		Decorative Pendant 34T1202M	Decorative Pendant / 34W Fluorescent, 4'-0" T12 / Standard Magnetic, T12	10 L	.2 Lam	np and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	A 10 Pendant	LED Lamp and Driver	2	30 20 365 0.8 0.3	299 110 0.52 6.2 190 0 -1 10 200 \$
557 Main Building	09.01-FS14	1st Floor	Lobby	Halls & common areas	710 \$		Recessed Downlight 13CFL02	Recessed Downlight / Compact Fluorescent, 13W PL / N/A	71	12 Retr	rofit Lamp	LED PL Bypass Lamp Upgrade, (2) Horizontal mount lamp with internal driver and remove existing ballast, 5.5W each, 550 delivered lumens, GREEN CREATIVE: PL H 5.5W HYBM	7 Recessed	LED Integral Driver	2	11 14 3650 0.2 0.1	715 281 0.12 1.4 434 0 -2 23 458 \$
	09.01-FS14	2nd Floor		Maintenance Areas - Inactive	701 \$			4' Acrylic Wrap / 34W Fluorescent, 4'-0" T12 /		No F	Retrofit -	No Retrofit Proposed	2 Surface	N/A		82 4 365 0.2 0.2	
558 Main Building			Mech rm in Shop		/01 \$		4' Acrylic Wrap 34T1202M 8' Industrial	8' Industrial w/reflectors / 95W Fluorescent, 8'-	-		back/Budget	LED (2) 4FT Strip Fixture, surface/chain mounting, 94W,			0	82 4 365 0.2 0.2	
559 Main Building	09.01-FS14	2nd Floor	Shop	Maintenance Areas	701 \$		w/reflectors 95T1202H0	0 0" T12, HO / Standard Magnetic, T12	3 L	.42 New	v Fixture	12000+ delivered lumen	3 Chain	LED Fixture	2	94 6 365 0.7 0.3	249 103 0.40 4.8 146 0 -1 8 153 \$
560 Main Building	09.01-FS14	1st Floor	Exterior	Outside Areas	711		Uplight LED	Uplight / LED Fixture / LED Driver Recessed Downlight / HPS 150W / HID	1 1		Retrofit - LED	No Retrofit Proposed	1 Ground	N/A	0	12 1 4015 0.0 0.0	48 48 0.00 0.0 0 0 0 0 \$
561 Main Building	09.01-FS14	1st Floor	Exterior	Outside Areas	711 PC		Recessed Downlight 150HPS01		6 N		back/Budget	No Retrofit Proposed	6 Recessed	N/A	0	170 6 4015 1.0 1.0	4,095 4,095 0.00 0.0 0 0 0 0 \$
562 Main Building	09.01-FS14	1st Floor	Exterior	Outside Areas	711 PC		Wallpack LED	Wallpack / LED Fixture / LED Driver	2 1	N No F	Retrofit - LED	No Retrofit Proposed	2 Wall	N/A	0	12 2 4015 0.0 0.0	96 96 0.00 0.0 0 0 0 0 \$
563 Main Building	09.01-FS14	1st Floor	Exterior	Outside Areas	711 PC		Downlight 13CFL01	Downlight / Compact Fluorescent, 13W PL / N/A	8 1		Retrofit - back/Budget	No Retrofit Proposed	8 Recessed	N/A	0	14 8 4015 0.1 0.1	450 450 0.00 0.0 0 0 0 0 \$
564 Main Building	09.01-FS14	1st Floor	Exterior	Outside Areas	711 PC		Area 175MH01	Area / MH 175W / HID Magnetic	8 1		Retrofit - back/Budget	No Retrofit Proposed	8 Pole	N/A	0	210 8 4015 1.7 1.7	6,745 6,745 0.00 0.0 0 0 0 0 \$
566 Mechanic Bldg	09.01-FS16 Mechanic Bldg	1st Floor	Main Bay 101 104 105	Maintenance Areas	706 \$		4' Strip 32T802E	4' Strip / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2	No F Pavt	Retrofit - back/Budget	No Retrofit Proposed	2 Wall	N/A	0	63 4 2190 0.1 0.1	276 276 0.00 0.0 0 0 0 0 s
	09.01-FS16 Mechanic	1st Floor			712 \$		8' Industrial	8' Industrial w/reflectors / 110W Fluorescent,	20	No F	Retrofit -		20 Chain			252 40 4380 5.0 5.0	22,075 22,075 0.00 0.0 0 0 0 0 0 s
567 Mechanic Bldg	09.01-FS16 Mechanic	:	Main Bay 101 104 105	Warehouse			4' Industrial	0 8'-0" T12, HO / Standard Magnetic, T12 4' Industrial w/reflectors / 60W Fluorescent, 4-	. 20	No F	back/Budget Retrofit -	No Retrofit Proposed		N/A	U	252 40 4380 5.0 5.0	
568 Mechanic Bldg	Bldg 09.01-FS16 Mechanic	1st Floor	Main Bay 101 104 105	Warehouse	712 \$			0 0" T12, H0 / Standard Magnetic, T12, No PCB's 2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /	s 2 N		back/Budget	No Retrofit Proposed	2 Chain	N/A	0	131 4 4380 0.3 0.3	1,148 1,148 0.00 0.0 0 0 0 0 0 \$
569 Mechanic Bldg	Bldg	1st Floor	Kitchen / Lunch 109	Kitchen	712 \$		2x4 Prismatic 32T803E	Electronic, T8	2 N	N Payt	back/Budget	No Retrofit Proposed	2 Recessed	N/A	0	86 6 4380 0.2 0.2	753 753 0.00 0.0 0 0 0 0 \$
570 Mechanic Bldg	09.01-FS16 Mechanic Bldg	1st Floor	Office 110	Offices	712 \$		2x4 Prismatic 32T803E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 N	N Payt	back/Budget	No Retrofit Proposed	2 Recessed	N/A	0	86 6 4380 0.2 0.2	753 753 0.00 0.0 0 0 0 0 \$
571 Mechanic Bldg	09.01-FS16 Mechanic Bldg	1st Floor	Exterior MECH	Outside Areas	712 PC		Recessed Downlight 70HPS01	Recessed Downlight / HPS 70W / HID Magnetic	10		Retrofit - back/Budget	No Retrofit Proposed	10 Recessed	N/A	0	86 10 4380 0.9 0.9	3,767 3,767 0.00 0.0 0 0 0 0 \$
572 Mechanic Bldg	09.01-FS16 Mechanic Bldg	1st Floor	Exterior MECH	Outside Areas	712 PC		Wallpack 50MH01	Wallpack / MH 50W / HID Magnetic	4 N	No F Payt	Retrofit - back/Budget	No Retrofit Proposed	4 Wall	N/A	0	62 4 4380 0.2 0.2	1,086 1,086 0.00 0.0 0 0 0 0 \$
573 Fire Station Bldg	09.02-FS16	1st Floor	Generator 128	Storage Areas	702 \$		4' Strip 32T802E	4' Strip / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1		Retrofit - back/Budget	No Retrofit Proposed	1 Surface	N/A	0	63 2 730 0.1 0.1	46 46 0.00 0.0 0 0 0 0 s
574 Fire Station Bldg	09.02-FS16	1st Floor	Stairs 131	Halls & common areas	705 \$		Wallpack 70HPS01	Wallpack / HPS 70W / HID Magnetic	4 🛚		Retrofit - back/Budget	No Retrofit Proposed	4 Wall	N/A	0	86 4 1825 0.3 0.3	628 628 0.00 0.0 0 0 0 0 s
575 Fire Station Bldg		1st Floor	Stairs 131	Halls & common areas	724 \$		4' Strip 32T802E	4' Strip / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1	No F Payt	Retrofit - back/Budget	No Retrofit Proposed	1	0 N/A	0	63 2 8760 0.1 0.1	552 552 0.00 0.0 0 0 0 0 \$
576 Fire Station Bldg		1st Floor	Garage 127 Upper storage	Storage Areas	702 \$			4' Strip / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2	No F	Retrofit -	No Retrofit Proposed	2 Surface	N/A	0	63 4 730 0.1 0.1	92 92 0.00 0.0 0 0 0 0 0
								4' Strip / 32W Fluorescent, 4'-0" T8 /		No F	Retrofit -		2 Surface				
577 Fire Station Bldg	09.01-FS16 Mechanic	2nd Floor	Main garage tool storage	Storage Areas	702 \$		Recessed	Electronic, T8 Recessed Downlight / Incandescent, A lamp /	3	No F	Retrofit -	No Retrofit Proposed	3	0 N/A	0	63 6 730 0.2 0.2	138 138 0.00 0.0 0 0 0 0 0 \$
578 Mechanic Bldg	Bldg 09.01-FS16 Mechanic	1st Floor	Bathroom 108	Restrooms	715 \$		Downlight 75A01	N/A 4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 /	1	N Payt	back/Budget Retrofit -	No Retrofit Proposed	1 Recessed	N/A	0	75 1 5475 0.1 0.1	411 411 0.00 0.0 0 0 0 0 \$
579 Mechanic Bldg	Bldg	1st Floor	Bathroom 108	Restrooms	715 \$		4' Acrylic Wrap 32T802E	Electronic, T8	1	N Payt	back/Budget	No Retrofit Proposed	1 Surface	N/A	0	63 2 5475 0.1 0.1	345 345 0.00 0.0 0 0 0 0 \$
580 Mechanic Bldg	09.01-FS16 Mechanic Bldg	1st Floor	Bathroom 108	Restrooms	715 \$		1x4 Paracube 32T802E		1	N Payt		No Retrofit Proposed	1 Wall	N/A	0	63 2 5475 0.1 0.1	345 345 0.00 0.0 0 0 0 0 \$
581 Mechanic Bldg	09.01-FS16 Mechanic Bidg	1st Floor	Storage 107	Storage Areas	702 \$		4' Industrial w/reflectors 60T1202H0	4' Industrial w/reflectors / 60W Fluorescent, 4- 0" T12, HO / Standard Magnetic, T12, No PCB's	s 1 N	No Payt	Retrofit - back/Budget	No Retrofit Proposed	1 Chain	N/A	0	131 2 730 0.1 0.1	96 96 0.00 0.0 0 0 0 0 0 \$
582 Mechanic Bldg	09.01-FS16 Mechanic Bidg	1st Floor	Storage 107	Storage Areas	702 \$		8' Industrial w/reflectors 110T1202H	8' Industrial w/reflectors / 110W Fluorescent, 0 8'-0" T12, HO / Standard Magnetic, T12	2	No F Payt	Retrofit - back/Budget	No Retrofit Proposed	2 Chain	N/A	0	252 4 730 0.5 0.5	368 368 0.00 0.0 0 0 0 0 \$
583 Mechanic Bldg	09.01-FS16 Mechanic Bidg	2nd Floor	Stairs 106	Halls & common areas	724 \$		8' Industrial w/reflectors 110T1202H	8' Industrial w/reflectors / 110W Fluorescent, 0 8'-0" T12, HO / Standard Magnetic, T12	2	No F Payt	Retrofit - back/Budget	No Retrofit Proposed	2 Chain	N/A	0	252 4 8760 0.5 0.5	4,415 4,415 0.00 0.0 0 0 0 0 0 \$
584 Mechanic Bldg	09.01-FS16 Mechanic Bldg	2nd Floor	Stairs 106	Halls & common areas	712 \$		4' Industrial w/reflectors 60T1202HC	4' Industrial w/reflectors / 60W Fluorescent, 4- 0" T12, HO / Standard Magnetic, T12, No PCB's	s 1	No F Payt	Retrofit - back/Budget	No Retrofit Proposed	1 Chain	N/A	0	131 2 4380 0.1 0.1	574 574 0.00 0.0 0 0 0 0 \$
585 Mechanic Bldg	09.01-FS16 Mechanic Bldg		Battery Rm 103	Storage Areas	702 \$		4' Industrial	4' Industrial w/reflectors / 60W Fluorescent, 4- 0" T12, HO / Standard Magnetic, T12, No PCB's		No F	Retrofit - back/Budget	No Retrofit Proposed	1 Chain	N/A	0	131 2 730 0.1 0.1	96 96 0.00 0.0 0 0 0 0 \$
	09.01-FS16 Mechanic Bldg		Fire Riser 102	Storage Areas	702 \$			4' Industrial w/reflectors / 60W Fluorescent, 4- 0" T12, HO / Standard Magnetic, T12, No PCB's		No F	Retrofit - back/Budget	No Retrofit Proposed	1 Chain	N/A		131 2 730 0.1 0.1	96 96 0.00 0.0 0 0 0 0 0 0 s
586 Mechanic Bldg				Storage Areas				2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /		No F	Retrofit -			,	U		
587 Fire Station Bldg		1st Floor	Police 104		501 \$\$		2x4 Prismatic 32T803E Recessed	Recessed Downlight / Incandescent, A lamp /	2			No Retrofit Proposed LED A19 Bypass Lamp Upgrade, (1) E26 base lamp with internal driver, 12W each, 1100+ delivered lumens, Sylvania:		0 N/A	0	86 6 261 0.2 0.2	45 45 0.00 0.0 0 0 0 0 0 \$
588 Fire Station Bldg	09.02-FS16	1st Floor	Mens Bath/Locker 108		712 \$		Downlight 75A01	N/A 4' Acrylic Wrap / 32W Eluorescent, 4'-0" T8 /	3 L	.18 Retr	rofit Lamp	A19 12W DIM LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	3	0 Driver	1	12 3 4380 0.2 0.0	986 158 0.19 2.3 828 0 -3 44 872 \$
589 Fire Station Bldg	09.02-FS16	1st Floor	Mens Bath/Locker 108		712 \$3		4' Acrylic Wrap 32T802E	Electronic, T8	1 L	.2 Lam	np and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	A 1	0 Driver	2	30 2 4380 0.1 0.0	276 131 0.03 0.4 145 0 -1 8 152 \$



					-			F	xisting					Propose	be									En	ergy			
								La	mp &						1	Mounting (i different			Watts					kW	kWh H	Heating Heatin		
ID Building	FIM Name	Floor/General Area	Room Name	ASHRAE Space Types	Time Code Swit	ching	Fixture Schedule		llast pe	Bescription F	t of ixtures	Fixture Code	Retrofit Type (Current Scope)	Description	# of 1 Fixtures	from existing)	Lamp Type	# of Lamps per Fixture	per Fixture # of Lan		w kw	ed Existing kW		W Savings Saving er Month per Ye		Penalty Penalty (kWh) (therm	y Credit Saving: ns) (kWh) Year	s per Savings per Year
590 Fire Station Bldg	09.02-FS16	1st Floor	Mens Bath/Locker 108		712 \$3			1x4 Paracube 32	T802E	1x4 Paracube / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2	L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	2		LED Lamp and 0 Driver	2	30	4 4380	0.1	0.1 5	52 263	0.07	1.8 289	0	-1 15	304 \$ 24
591 Fire Station Bldg	09.02-FS16	1st Floor	Mens Bath/Locker 108		712 \$3			Direct/Indirect 32	T802E	Direct/Indirect / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1	L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	1		LED Lamp and 0 Driver	2	30	2 4380	0.1	0.0 2	76 131	0.03 0	1.4 145	0	-1 8	152 \$ 12
592 Fire Station Bldg	09.02-FS16	1st Floor	Training Rm 134	Conf. Room, add new sensor	702 \$D			Recessed Downlight LEI	D	Recessed Downlight / LED Fixture / LED Driver	4	N	No Retrofit - LED	No Retrofit Proposed	4	Recessed	N/A	0	12	4 730	0.0	0.0	35 35	0.00	J.O O	0	0 0	0 \$ -
593 Fire Station Bldg	09.02-FS16	1st Floor	Training Rm 134	Conf. Room, add new sensor	702 \$\$			2x4 Prismatic 32	T803E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	4	13	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (3) lamps with (1) 3- lamp driver, 45W (system), 6000+ delivered lumens, SYLVANIA	. 4	Recessed	LED Lamp and Driver	3	45	12 730	0.3	0.2 2	51 131	0.16	2.0 120	0	0 6	126 \$ 23
594 Fire Station Bldg	09.02-FS16	Multiple	Hose Tower 132	Storage Areas	702 s			Wallpack 70	MH01	Wallpack / MH 70W / HID Magnetic	2	N	No Retrofit - Payback/Budget	No Retrofit Proposed		Wall	N/A	0	90	2 730	0.2	0.2 1	31 131	0.00	a.o o	0	0 0	0 \$ -
595 Fire Station Bldg	09.02-FS16	Multiple	Hose Tower 132	Storage Areas	702 \$			4' Strip 32'		4' Strip / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1	N	No Retrofit - Payback/Budget	No Retrofit Proposed	1		0 N/A	0	63	2 730	0.1	0.1	45 46	0.00		0	0 0	0.5
	09.02-FS16	Multiple			702 s					4' Strip / 32W Fluorescent, 4'-0" T8 / Electronic, T8			No Retrofit -	No Retrofit Proposed			0 N/A			2 730				0.00				
596 Fire Station Bldg			Hose Storage 130	Storage Areas						4' Strip / 32W Fluorescent, 4'-0" T8 /	1	N	Payback/Budget	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	1		LED Lamp and	0	63		0.1	0.1	46 46			U	0 0	0 \$ -
597 Fire Station Bldg	09.02-FS16	1st Floor	Work Shop 129	Storage Areas - Active	703 \$			4' Strip 32'	T802E	Electronic, T8 2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	1	L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA LED 4FT T8 Lamp and Driver Upgrade, (3) lamps with (1) 3-	1	Surface	LED Lamp and	2	30	2 1095	0.1	0.0	69 33	0.03 0	.4 36	0	0 2	38 \$ 5
598 Fire Station Bldg	09.02-FS16	1st Floor	Office 125 & 126	Open Office	708 \$			2x4 Parabolic 32	T803E	Electronic, T8 2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /	5	L3	Lamp and Driver	lamp driver, 45W (system), 6000+ delivered lumens, SYLVANIA LED 4FT T8 Lamp and Driver Upgrade, (3) lamps with (1) 3-	5	Recessed	Driver	3	45	15 2920	0.4	0.2 1,2	56 657	0.21	2.5 599	0	-2 32	631 \$ 56
599 Fire Station Bldg	09.02-FS16	1st Floor	Office 124	Offices	708 \$			2x4 Prismatic 32		Electronic, T8	1	L3	Lamp and Driver	lamp driver, 45W (system), 6000+ delivered lumens, SYLVANIA	1	Recessed	Driver	3	45	3 2920	0.1	0.0 2	51 131	0.04 0	.5 120	0	0 6	126 \$ 11
600 Fire Station Bldg	09.02-FS16	1st Floor	Electrical 123	Storage Areas	501 \$			4' Acrylic Wrap 32'	T802E	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1	N	No Retrofit - Payback/Budget	No Retrofit Proposed	1		0 N/A	0	63	2 261	0.1	0.1	16 16	0.00	.0 0	0	0 0	0 \$ -
601 Fire Station Bldg	09.02-FS16	1st Floor	Laundry 122	Halls & common areas	704 \$3			4' Acrylic Wrap 32'	T802E	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2	L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA LED A19 Bypass Lamp Upgrade, (1) E26 base lamp with	2		0 Driver	2	30	4 1460	0.1	0.1 1	84 88	0.07	.8 96	0	0 5	101 \$ 12
602 Fire Station Bldg	09.02-FS16	1st Floor	Dorm 119	Bedroom, Housing Authority	701 \$			Wall Bracket 60	A01	Wall Bracket / Incandescent, A lamp / N/A	1	L17	Retrofit Lamp	internal driver, 9W each, 800+ delivered lumens, Sylvania: A19 9W DIM		Wall	LED Integral Driver	1	9	1 365	0.1	0.0	22 3	0.05		0	0 1	20 \$ 6
603 Fire Station Bldg	09.02-FS16	1st Floor	Dorm 119	Bedroom, Housing Authority	706 \$			2x4 Prismatic 32	T802E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1	L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	1	Recessed	LED Lamp and Driver	2	30	2 2190	0.1	0.0 1	38 66	0.03 0	1.4 72	0	0 4	76 \$ 8
604 Fire Station Bldg	09.02-FS16	1st Floor	Dorm 111	Bedroom, Housing Authority	701 \$			Wall Bracket 50	MR16	Wall Bracket / Halogen, MR16 / Dimming, Magnetic	1	L22	Retrofit Lamp	LED MR16 Bypass Lamp Upgrade, (1) GU5.3 base lamp with internal driver operates on 12V power, 9W each, 700+ delivered lumens, Sylvania: MR16 9W DIM	1	Wall	LED Integral Driver	1	9	1 365	0.1	0.0	18 3	0.04 0).5 15	0	0 1	16 \$ 5
605 Fire Station Bldg	09.02-FS16	1st Floor	Dorm 111	Bedroom, Housing Authority	706 \$			2x4 Prismatic 32	T802E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1	L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	1	Recessed	LED Lamp and Driver	2	30	2 2190	0.1	0.0 1	38 66	0.03	3.4 72	0	0 4	76 \$ 8
606 Fire Station Bldg	09.02-FS16	1st Floor	Womans Locker 110	Gym lockers	712 \$			Recessed Downlight 75	A01	Recessed Downlight / Incandescent, A lamp /	2	L18	Retrofit Lamp	LED A19 Bypass Lamp Upgrade, (1) E26 base lamp with internal driver, 12W each, 1100+ delivered lumens, Sylvania: A19 12W DIM	21	Recessed	LED Integral Driver	1	12	2 4380	0.2	0.0 6	57 105	0.13	1.5 552	0	-2 29	581 \$ 45
607 Fire Station Bldg	09.02-FS16	1st Floor	Womans Locker 110	Gym lockers	712 ¢			4' Acrylic Wrap 32'		4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1	12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	1		LED Lamp and 0 Driver	2	30	2 4380	0.1	0.0	76 131	0.03	145	0	-1 8	152 \$ 12
					712 4					1x4 Paracube / 32W Fluorescent, 4'-0" T8 /				LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-			LED Lamp and			2 4380	0.1	0.0		0.03				
608 Fire Station Bldg	09.02-FS16	1st Floor	Womans Locker 110	Restrooms	712 \$			1x4 Paracube 32		Electronic, T8 Direct/Indirect / 17W Fluorescent, 2'-0" T8 /	1		Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA LED 2FT T8 Bypass lamp Upgrade, (2) lamp, 18W (system), 2200 delivered lumens, SYLVANIA		Wall	LED Integral	2	30	4300	0.1	0.0 2	/6 131		.4 145	U	-1 8	152 \$ 12
609 Fire Station Bldg	09.02-FS16	1st Floor	Womans Locker 110	Restrooms	712 \$			Direct/Indirect 17		Electronic, T8 2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /		L8-2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-		Wall	LED Lamp and	2	18	2 4380	0.0	0.0 1	58 79	0.02 0	.2 79	0	0 4	83 \$ 6
610 Fire Station Bldg	09.02-FS16	1st Floor	Exercise 109	Gyms	706 \$3			2x4 Prismatic 32	T802E	Electronic, T8 Recessed Downlight / Compact Fluorescent,	4	L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	41	Recessed	Driver	2	30	8 2190	0.3	0.1 5	52 263	0.13	.6 289	0	-1 15	304 \$ 30
611 Fire Station Bldg	09.02-FS16	1st Floor	Janitor 108	Janitor Closet	701 \$				CFL02	26W Triple / N/A Undercabinet / 25W Fluorescent, 3'-0" T8 /	1	N	Payback/Budget	No Retrofit Proposed	1	Recessed	N/A	0	60	2 365	0.1	0.1	22 22	0.00	.0 0	0	0 0	0 \$ -
612 Fire Station Bldg	09.02-FS16	1st Floor	Kitchen / Dining 105 & 106	Kitchen	710 \$			Undercabinet 25	T802E	Electronic, T8	1	L9-2	Retrofit Lamp	LED 3FT T8 Bypass Lamp Upgrade, (2) lamp, 24W (system), 1600+ delivered lumens, SYLVANIA	1	Surface	LED Integral Driver	1	12	1 3650	0.0	0.0 1	64 44	0.03 0	.4 120	0	0 6	127 \$ 10
613 Fire Station Bldg	09.02-FS16	1st Floor	Kitchen / Dining 105 & 106	Kitchen	710 \$			Undercabinet 32	T802E	Undercabinet / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1	L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA LED PL Bypass Lamp Upgrade, (2) Horizontal mount lamp with	1	Surface	LED Lamp and Driver	2	30	2 3650	0.1	0.0 2	30 110	0.03 0	.4 120	0	0 6	127 \$ 10
614 Fire Station Bldg	09.02-FS16	1st Floor	Kitchen / Dining 105 & 106	Kitchen	710 \$			Recessed Downlight 260	CFL02	Recessed Downlight / Compact Fluorescent, 26W Triple / N/A	6	L15	Retrofit Lamp	internal driver and remove existing ballast, 8W each, 900 delivered lumens, GREEN CREATIVE: PL H 8W BYP	6	Recessed	LED Integral Driver	2	16	12 3650	0.4	0.1 1,3	14 350	0.26	3.2 964	0	-4 51	1,015 \$ 83
615 Fire Station Bldg	09.02-FS16	1st Floor	Kitchen / Dining 105 & 106	Kitchen	710 \$\$			Direct/Indirect 32	T815E	Direct/Indirect / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2	L3-5	Retrofit Lamp	LED 4FT T8 Lamp and Driver Upgrade, (15) lamps with (5) 3- lamp driver, 45W (system), 6000+ delivered lumens, SYLVANIA	2	Pendant	LED Lamp and Driver	15	225	30 3650	0.9	0.5 3,3	95 1,643	0.48	.8 1,752	0	-7 93	1,845 \$ 152
616 Fire Station Bldg	09.02-FS16	1st Floor	Public Toilet 103	Restrooms, private	701 \$			1x4 Paracube 32	T802E	1x4 Paracube / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1	N	No Retrofit - Payback/Budget	No Retrofit Proposed	1	Wall	N/A	0	63	2 365	0.1	0.1	23 23	0.00	1.0 0	0	0 0	0 \$ -
617 Fire Station Bldg	09.02-FS16	1st Floor	Lobby 101	Halls & common areas	713 \$			Recessed Downlight 751	R01	Recessed Downlight / Incandescent, R lamp / N/A	1	L19HO	Retrofit Lamp	LED PAR30 Bypass Lamp Upgrade, (1) E26 base lamp with internal driver, 13W each, 1050+ delivered lumens, Sylvania: Par30 13W DIM	1	Recessed	LED Integral Driver	1	13	1 4745	0.1	0.0 3	56 62	0.06).7 294	0	-1 16	310 \$ 24
618 Fire Station Bidg	09.02-FS16	1st Floor	Lobby 101	Halls & common areas	713 \$			General 32	T802E	General / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1	L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	1	Chain	LED Lamp and Driver	2	30	2 4745	0.1	0.0 2	99 142	0.03	0.4 157	0	-1 8	165 \$ 13
619 Fire Station Bldg	09.02-FS16	1st Floor	Lobby 101	Halls & common areas	713 \$			Sconce 18	CFL01	Sconce / Compact Fluorescent, 18W PL / N/A	1	L13	Retrofit Lamp	LED PL Bypass Lamp Upgrade, (1) Vertical mount lamp with internal driver and remove existing ballast, 5.5W each, 600 delivered lumens, GREEN CREATIVE: PL V 5.5W HYBM	1	Wall	LED Integral Driver	1	6	1 4745	0.0	0.0	90 26	0.01 0	0.2 64	0	0 3	67 \$ 5
620 Fire Station Bldg	09.02-FS16	1st Floor	Garage 127	24 Hour Areas	713 \$3			8' Industrial		8' Industrial w/reflectors / 95W Fluorescent, 8'- 0" T12, HO / Standard Magnetic, T12	15	144	New Fixture	LED Linear HIBAY Fixture, 95W, 15,000 delivered lumens, lens and wireguard			LED Fixture	1	95	15 4745	3.4	1.4 16.1	57 6.762	1.98 2		0	-35 501	9,896 \$ 756
										4' Industrial w/reflectors / 60W Fluorescent, 4- 0" T12, HO / Standard Magnetic, T12, No PCB's				LED 4FT Strip Fixture, surface/chain mounting, 47W, 6200														
621 Fire Station Bldg	09.02-FS16	1st Floor	Garage 127	Bedroom, Housing	712 \$						1	L41	New Fixture	delivered lumen		Chain	LED Fixture	1	4/	1 4380	0.1	0.0 5	206		1.0 368		-1 20	388 \$ 30
	09.02-FS16	1st Floor	Dorm Rm 112	Authority Bedroom, Housing	701 \$			Wall Bracket LE		Wall Bracket / LED Fixture / LED Driver 2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /	1	N	No Retrofit - LED	No Retrofit Proposed LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-		Wall	N/A LED Lamp and	0	12	1 365	0.0	0.0	4 4	0.00	.0 0	0	0 0	0 \$ -
623 Fire Station Bldg	09.02-FS16	1st Floor	Dorm Rm 112	Authority Bedroom, Housing	706 \$			2x4 Prismatic 32		Electronic, T8 Wall Bracket / Halogen, MR16 / Dimming,	1	L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA LED MR16 Bypass Lamp Upgrade, (1) GU5.3 base lamp with	1	Recessed	Driver LED Integral	2	30	2 2190	0.1	0.0 1	38 66	0.03 0	.4 72	0	0 4	76 \$ 8
624 Fire Station Bldg	09.02-FS16	1st Floor	Dorm Rm 118	Authority	701 \$			Wall Bracket 50	MR16	Magnetic	1	L22	Retrofit Lamp	Internal driver operates on 12V power, 9W each, 700+ delivered lumens, Sylvania: MR16 9W DIM	1	Wall	Driver	1	9	1 365	0.1	0.0	18 3	0.04	.5 15	0	0 1	16 \$ 5
625 Fire Station Bldg	09.02-FS16	1st Floor	Dorm Rm 118	Bedroom, Housing Authority	702 \$			4' Acrylic Wrap 32'	T802E	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1	L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA LED PAR30 Bypass Lamp Upgrade, (1) E26 base lamp with	1	Surface	LED Lamp and Driver	2	30	2 730	0.1	0.0	46 22	0.03 0	.4 24	0	0 1	25 \$ 5
626 Fire Station Bldg	09.02-FS16	1st Floor	Dorm Rm 117	Bedroom, Housing Authority	701 \$			Wall Bracket 60	PAR01	Wall Bracket / Incandescent, PAR lamp / N/A	1	L19	Retrofit Lamp	internal driver, 10W each, 800+ delivered lumens, Sylvania: Par30 10W DIM	1	Wall	LED Integral Driver	1	10	1 365	0.1	0.0	22 4	0.05	.6 18	0	0 1	19 \$ 6
627 Fire Station Bldg	09.02-FS16	1st Floor	Dorm Rm 117	Bedroom, Housing Authority	702 \$			2x4 Prismatic 32	T802E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1	L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA LED PAR30 Bypass Lamp Upgrade, (1) E26 base lamp with	1	Recessed	LED Lamp and Driver	2	30	2 730	0.1	0.0	46 22	0.03 0	.4 24	0	0 1	25 \$ 5
628 Fire Station Bldg	09.02-FS16	1st Floor	Dorm Rm 116	Bedroom, Housing Authority	701 \$			Wall Bracket 60	PAR01	Wall Bracket / Incandescent, PAR lamp / N/A	1	L19	Retrofit Lamp	LED PAR30 Bypass Lamp Upgrade, (1) E26 base lamp with internal driver, 10W each, 800+ delivered lumens, Sylvania: Par30 10W DIM	1	Wall	LED Integral Driver	1	10	1 365	0.1	0.0	22 4	0.05	0.6 18	0	0 1	19 \$ 6
629 Fire Station Bldg	09.02-FS16	1st Floor	Dorm Rm 116	Bedroom, Housing Authority	702 \$			2x4 Prismatic 32	T802E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1	L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	1	Recessed	LED Lamp and Driver	2	30	2 730	0.1	0.0	46 22	0.03 0	1.4 24	0	0 1	25 \$ 5
630 Fire Station Bldg	09.02-FS16	1st Floor	Dorm Rm 115	Bedroom, Housing Authority	701 \$			Wall Bracket 50	MR16	Wall Bracket / Halogen, MR16 / Dimming, Magnetic	1	L22	Retrofit Lamp	LED MR16 Bypass Lamp Upgrade, (1) GU5.3 base lamp with internal driver operates on 12V power, 9W each, 700+ delivered lumens, Sylvania: MR16 9W DIM	1	Wall	LED Integral Driver	1	9	1 365	0.1	0.0	18 3	0.04 0).5 15	0	0 1	16 \$ 5
631 Fire Station Bldg	09.02-FS16	1st Floor	Dorm Rm 115	Bedroom, Housing Authority	702 \$			2x4 Prismatic 32	T802E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1	L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	1	Recessed	LED Lamp and Driver	2	30	2 730	0.1	0.0	46 22	0.03).4 24	0	0 1	25 \$ 5
632 Fire Station Bldg		1st Floor	Dorm Rm 114	Bedroom, Housing Authority	701 \$			Wall Bracket 50	MR16	Wall Bracket / Halogen, MR16 / Dimming, Magnetic	,	L22	Retrofit Lamp	LED MR16 Bypass Lamp Upgrade, (1) GU5.3 base lamp with internal driver operates on 12V power, 9W each, 700+ delivered lumens, Sylvania: MR16 9W DIM		Wall	LED Integral Driver	1	9	1 365	0.1	0.0	18 3	0.04 0	0.5 15	0	0 1	16 \$ 5
SSA FILE Station Bldg	59.02-1 310	15t 11001	50111 Kill 114	Muthonity	1013			SUI DI aCKEL 501		ringinette	1		Netrone Lamp	denvereu lumens, sylvania, MR10 9W DIM	1		Silvei	1	2	4 305	0.1	0.0		0.04 (.5 15			10 9 5



					·		Exist	na			Propos	ad				r			Energy			
											Propos	Mounting	(if	Watts					Energy	Heating Heating	Cooling Net Wh	Net Energy
ID Building	FIM Name	Floor/General Area	Room Name	ASHRAE Space Types	Time Code Switching	Fixture Schedule	Fixture Type	Description	# of Fixtures	Retrofit Type Fixture Code (Current Scope)	Description	# of from Fixtures existing)	Lamp Type	# of Lamps per per Fixture Fixture	Øperating	Existing Propos	sed Existing kWh kWh			er Penalty Penalt	ng Cooling Net kWh ty Credit Savings per ns) (kWh) Year	er Savings per Year
(2) 5 - 0 - 1 - 01	09.02-FS16	1st Floor	Dorm Rm 114	Bedroom, Housing Authority	703.6		2x4 Prismatic 32T802E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8		L2 Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	A 1 Recessed	LED Lamp and Driver	2 20	2 730	0.1		22 0.03	0.4	24		25 \$ 5
633 Fire Station Bldg					702 \$			2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /			LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-		LED Lamp and	2 50			0.0 40			24 0		
634 Fire Station Bldg	09.02-FS16	1st Floor	Hall 113	Halls & common areas	712 \$3		2x4 Prismatic 32T802E	Electronic, T8 2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /	4	L2 Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	A 4 Recessed	LED Lamp and	2 30	8 4380	0.3	0.1 1,104	526 0.13	1.6 5	78 0	-2 31 60	i09 \$ 47
635 Fire Station Bldg	09.02-FS16	1st Floor	Hall 120	Halls & common areas	712 \$3		2x4 Prismatic 32T802E	Electronic, T8	1	L2 Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	A 1 Recessed	Driver	2 30	2 4380	0.1	0.0 276	131 0.03	0.4 1	45 0	-1 8 15	.52 \$ 12
636 Fire Station Bldg	09.02-FS16	1st Floor	Hall 120	Halls & common areas	712 \$		2x4 Prismatic 32T8028	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	6	L2 Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	A 6 Recessed	LED Lamp and Driver	2 30	12 4380	0.4	0.2 1,656	788 0.20	2.4 8	67 0	-3 46 91	13 \$ 71
637 Fire Station Bldg	09.02-FS16	1st Floor	Hall 133, 135, 121	Halls & common areas	713 \$		Undercabinet 32T802E	Undercabinet / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1	L2 Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	A 1 Surface	LED Lamp and Driver	2 30	2 474	0.1	0.0 299	142 0.03	0.4 1	57 0	-1 8 16	.65 \$ 13
638 Fire Station Bldg	09.02-FS16	1st Floor	Hall 133, 135, 121	Halls & common areas	713 \$3		2x4 Prismatic 32T802E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	6	L2 Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	A 6 Recessed	LED Lamp and Driver	2 30	12 474	0.4	0.2 1,794	854 0.20	2.4 9	40 0	-3 50 9f	190 \$ 76
639 Fire Station Bldg	09.02-FS16	1st Floor	Exterior	Outside Areas	711 PC		Wallpack 70MH01	Wallpack / MH 70W / HID Magnetic	2	No Retrofit - N Payback/Budget	No Retrofit Proposed	2 Wall	N/A	0 90	2 401	0.2	0.2 723	723 0.00	0.0	0 0	0 0	0 s -
							Recessed											96 0.00				
640 Fire Station Bldg	09.02-FS16	1st Floor	Exterior	Outside Areas	711 PC		Downlight LED	Recessed Downlight / LED Fixture / LED Driver Wallpack / Compact Fluorescent, 26W Triple /	2	N No Retrofit - LED	No Retrofit Proposed	2 Recessed	N/A	0 12	2 401:	0.0	0.0 96		0.0			0 \$ -
641 Fire Station Bldg	09.02-FS16	1st Floor	Exterior	Outside Areas	711 PC		Wallpack 26CFL01	N/A	2	N Payback/Budget	No Retrofit Proposed	2 Wall	N/A	0 30	2 401	0.1	0.1 241	241 0.00	0.0	0 0	0 0	0 \$ -
642 Fire Station Bldg	09.02-FS16	1st Floor	Exterior	Outside Areas	711 PC		Downlight 70HPS0	Recessed Downlight / HPS 70W / HID Magnetic	6	N Payback/Budget	No Retrofit Proposed	6 Recessed	N/A	0 86	6 401	0.5	0.5 2,072 2	072 0.00	0.0	0 0	0 0	0 \$ -
643 Fire Station Bldg	09.02-FS16	1st Floor	Exterior	Outside Areas	711 PC		Wallpack LED	Wallpack / LED Fixture / LED Driver	1	N No Retrofit - LED	No Retrofit Proposed	1 Wall	N/A	0 12	1 401	0.0	0.0 48	48 0.00	0.0	0 0	0 0	0\$-
644 Fire Station Bldg	09.02-FS16	1st Floor	Exterior	Outside Areas	711 PC		Cylinder 70MH01	Cylinder / MH 70W / HID Magnetic	3	No Retrofit - Payback/Budget	No Retrofit Proposed	3 Surface	N/A	0 90	3 401	0.3	0.3 1,084 1	084 0.00	0.0	0 0	0 0	0\$-
645 Fire Station Bldg	09.02-FS16	1st Floor	Exterior	Outside Areas	711 PC		Area 250MH0	Area / MH 250W / HID Magnetic	8	No Retrofit - Payback/Budget	No Retrofit Proposed	8 Pole	N/A	0 295	8 401	2.4	2.4 9,475 9	475 0.00	0.0	0 0	0 0	0 \$ -
								Vanity / 14W, Fluorescent, 22" T5 / Program														· · ·
647 Main Building	09.01-FS17	2nd Floor	Womans 204	Restrooms, private	706 \$0		Vanity 14T502 Recessed	Rapid Start T5HO Recessed Downlight / Compact Fluorescent,	1	N Retrofit Lamp	No Retrofit Proposed LED PL Bypass Lamp Upgrade, (1) Vertical mount lamps with internal driver and remove existing ballast, 8.5W each, 1000	1 Wall	N/A	0 28	2 2190	0.0	0.0 61	61 0.00	0.0	0 0	0 0	0 \$ -
648 Main Building	09.01-FS17	2nd Floor	Womans 204	Restrooms, private	704 \$O		Downlight 32CFL01	32W Triple / N/A	1	L16 Retrofit Lamp	delivered lumens, GREEN CREATIVE: PL V 8.5W BYP	1 Recessed	Driver	1 9	1 1460	0.0	0.0 48	12 0.02	0.3	36 0	0 2 3	38 \$ 5
649 Main Building	09.01-FS17	2nd Floor	Mens 203	Restrooms, private	706 \$O		Vanity 14T502	Vanity / 14W, Fluorescent, 22" T5 / Program Rapid Start T5HO	1	N Retrofit Lamp	No Retrofit Proposed LED PL Bypass Lamp Upgrade, (1) Vertical mount lamps with	1 Wall	N/A	0 28	2 2190	0.0	0.0 61	61 0.00	0.0	0 0	0 0	0\$-
650 Main Building	09.01-FS17	2nd Floor	Mens 203	Restrooms, private	704 \$O		Recessed Downlight 32CFL01	Recessed Downlight / Compact Fluorescent, 32W Triple / N/A	1	L16 Retrofit Lamp	Internal driver and remove existing ballast, 8.5W each, 1000 delivered lumens, GREEN CREATIVE: PL V 8.5W BYP	1 Recessed	LED Integral Driver	1 9	1 1460	0.0	0.0 48	12 0.02	0.3	36 0	0 2 5	38 \$ 5
651 Main Building	09.01-FS17	1st Floor	Hall 113	Halls & common areas	715 \$3		4' Acrylic Wrap 32T802E	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2	L2 Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	A 2 Surface	LED Lamp and Driver	2 30	4 547!	0.1	0.1 690	329 0.07	0.8 3	61 0	-1 19 31	81 \$ 28
652 Main Building	09.01-FS17	1st Floor	Hall 113		715		Recessed Downlight 32CFL03	Recessed Downlight / Compact Fluorescent, 32W Triple / N/A	2	L14 Retrofit Lamp	LED PL Bypass Lamp Upgrade, (1) Horizontal mount lamp with internal driver and remove existing ballast, 8W each, 900 delivered lumens, GREEN CREATIVE: PL H 8W BYP	2 Recessed	LED Integral	1 8	2 547	0.1	0.0 361	88 0.05	0.6 2	74 0	-1 15 2:	188 \$ 21
								Indirect / 32W Fluorescent, 4'-0" T8 /			LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-		LED Lamp and		2 50	0.1	0.0					
653 Main Building	09.01-FS17	1st Floor	Hall 113	Halls & common areas	715 \$3		Indirect 32T802E	Electronic, T8 Sconce / Compact Fluorescent, 42W Triple,	3	L2 Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI LED PL Bypass Lamp Upgrade, (2) Horizontal mount lamp with internal driver and remove existing ballast, 15.5W each, 1750		LED Integral	2 30	6 547!	0.2	0.1 1,035	493 0.10	1.2 5	42 0	-2 29 57	571 \$ 42
654 Main Building	09.01-FS17	1st Floor	Hall 105, 106	Halls & common areas	712 \$3	F26	Sconce 42CFL02	Vertical / N/A	3	L14HO2 Retrofit Lamp	delivered lumens, GREEN CREATIVE: PL H 15.5W BYP	3 Wall	Driver	2 30	6 4380	0.3	0.1 1,156	394 0.17	2.1 7	62 0	-3 41 80	103 \$ 63
655 Main Building	09.01-FS17	1st Floor	Hall 105, 106	Halls & common areas	710 \$	15	Display 10H01	Display / Halogen, 10W Bi-Pin / N/A	4	N Retrofit Lamp	No Retrofit Proposed LED 4FT T8 Lamp and Bi-Level Driver/Ballast Upgrade, (2)	4 Surface	N/A	0 11	4 3650	0.0	0.0 161	161 0.00	0.0	0 0	0 0	0\$-
656 Main Building	09.01-FS17	1st Floor	Hall 105, 106	Halls & common areas	715 \$		2x4 Troffer 32T802E	2x4 Troffer / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1	L2 Bi-level Lamp and Driver	lamps with (1) 2-lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	1 Recessed	LED Lamp and Driver	2 32	2 547	0.1	0.0 345	175 0.03	0.4 1	70 0	-1 9 17	.79 \$ 13
657 Main Building	09.01-FS17	1st Floor	Hall 105, 106	Halls & common areas	715	F6X, F5X	Recessed Downlight 32CFL01	Recessed Downlight / Compact Fluorescent, 32W Triple / N/A	3	L14A Retrofit Lamp	LED PL Lamp Upgrade, (1) Horizontal mount lamp using existing ballast, 8.5W each, 900 delivered lumens, GREEN CREATIVE: PL H 8W DIR	3 Recessed	LED Fixture	1 9	3 5475	0.1	0.0 542	140 0.07	0.9 4	02 0	-1 21 4	24 \$ 31
658 Main Building	09.01-FS17	1st Floor	Hall 105, 106	Halls & common areas	715	F5	Recessed Downlight 32CFL01	Recessed Downlight / Compact Fluorescent, 32W Triple / N/A	1	L14 Retrofit Lamp	LED PL Bypass Lamp Upgrade, (1) Horizontal mount lamp with internal driver and remove existing ballast, 8W each, 900 delivered lumens, GREEN CREATIVE: PL H 8W BYP	1 Recessed	LED Integral Driver	1 8	1 547	0.0	0.0 181	44 0.03	0.3 1	37 0		44 \$ 11
	09.01-FS17						Recessed	Recessed Downlight / Compact Fluorescent,			LED PL Bypass Lamp Upgrade, (1) Vertical mount lamps with internal driver and remove existing ballast, 8.5W each, 1000		LED Integral					140 0.07				
659 Main Building	09.01-FS17	1st Floor	Hall 105, 106	Halls & common areas	715 \$	Fb	Downlight 32CFL01	32W Triple / N/A Indirect / 32W Fluorescent, 4'-0" T8 /	3	L16 Retrofit Lamp	delivered lumens, GREEN CREATIVE: PL V 8.5W BYP LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, Back-up	3 Recessed	LED Lamp and	1 9	3 547	0.1	0.0 542	140 0.07	0.9 4	02 0	-1 21 42	24 \$ 31
660 Main Building	09.01-FS17	1st Floor	Hall 122	Halls & common areas	715 \$		Indirect 32T802E	Electronic, T8 Indirect / 32W Fluorescent, 4'-0" T8 /	2	L2B (Battery)	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	2 Recessed	Driver	2 30	4 547	0.1	0.1 690	329 0.07	0.8 3	61 0	-1 19 38	81 \$ 28
661 Main Building	09.01-FS17	1st Floor	Hall 122	Halls & common areas	715 \$		Indirect 32T802E	Electronic, T8	2	L2 Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	A 2 Recessed	Driver	2 30	4 547	0.1	0.1 690	329 0.07	0.8 3	61 0	-1 19 38	31 \$ 28
662 Main Building	09.01-FS17	1st Floor	Tower 133	Storage Areas	702 \$3		Liquid-tight 32T802E	Liquid-tight / 32W Fluorescent, 4'-0" T8 / Electronic, T8	4	No Retrofit - Payback/Budget	No Retrofit Proposed	4 Surface	N/A	0 63	8 730	0.3	0.3 184	184 0.00	0.0	0 0	0 0	0 \$ -
663 Main Building	09.01-FS17	1st Floor	Bunker Storage 135	Storage Areas	702 \$0		4' Acrylic Wrap 32T802E	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	3	No Retrofit - Payback/Budget	No Retrofit Proposed	3 Surface	N/A	0 63	6 730	0.2	0.2 138	138 0.00	0.0	0 0	0 0	0\$-
664 Main Building	09.01-FS17	1st Floor	Wash/Dry 137, 138, 139	Storage Areas - Active	704 Wall		4' Acrylic Wrap 32T802E	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	3	L2 Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	A 3 Surface	LED Lamp and Driver	2 30	6 1460	0.2	0.1 276	131 0.10	1.2 1	45 0	-1 8 1!	.52 \$ 18
665 Main Building	09.01-FS17	1st Floor	Garage 130	24 Hour Areas	720 s		4' Acrylic Wrap 32T802E	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 /	2		LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI		LED Lamp and Driver	2 30	4 730	0.1	0.1 920	438 0.07	0.8 4	82 0		i07 \$ 35
							Recessed	Recessed Downlight / Compact Fluorescent.			LED PL Bypass Lamp Upgrade, (1) Vertical mount lamps with internal driver and remove existing ballast, 8.5W each, 1000 delivered lumens, GREEN CREATIVE: PL V 8.5W BYP		LED Integral									
666 Main Building	09.01-FS17	1st Floor	Garage 130	24 Hour Areas	720 \$			32W Triple / N/A	2	L16 Retrofit Lamp	delivered lumens, GREEN CREATIVE: PL V 8.5W BYP LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	2 Recessed	LED Lamp and	1 9	2 7300	0.1	0.0 482	124 0.05	0.6 3	58 0	-1 19 37	\$ 26
667 Main Building	09.01-FS17	1st Floor	Garage 130	24 Hour Areas	720 \$		Liquid-tight 32T802E	Electronic, T8	2	L2 Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	A 2 Surface	Driver	2 30	4 7300	0.1	0.1 920	438 0.07	0.8 4	82 0	-2 26 50	i07 \$ 35
668 Main Building	09.01-FS17	1st Floor	Garage 130	24 Hour Areas	720 \$		Undercabinet 32T801E		2	L10 Retrofit Lamp	LED 4FT T8 Bypass Lamp Upgrade, (1) lamp, 14W (system), 1800+ delivered lumens, SYLVANIA LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	2 Surface	LED Integral Driver	1 14	2 7300	0.1	0.0 438	204 0.03	0.4 2	34 0	-1 12 24	246 \$ 17
669 Main Building	09.01-FS17	1st Floor	Garage 130	24 Hour Areas	720 \$		2x4 Prismatic 32T8028	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	4	L2B Lamp and Driver (Battery)	lamp driver, 30W (system), 4300+ delivered lumens, Back-up battery, SYLVANIA	4 Recessed	LED Lamp and Driver	2 30	8 7300	0.3	0.1 1,840	876 0.13	1.6 9	64 0	-4 51 1,01	15 \$ 71
670 Main Building	09.01-FS17	1st Floor	Garage 130	24 Hour Areas	720 \$		2x4 Prismatic 32T802E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	28	L2 Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	A 28 Recessed	LED Lamp and Driver	2 30	56 7300	1.8	0.8 12,877 6	132 0.92	11.1 6,7	45 0	-25 360 7,10	.05 \$ 495
671 Main Building	09.01-FS17	1st Floor	Garage 130	24 Hour Areas	720 \$		2x4 Troffer 32T8028	2x4 Troffer / 32W Fluorescent, 4'-0" T8 /	13		LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI		LED Lamp and Driver	2 30	26 730	0.8	0.4 5,979 2	847 0.43	5.1 3,1	32 0	-12 167 3,29	199 \$ 230
								2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /	13	No Retrofit -					/300	0.0	5,575 2				3,29	
672 Main Building	09.01-FS17	1st Floor	EMS 128	Storage Areas	702 \$0		2x4 Prismatic 32T8028 Recessed	Recessed Downlight / Compact Fluorescent,	1	N Payback/Budget	No Retrofit Proposed	1 Recessed	N/A	0 63	2 730	0.1	0.1 46	46 0.00		0 0	0 0	<u>uş -</u>
673 Main Building	09.01-FS17	1st Floor	Closet 104A	Storage Areas	702 \$			32W Triple / N/A	1	N Payback/Budget	No Retrofit Proposed	1 Recessed	N/A	0 33	1 730	0.0	0.0 24	24 0.00	0.0	0 0	0 0	0\$-
674 Main Building	09.01-FS17	1st Floor	Laundry 125	Storage Areas	704 \$O		2x4 Prismatic 32T802E		1	L2 Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	A 1 Recessed	LED Lamp and Driver	2 30	2 1460	0.1	0.0 92	44 0.03	0.4	48 0	0 3 5	51 \$ 6
675 Main Building	09.01-FS17	1st Floor	Additional Sleeping Area	Bedroom, Housing Authority	706 \$		4' Acrylic Wrap 32T802E	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	6	L2 Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI LED 4FT T8 Lamp and Dimmable Driver Upgrade, (2) lamps	A 6 Surface	LED Lamp and Driver	2 30	12 2190	0.4	0.2 828	394 0.20	2.4 4	34 0	-2 23 45	157 \$ 45
676 Main Building	09.01-FS17	1st Floor	Sleeping 116	Bedroom, Housing Authority	706 \$D		2x4 Troffer 32T802E	2x4 Troffer / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1	L2 DIM Lamp and Driver	LED 4FT T8 Lamp and Dimmable Driver Upgrade, (2) lamps with (1) 2-lamp driver, 30W (system), 4300+ delivered lumen: SYLVANIA	5, 1 Recessed	LED Lamp and Driver	2 32	2 2190	0.1	0.0 138	70 0.03	0.4	68 0	0 4 7	72 \$ 7



								Exis	ing			Propos	ed				Energ	v	
								Lamp					Mounting (different	if	Watts		kW	kWh Heating Heating	
ID Building		FIM Name	Floor/General Area	Room Name	ASHRAE Space Types Time C	Code Switching	Fixture Schedule	Fixture Type Type	Description	# of Fixtures Fixture Code	Retrofit Type (Current Scope)	Description	# of from Fixtures existing)	# of Lamp Lamp Type per Fixtur	ps per Operat re Fixture # of Lamps Hours	ng Existing Proposed kW kW Existin	Proposed kW Savings Savings kWh kWh per Month per Year		v Credit Savings per Savings per s) (kWh) Year Year
677 Main Buik	ding	09.01-FS17	1st Floor	Sleeping 116	Bedroom, Housing Authority	706 \$D		LED	LED Fixture / LED Driver	1 N	No Retrofit - LED	No Retrofit Proposed	1 Wall	N/A	0 12 1	2190 0.0 0.0	26 26 0.00 0.0	0 0	0 0 0 \$ -
678 Main Buik	ding	09.01-FS17	1st Floor	Crew 104	Offices	708 \$		LED	LED Fixture / LED Driver	7 N	No Retrofit - LED	No Retrofit Proposed	7 Wall	N/A	0 12 7	2920 0.1 0.1	245 245 0.00 0.0	0 0	0 0 0 \$ -
679 Main Buik		09.01-FS17	1st Floor	Crew 104	Open Offices, existing sensor	708 \$O		2x4 Troffer 32T803	2x4 Troffer / 32W Fluorescent, 4'-0" T8 / Electronic, T8	3 L2 Bi-level	Lamp and Driver	LED 4FT T8 Lamp and Bi-Level Driver/Ballast Upgrade, (2) lamps with (1) 2-lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	3 Recessed	LED Lamp and Driver	2 22 6	2920 0.3 0.1	753 280 0.16 1.9	472 0	-2 25 498 \$ 44
	-							Recessed	Recessed Downlight / Compact Fluorescent,		No Retrofit -			Dive	2 32 0	2920 0.3 0.1		475 0	- <u>-</u>
680 Main Build	ding	09.01-FS17	1st Floor	Crew 104 Closet	Storage Areas	702 \$		Downlight 32CFL0	L 32W Triple / N/A Liquid-tight / 32W Fluorescent, 4'-0" T8 /	1 N	Payback/Budget	No Retrofit Proposed LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, Back-up	1 Recessed	LED Lamp and	0 33 1	730 0.0 0.0	24 24 0.00 0.0	0 0	0 0 0 \$ -
681 Main Buik	ding	09.01-FS17	Stairs	Stairs @ Garage Tower 133	Halls & common areas	715 \$		Liquid-tight 32T802	Electronic, T8	3 L2B	(Battery)	battery, SYLVANIA	3 Surface	Driver	2 30 6	5475 0.2 0.1	1,035 493 0.10 1.2	542 0	-2 29 571 \$ 42
682 Main Buik	ding	09.01-FS17	Stairs	Stairs @ Garage Tower 133	Halls & common areas	715 \$		Liquid-tight 32T802		9 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI LED PL Lamp Upgrade, (2) Vertical mount lamp using existing	A 9 Surface	LED Lamp and Driver	2 30 18	5475 0.6 0.3	3,104 1,478 0.30 3.6	1,626 0	-6 87 1,713 \$ 126
683 Main Buik	ding	09.01-FS17	Stairs	Stairs Central	Halls & common areas	712 \$3		Decorative Pendant 42CFL0	Decorative Pendant / Compact Fluorescent, 42W Triple, Vertical / N/A	2 L16A2	Retrofit Lamp	ballast, 17W each, 1000 delivered lumens, GREEN CREATIVE: PL V 17W BYP LED PL Lamp Upgrade, (2) Vertical mount lamp using existing	2 Pendant	LED Fixture	2 34 4	4380 0.2 0.1	771 298 0.11 1.3	473 0	-2 25 498 \$ 39
684 Main Buik	ding	09.01-FS17	Stairs	Stairs Central	Halls & common areas	715 \$3		Decorative Pendant 42CFLC	Decorative Pendant / Compact Fluorescent, 42W Triple, Vertical / N/A	1 L16A2	Retrofit Lamp	ballast, 17W each, 1000 delivered lumens, GREEN CREATIVE: PL V 17W BYP	1 Pendant	LED Fixture	2 34 2	5475 0.1 0.0	482 186 0.05 0.6	296 0	-1 16 311 \$ 23
685 Main Build	ding	09.01-FS17	1st Floor	Riser Room 126	Storage Areas - Active	702 \$O		4' Acrylic Wrap 32T802	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 N	No Retrofit - Payback/Budget	No Retrofit Proposed	2 Surface	N/A	0 63 4	730 0.1 0.1	92 92 0.00 0.0	0 0	0 0 0 \$ -
686 Main Buik	diag	09.01-FS17	1st Floor	Fitness 109	Gyms	712 \$0		2x4 Troffer 32T803	2x4 Troffer / 32W Fluorescent, 4'-0" T8 /	9 L2 Bi-level	Lamp and Driver	LED 4FT T8 Lamp and Bi-Level Driver/Ballast Upgrade, (2) lamps with (1) 2-lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	9 Recessed	LED Lamp and Driver	2 32 18	4380 0.8 0.3	3.390 1.261 0.49 5.8	2,129 0	-8 114 2,242 \$ 175
	-								2x4 Troffer / 32W Fluorescent, 4'-0" T8 /			LED 4FT T8 Lamp and Bi-Level Driver/Ballast Upgrade, (2) lamps with (1) 2-lamp driver, 30W (system), 4300+ delivered		LED Lamp and					
687 Main Build	ding	09.01-FS17	1st Floor	Kitchen/Day Rm 107 & 108	Cafeteria 712L-D	\$0		2x4 Troffer 32T803 Recessed	Electronic, T8 Recessed Downlight / Compact Fluorescent,	10 L2 Bi-level	Lamp and Driver	LED PL Compatible Lamp Upgrade, (1) Vertical mount lamps with Dimmable internal driver. 8.5W each, 1000 delivered	10 Recessed	LED Integral	2 32 20	4380 0.9 0.3	3,767 1,402 0.54 6.5	2,365 0	-9 126 2,491 \$ 194
688 Main Build	ding	09.01-FS17	1st Floor	Kitchen/Day Rm 107 & 108	Cafeteria 712L-D	\$D		Downlight 32CFL0	32W Triple / N/A	6 L16 DIM	Retrofit Lamp	lumens,	6 Recessed	Driver	1 9 6	4380 0.2 0.1	867 223 0.15 1.8	644 0	-2 34 678 \$ 53
689 Main Buik	ding	09.01-FS17	1st Floor	Kitchen/Day Rm 107 & 108	Cafeteria 712L-D	\$		Undercabinet 17T801	Undercabinet / 17W Fluorescent, 2'-0" T8 / Electronic, T8	5 L8	Retrofit Lamp	LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 delivered lumens, SYLVANIA	5 Surface	LED Integral Driver	1 9 5	4380 0.1 0.0	394 197 0.05 0.5	197 0	-1 11 208 \$ 16
690 Main Buik	ding	09.01-FS17	1st Floor	Kitchen/Day Rm 107 & 108	Cafeteria 712L-D	\$		Undercabinet 32T801	Undercabinet / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1 L10	Retrofit Lamp	LED 4FT T8 Bypass Lamp Upgrade, (1) lamp, 14W (system), 1800+ delivered lumens, SYLVANIA	1 Surface	LED Integral Driver	1 14 1	4380 0.0 0.0	131 61 0.02 0.2	70 0	0 4 74 \$ 6
691 Main Buik	ding	09.01-FS17	1st Floor	Hall 110	Halls & common areas	715 \$		Recessed Downlight 32CFL0	Recessed Downlight / Compact Fluorescent, 32W Triple / N/A	1 L16	Retrofit Lamp	LED PL Bypass Lamp Upgrade, (1) Vertical mount lamps with internal driver and remove existing ballast, 8.5W each, 1000 delivered lumens, GREEN CREATIVE: PL V 8.5W BYP	1 Recessed	LED Integral Driver	1 9 1	5475 0.0 0.0	181 47 0.02 0.3	134 0	0 7 141 \$ 10
692 Main Buik	ding	09.01-FS17	1st Floor	Hall 110	Halls & common areas	715 \$		2x4 Troffer 32T802	2x4 Troffer / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1 L2B	Lamp and Driver (Battery)	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, Back-up battery, SYLVANIA	1 Recessed	LED Lamp and Driver	2 30 2	5475 0.1 0.0	345 164 0.03 0.4	181 0	-1 10 190 \$ 14
693 Main Build	diag	09.01-FS17	1st Floor	Hall 110	Halls & common areas	715 s		2x4 Troffer 32T802	2x4 Troffer / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 L2 Bi-level	Lamp and Driver	LED 4FT T8 Lamp and Bi-Level Driver/Ballast Upgrade, (2) lamps with (1) 2-lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	2 Recessed	LED Lamp and	2 32 4	5475 0.1 0.1	690 350 0.06 0.7	339 0	-1 18 358 \$ 26
									Sconce / 54W, Fluorescent, 4'-0" T5HO /		No Retrofit -			biite				555 0	1 10 550 4 10
694 Main Build	ding	09.01-FS17	1st Floor	Storage 113B	Storage Areas	702 \$		Sconce 54T502	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 /	1 N	Payback/Budget	No Retrofit Proposed	1 Wall	N/A	0 100 2	730 0.1 0.1	73 73 0.00 0.0	0 0	0 0 0 \$ -
695 Main Buik	ding	09.01-FS17	1st Floor	Storage 113B	Storage Areas	702 \$		4' Acrylic Wrap 32T802	Electronic, T8	1 N	Payback/Budget	No Retrofit Proposed	1 Surface	N/A	0 63 2	730 0.1 0.1	46 46 0.00 0.0	0 0	0 0 0 \$ -
696 Main Buik	ding	09.01-FS17	1st Floor	Shop Cascade 134	Storage Areas	702 \$		Undercabinet 32T801	Undercabinet / 32W Fluorescent, 4'-0" T8 / Electronic, T8	4 N	No Retrofit - Payback/Budget	No Retrofit Proposed	4 Surface	N/A	0 30 4	730 0.1 0.1	88 88 0.00 0.0	0 0	0 0 0 \$ -
697 Main Build	ding	09.01-FS17	1st Floor	Shop Cascade 134	Storage Areas - Active	702 \$O		4' Acrylic Wrap 32T802	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 N	No Retrofit - Payback/Budget	No Retrofit Proposed	2 Surface	N/A	0 63 4	730 0.1 0.1	92 92 0.00 0.0	0 0	0 0 0 \$ -
698 Main Buik	ding	09.01-FS17	1st Floor	Storage 129	Storage Areas - Active	702 \$O		2x4 Prismatic 32T802	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	3 N	No Retrofit - Payback/Budget	No Retrofit Proposed	3 Recessed	N/A	0 63 6	730 0.2 0.2	138 138 0.00 0.0	0 0	0 0 0 \$ -
699 Main Buik	ding	09.01-FS17	1st Floor	Electrical 123	Storage Areas	701 \$O		4' Industrial w/reflectors 32T802	4' Industrial w/reflectors / 32W Fluorescent, 4'- 0" T8 / Electronic, T8	1 N	No Retrofit - Payback/Budget	No Retrofit Proposed	1 Surface	N/A	0 63 2	365 0.1 0.1	23 23 0.00 0.0	0 0	0 0 0 \$ -
700 Main Buik		09.01-FS17	1st Floor	Hall 124	Halls & common areas	715 \$3		Sconce LED	Sconce / LED Fixture / LED Driver	3 N	No Retrofit - LED	No Retrofit Proposed	3 Wall	N/A	0 12 3	5475 0.0 0.0	197 197 0.00 0.0	0 0	0 0 0 5 -
						215 42		Recessed	Recessed Downlight / Compact Fluorescent,	3 L16		LED PL Bypass Lamp Upgrade, (1) Vertical mount lamps with internal driver and remove existing ballast, 8.5W each, 1000 delivered lumens, GREEN CREATIVE: PL V 8.5W BYP		LED Integral		5475 0.1 0.0	542 140 0.07 0.9		
701 Main Build	-	09.01-FS17	1st Floor	Hall 124	Halls & common areas	715 \$3		Downlight 32CFL0	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 /	3 L16	Retrofit Lamp	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	3 Recessed	LED Lamp and	1 9 3	5475 0.1 0.0		402 0	-1 21 424 \$ 31
702 Main Build	ding	09.01-FS17	1st Floor	Womans 111	Restrooms, existing	704 \$O		4' Acrylic Wrap 32T802	Electronic, T8 Vanity / 14W, Fluorescent, 22" T5 / Program	1 L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	A 1 Surface	Driver	2 30 2	1460 0.1 0.0	92 44 0.03 0.4	48 0	0 3 51 \$ 6
703 Main Buik	ding	09.01-FS17	1st Floor	Womans 111	sensor	704 \$O		Vanity 14T502	Rapid Start T5HO	2 N	Retrofit Lamp	No Retrofit Proposed	2 Wall	N/A	0 28 4	1460 0.1 0.1	82 82 0.00 0.0	0 0	0 0 0 \$ -
704 Main Build	ding	09.01-FS17	1st Floor	Womans 111	Restrooms, existing sensor	704 \$O		Strip 25T801	Strip / 25W Fluorescent, 3'-0" T8 / Electronic, T8	1 L5K	Lamp and Driver	LED 3FT T8 Lamp and Driver Upgrade, (1) lamps with (1) 1- lamp driver, 11W (system), 1600+ delivered lumens, SYLVANI LED 4FT T8 Lamp and Driver Upgrade, (1) lamp with (1) 1-	A 1 Surface	LED Lamp and Driver	2 20 2	1460 0.0 0.0	38 29 0.01 0.1	9 0	0 0 9 \$ 1
705 Main Buik	ding	09.01-FS17	1st Floor	Womans 111	Restrooms, existing sensor	704 \$O		Strip 32T801	Strip / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1 L1	Lamp and Driver	lamp driver, 15W (system), 2100+ delivered lumens, SYLVANIA:	1 Surface	LED Lamp and Driver	1 15 1	1460 0.0 0.0	44 22 0.02 0.2	22 0	0 1 23 \$ 3
706 Main Build	ding	09.01-FS17	1st Floor	Womans 111	Restrooms, existing sensor	704 \$O		Sconce LED	Sconce / LED Fixture / LED Driver	1 N	No Retrofit - LED	No Retrofit Proposed	1 Wall	N/A	0 12 1	1460 0.0 0.0	18 18 0.00 0.0	0 0	0 0 0 \$ -
707 Main Buik	ding	09.01-FS17	1st Floor	Womans 111	Restrooms, existing sensor	704 \$O		Recessed Downlight 32CFL0	Recessed Downlight / Compact Fluorescent, 32W Triple / N/A	4 L16	Retrofit Lamp	LED PL Bypass Lamp Upgrade, (1) Vertical mount lamps with internal driver and remove existing ballast, 8.5W each, 1000 delivered lumens, GREEN CREATIVE: PL V 8.5W BYP	4 Recessed	LED Integral Driver	1 9 4	1460 0.1 0.0	193 50 0.10 1.2	143 0	-1 8 151 \$ 18
708 Main Buik	-	09.01-FS17	1st Floor	Mens 112	Restrooms, existing sensor	704 \$O		Sconce LED	Sconce / LED Fixture / LED Driver	1 N	No Retrofit - LED	No Retrofit Proposed	1 Wall	N/A	0 12 1	1460 0.0 0.0	18 18 0.00 0.0	0 0	0 0 0 0
	-				Restrooms, existing				4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 /		Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, Back-up		LED Lamp and				0 0	
709 Main Buik	,	09.01-FS17	1st Floor	Mens 112	sensor Restrooms, existing	704 \$O		4' Acrylic Wrap 32T802	Electronic, T8	1 L2B	(Battery)	battery, SYLVANIA	1 Surface	Driver	2 30 2	1460 0.1 0.0	92 44 0.03 0.4	48 0	0 3 51 \$ 6
710 Main Buik	ding	09.01-FS17	1st Floor	Mens 112	sensor	704 \$O			4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANL LED PL Bypass Lamp Upgrade, (1) Vertical mount lamps with internal driver and remove existing ballast, 8.5W each, 1000	A 1 Surface	Driver	2 30 2	1460 0.1 0.0	92 44 0.03 0.4	48 0	0 3 51 \$ 6
711 Main Build	ding	09.01-FS17	1st Floor	Mens 112	Restrooms, existing sensor	704 \$O		Recessed Downlight 32CFL0	Recessed Downlight / Compact Fluorescent, 32W Triple / N/A	6 L16	Retrofit Lamp	delivered lumens, GREEN CREATIVE: PL V 8.5W BYP	6 Recessed	LED Integral Driver	1 9 6	1460 0.2 0.1	289 74 0.15 1.8	215 0	-1 11 226 \$ 27
712 Main Build	ding	09.01-FS17	1st Floor	Mens 112	Restrooms, existing sensor	704 \$O		Strip 17T801	Strip / 17W Fluorescent, 2'-0" T8 / Electronic, T8	1 L5	Lamp and Driver	LED 2FT T8 Lamp and Driver Upgrade, (1) lamp with (1) 1- lamp driver, 8W (system), 1200+ delivered lumens, SYLVANIA	1 Surface	LED Lamp and Driver	1 20 1	1460 0.0 0.0	26 29 0.00 0.0	-3 0	0 0 -3 \$ (0)
713 Main Buik	ding	09.01-FS17	1st Floor	Mens 112	Restrooms, existing sensor	704 \$O		Strip 32T801	Strip / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 L1	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (1) lamp with (1) 1- lamp driver, 15W (system), 2100+ delivered lumens, SYLVANIA:	2 Surface	LED Lamp and Driver	1 15 2	1460 0.1 0.0	88 44 0.03 0.4	44 0	0 2 46 \$ 6
714 Main Buik	ding	09.01-FS17	1st Floor	Mens 112	Restrooms, existing sensor	704 \$O		Vanity 14T502	Vanity / 14W, Fluorescent, 22" T5 / Program Rapid Start T5HO	3 N	Retrofit Lamp	No Retrofit Proposed	3 Wall	N/A	0 28 6	1460 0.1 0.1	123 123 0.00 0.0	0 0	0 0 0 \$ -
715 Main Buik	-	09.01-FS17	1st Floor	Sleeping 121	Bedroom, Housing Authority	706 \$D		LED	LED Fixture / LED Driver	1 N	No Retrofit - LED	No Retrofit Proposed	1 Wall	N/A	0 12 1	2190 0.0 0.0	26 26 0.00 0.0	0	0 0 0 5 -
					Bedroom, Housing				2x4 Troffer / 32W Fluorescent, 4'-0" T8 / Electronic, T8			LED 4FT T8 Lamp and Dimmable Driver Upgrade, (2) lamps with (1) 2-lamp driver, 30W (system), 4300+ delivered lumens	i,	LED Lamp and					
716 Main Build	-	09.01-FS17	1st Floor	Sleeping 121	Authority Bedroom, Housing	706 \$D				1 L2 DIM	Lamp and Driver	SYLVANIA	1 Recessed	Driver	2 32 2	2190 0.1 0.0	138 70 0.03 0.4	68 0	0 4 72 \$ 7
717 Main Build	ding	09.01-FS17	1st Floor	Sleeping 120	Authority	706 \$D		LED	LED Fixture / LED Driver 2x4 Troffer / 32W Fluorescent, 4'-0" T8 /	1 N	No Retrofit - LED	No Retrofit Proposed LED 4FT T8 Lamp and Dimmable Driver Upgrade, (2) lamps with (1) 2-lamp driver, 30W (system), 4300+ delivered lumens	1 Wall	N/A	0 12 1	2190 0.0 0.0	26 26 0.00 0.0	0 0	0 0 0 \$ -
718 Main Buik	ding	09.01-FS17	1st Floor	Sleeping 120	Bedroom, Housing Authority	706 \$D		2x4 Troffer 32T802	Electronic, T8	1 L2 DIM	Lamp and Driver	SYLVANIA LED 4FT T8 Lamp and Dimmable Driver Upgrade, (2) lamps	1 Recessed	LED Lamp and Driver	2 32 2	2190 0.1 0.0	138 70 0.03 0.4	68 0	0 4 72 \$ 7
719 Main Build	ding	09.01-FS17	1st Floor	MBO Sleep 119	Bedroom, Housing Authority	706 \$D		2x4 Troffer 32T802	2x4 Troffer / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1 L2 DIM	Lamp and Driver	with (1) 2-lamp driver, 30W (system), 4300+ delivered lumens SYLVANIA	1 Recessed	LED Lamp and Driver	2 32 2	2190 0.1 0.0	138 70 0.03 0.4	68 0	0 4 72 \$ 7



					F			E	Existing					Propos	sed									Ene	rav			
									amp &							Mounting (i different	if		atts					kW		eating Heatin	g Cooling Net kv	Net Energy Wh Cost
ID Building	FIM Name	Floor/General Area	a Room Name	ASHRAE Space Types	Time Code S	witching	Fixture Schedule	Ba	allast	# Description Fi	of ixtures	Fixture Code	Retrofit Type (Current Scope)	Description		from	Lamp Type	# of Lamps p			isting Proposed	Existing kWh		Savings Savings Month per Yea	Savings per Pe	enalty Penalty	y Credit Saving (kWh) Year	ngs per Savings per Year
720 Main Building	09.01-FS17	1st Floor	MBO Sleep 119	Bedroom, Housing Authority	706 SI	D		IE	=n	LED Fixture / LED Driver	1	N	No Retrofit - LED	No Retrofit Proposed	1	Wall	N/A	0	12 1	2190	0.0	0 26	26	0.00 0.	0 0	0	0 0	0.5
				Open Offices, existing						2x4 Troffer / 32W Fluorescent, 4'-0" T8 /				LED 4FT T8 Lamp and Bi-Level Driver/Ballast Upgrade, (2) lamps with (1) 2-lamp driver, 30W (system), 4300+ delivered		-	LED Lamp and											
721 Main Building	09.01-FS17	1st Floor	MBO Office 118	sensor	708 \$0	0		2x4 Troffer 32	2T803E	Electronic, T8 2x4 Troffer / 32W Fluorescent, 4'-0" T8 /	2	L2 Bi-level	Lamp and Driver	Iumens, SYLVANIA LED 4FT T8 Lamp and Bi-Level Driver/Ballast Upgrade, (2) lamps with (1) 2-lamp driver, 30W (system), 4300+ delivered	2	Recessed	LED Lamp and	2	32 4	2920	0.2 0	.1 502	187	0.11 1.	3 315	0	-1 17	332 \$ 29
722 Main Building	09.01-FS17	1st Floor	Office 103	Offices	708 \$0	0		2x4 Troffer 32	2T803E	Electronic, T8	2	L2 Bi-level	Lamp and Driver	Iumens, SYLVANIA	2	Recessed	Driver	2	32 4	2920	0.2 0	.1 502	187	0.11 1.	3 315	0	-1 17	332 \$ 29
723 Main Building	09.01-FS17	1st Floor	Toilet 101	Restrooms, private, existing sensor	702 \$0	0		Recessed Downlight 32	2CFL01	Recessed Downlight / Compact Fluorescent, 32W Triple / N/A	1	N	No Retrofit - Payback/Budget	No Retrofit Proposed	1	Recessed	N/A	0	33 1	730	0.0 0	.0 24	24	0.00 0.	0 0	0	0 0	0 \$ -
724 Main Building	09.01-FS17	1st Floor	Toilet 101	Restrooms, private, existing sensor	702 \$0	0		Vanity 14	4T502	Vanity / 14W, Fluorescent, 22" T5 / Program Rapid Start T5HO	1	N	No Retrofit - Payback/Budget	No Retrofit Proposed	1	Wall	N/A	0	28 2	730	0.0 0	.0 20	20	0.00 0.	0 0	0	0 0	0 \$ -
725 Main Building	09.01-FS17	1st Floor	Office 102	Offices	708 \$0	0		2x4 Troffer 32	2T803E	2x4 Troffer / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2	L2 Bi-level	Lamp and Driver	LED 4FT T8 Lamp and Bi-Level Driver/Ballast Upgrade, (2) lamps with (1) 2-lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	2	Recessed	LED Lamp and Driver	2	32 4	2920	0.2 0	.1 502	187	0.11 1.	3 315	0	-1 17	332 \$ 29
								Recessed		Recessed Downlight / Compact Fluorescent,				LED PL Bypass Lamp Upgrade, (1) Vertical mount lamps with internal driver and remove existing ballast, 8.5W each, 1000			LED Integral											
726 Main Building	09.01-FS17	1st Floor	Lobby 100	Halls & common areas	715 \$			Downlight 32 Recessed	ZCFLUI	32W Triple / N/A Recessed Downlight / Compact Fluorescent,	3	L16	Retrofit Lamp	delivered lumens, GREEN CREATIVE: PL V 8.5W BYP LED PL Lamp Upgrade, (1) Horizontal mount lamp using existing ballast, 8.5W each, 900 delivered lumens, GREEN	3	Recessed	Driver	1	9 3	5475	0.1 0	.0 542	140	0.07 0.	9 402	0	-1 21	424 \$ 31
727 Main Building	09.01-FS17	2nd Floor	Lobby 100	Halls & common areas	715 \$				2CFL01	32W Triple / N/A	1	L14A	Retrofit Lamp	CREATIVE: PL H 8W DIR LED PL Bypass Lamp Upgrade, (1) Horizontal mount lamp with		Recessed	LED Fixture	1	9 1	5475	0.0 0	.0 181	47	0.02 0.	3 134	0	0 7	141 \$ 10
728 Main Building	09.01-FS17	2nd Floor	Lobby 100	Halls & common areas	715 \$			Recessed Downlight 32	2CFL01	Recessed Downlight / Compact Fluorescent, 32W Triple / N/A	3	L14	Retrofit Lamp	internal driver and remove existing ballast, 8W each, 900 delivered lumens, GREEN CREATIVE: PL H 8W BYP	3	Recessed	LED Integral Driver	1	8 3	5475	0.1 0	.0 542	131	0.08 0.	9 411	0	-2 22	433 \$ 32
729 Main Building	09.01-FS17	2nd Floor	Mech 210	Storage Areas	701 \$0	0		4' Industrial w/reflectors 32	2T802E	4' Industrial w/reflectors / 32W Fluorescent, 4'- 0" T8 / Electronic, T8	6	N	No Retrofit - Payback/Budget	No Retrofit Proposed	6	Surface	N/A	0	63 12	365	0.4 0	.4 138	138	0.00 0.	0 0	0	0 0	0\$-
730 Main Building	09.01-FS17	2nd Floor	Storage 209	Storage Areas	701 \$0	0		2x4 Prismatic 32	2T802E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2	N	No Retrofit - Payback/Budget	No Retrofit Proposed	2	Recessed	N/A	0	63 4	365	0.1 0	.1 46	46	0.00 0.	0 0	0	0 0	0\$-
	09.01-FS17	2nd Floor	Tel-Com 208		701 \$0			Quid Delematic 22	270025	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 /	2		No Retrofit - Payback/Budget	No Dobustik Deserved		Deserved				265				0.00 0.				
731 Main Building	09.01-F517	2nd Floor	Tei-Com 208	Storage Areas	701 \$0	0		2x4 Prismatic 32	21802E	Electronic, T8 Direct/Indirect / 54W, Fluorescent, 4'-0" T5HO	2	N	No Retrofit -	No Retrofit Proposed	2	Recessed	N/A	0	63 4	365	0.1 0	.1 46	46	0.00 0.	0 0	0	0 0	U \$ -
732 Main Building	09.01-FS17	2nd Floor	Classroom 206	Classrooms	710L-C \$0	0		Direct/Indirect 54	4T508E	/ Program Rapid Start T5HO	4	N	Payback/Budget	No Retrofit Proposed	4	Pendant	N/A	0	800 32	3740	3.2 3	2 11,968	11,968	0.00 0.	0 0	0	0 0	0 \$ -
733 Main Building	09.01-FS17	2nd Floor	Classroom 206	Classrooms	710L-C \$0	0		Wall Washer 54	4T502E	Wall Washer / 54W, Fluorescent, 4'-0" T5HO / Program Rapid Start T5HO	2	N	No Retrofit - Payback/Budget	No Retrofit Proposed	2	Surface	N/A	0	100 4	3740	0.2 0	.2 748	748	0.00 0.	0 0	0	0 0	0\$-
734 Main Building	09.01-FS17	2nd Floor	Classroom 206	Classrooms	710L-C \$0	0		Undercabinet 17	7T801E	Undercabinet / 17W Fluorescent, 2'-0" T8 / Electronic, T8	1	N	No Retrofit - Payback/Budget	No Retrofit Proposed	1	Surface	N/A	0	18 1	3740	0.0 0	.0 67	67	0.00 0.	0 0	0	0 0	0 \$ -
735 Main Building	09.01-FS17	2nd Floor	Classroom 206	Classrooms	710L-C \$0	0		Undercabinet 32	2T801E	Undercabinet / 32W Fluorescent, 4'-0" T8 / Electronic, T8	3	N	No Retrofit - Payback/Budget	No Retrofit Proposed	3	Surface	N/A	0	30 3	3740	0.1 0	.1 337	337	0.00 0.	0 0	0	0 0	0\$-
736 Main Building	09.01-FS17	2nd Floor	Hall 202	Halls & common areas	715 \$3	2		Recessed Downlight 32	2CFL01	Recessed Downlight / Compact Fluorescent, 32W Triple / N/A	2	L16	Retrofit Lamp	LED PL Bypass Lamp Upgrade, (1) Vertical mount lamps with internal driver and remove existing ballast, 8.5W each, 1000 delivered lumens, GREEN CREATIVE: PL V 8.5W BYP	2	Recessed	LED Integral Driver	1	0 2	5475	0.1	0 361	02	0.05 0.	c 269	0	-1 14	283 \$ 21
										Indirect / 32W Fluorescent, 4'-0" T8 /			Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, Back-up			LED Lamp and	1	5 2	5475	0.1 0	.0	33		200		-1 14	
737 Main Building	09.01-FS17	2nd Floor	Hall 202	Halls & common areas	715 \$3	3		Indirect 32	2T802E	Electronic, T8 Indirect / 32W Fluorescent, 4'-0" T8 /	1	L2B	(Battery)	battery, SYLVANIA LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-	1	Recessed	Driver LED Lamp and	2	30 2	5475	0.1 0	.0 345	164	0.03 0.	4 181	0	-1 10	190 \$ 14
738 Main Building	09.01-FS17	2nd Floor	Hall 202	Halls & common areas	715 \$3	3		Indirect 32	2T802E	Electronic, T8	1	L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	A 1	Recessed	Driver	2	30 2	5475	0.1 0	.0 345	164	0.03 0.	4 181	0	-1 10	190 \$ 14
739 Main Building	09.01-FS17	2nd Floor	Storage 205	Storage Areas	701 \$0	0		2x4 Prismatic 32	2T802E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2	N	No Retrofit - Payback/Budget	No Retrofit Proposed	2	Recessed	N/A	0	63 4	365	0.1 0	.1 46	46	0.00 0.	0 0	0	0 0	0\$-
740 Main Building	09.01-FS17	2nd Floor	Storage 212	Storage Areas	702 \$			4' Industrial w/reflectors 32	2T802E	4' Industrial w/reflectors / 32W Fluorescent, 4'- 0" T8 / Electronic, T8	2	N	No Retrofit - Payback/Budget	No Retrofit Proposed	2	Surface	N/A	0	63 4	730	0.1 0	.1 92	92	0.00 0.	0 0	0	0 0	0\$-
741 Main Building	09.01-FS17	2nd Floor	Radio 207	Storage Areas	701 \$0	0		2x4 Prismatic 32	2T802E	2x4 Prismatic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2	N	No Retrofit - Payback/Budget	No Retrofit Proposed	2	Recessed	N/A	0	63 4	365	0.1 0	.1 46	46	0.00 0.	0 0	0	0 0	0\$-
													No Retrofit -															
742 Main Building	09.01-FS17	1st Floor	Exterior	Outside Areas	712 PC	с <u> </u>		Wallpack 70	DMH01	Wallpack / MH 70W / HID Magnetic	1	N	Payback/Budget	No Retrofit Proposed	1	Wall	N/A	0	90 1	4380	0.1 0	1 394	394	0.00 0.	0 0	0	0 0	0 \$ -
743 Main Building	09.01-FS17	1st Floor	Exterior	Outside Areas	712 PC	c		Wallpack 70	DMH01	Wallpack / MH 70W / HID Magnetic	6	N	Payback/Budget	No Retrofit Proposed	6	Wall	N/A	0	90 6	4380	0.5 0	.5 2,365	2,365	0.00 0.	0 0	0	0 0	0 \$ -
744 Main Building	09.01-FS17	1st Floor	Exterior	Outside Areas	712 PC	c		Wallpack 42	2CFL01	Wallpack / Compact Fluorescent, 42W Triple, Vertical / N/A	2	N	No Retrofit - Payback/Budget	No Retrofit Proposed	2	Wall	N/A	0	44 2	4380	0.1 0	1 385	385	0.00 0.	0 0	0	0 0	0 \$ -
745 Main Building	09.01-FS17	1st Floor	Exterior	Outside Areas	712 PC	c		Strip 32	2T801E	Strip / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2	N	No Retrofit - Payback/Budget	No Retrofit Proposed	2	Surface	N/A	0	30 2	4380	0.1 0	.1 263	263	0.00 0.	0 0	0	0 0	0 \$ -
746 Main Building	09.01-FS17	1st Floor	Exterior	Outside Areas	712 PC	c		Uplight 39	9MH01	Uplight / MH 39W / HID Magnetic	4	N	No Retrofit - Payback/Budget	No Retrofit Proposed	4	Surface	N/A	0	39 4	4380	0.2 0	.2 683	683	0.00 0.	0 0	0	0 0	0\$-
747 Main Building	09.01-FS17	1st Floor	Exterior	Outside Areas	712 PC	c		Shoebox 15	50MH01	Shoebox / MH 150W / HID Magnetic	6	N	No Retrofit - Payback/Budget	No Retrofit Proposed	6	Pole	N/A	0	165 6	4380	1.0 1	.0 4.336	4.336	0.00 0.	0 0	0	0	0.5
747 Main Building			LACEITON					Recessed		Recessed Downlight / Compact Fluorescent,	0		No Retrofit -		0	role	N/A	0	105 0		1.0 1	4,550	4,550		0 0		0 0	0
748 Main Building	09.01-FS17	1st Floor	Exterior	Outside Areas	712 PC	c		Downlight 32 Recessed	2CFL01	32W Triple / N/A Recessed Downlight / Compact Fluorescent,	1	N	Payback/Budget	No Retrofit Proposed	1	Recessed	N/A	0	33 1	4380	0.0 0	.0 145	145	0.00 0.	0 0	0	0 0	0 \$ -
749 Main Building	09.01-FS17	1st Floor	Exterior	Outside Areas	712 PC	c			2CFL01	32W Triple / N/A	9	N	Payback/Budget	No Retrofit Proposed	9	Recessed	N/A	Q	33 9	4380	0.3 0	3 1,301	1,301	0.00 0.	0	0	0 0	0 \$ -
751 Main Bldg.	09.01-FS18	2nd Floor	Mech room	Maintenance Areas - Inactive	701 \$			4' Strip 32	2T802E	4' Strip / 32W Fluorescent, 4'-0" T8 / Electronic, T8	8	N	No Retrofit - Payback/Budget	No Retrofit Proposed	8	Surface	N/A	0	63 16	365	0.5 0	.5 184	184	0.00 0.	0 0	0	0 0	0\$-
752 Main Bldg.	09.01-FS18	1st Floor	Office 104	Offices	708 \$			2x4 Parabolic 32	2T803E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2	13	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (3) lamps with (1) 3- lamp driver, 45W (system), 6000+ delivered lumens, SYLVANI	A 2	Recessed	LED Lamp and Driver	3	45 6	2920	0.2 0	.1 502	263	0.08 1.	0 239	0	-1 13	252 \$ 22
				Storage Areas,						2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /			No Retrofit -															
753 Main Bldg.	09.01-FS18	1st Floor	Storage in Garage 119	existing sensor	502 \$0					Electronic, T8	2	N	Payback/Budget	No Retrofit Proposed LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2-			N/A LED Lamp and	0	86 6	521	0.2 0	90	90	0.00 0.	0	0	0 0	0 \$ -
754 Main Bldg.	09.01-FS18	1st Floor	Garage 119	24 Hour Areas	720 \$			4' Acrylic Wrap 32	2T802E	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	4	L2	Lamp and Driver	lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	A 4	Surface	Driver	2	30 8	7300	0.3 0	1 1,840	876	0.13 1.	6 964	0	-4 51	1,015 \$ 71
755 Main Bldg.	09.01-FS18	1st Floor	Garage 119	Warehouse	712 \$					4' Industrial w/reflectors / 32W Fluorescent, 4'- 0" T8 / Electronic, T8	30	L3	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (3) lamps with (1) 3- lamp driver, 45W (system), 6000+ delivered lumens, SYLVANI	A 30	Chain	LED Lamp and Driver	3	45 90	4380	2.6 1	.4 11,300	5,913	1.23 14.	8 5,387	0	-20 287	5,675 \$ 443
756 Main Bldg.	09.01-FS18	1st Floor	Police 103	Offices	704 \$			2x4 Parabolic 32	2T803E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	4	13	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (3) lamps with (1) 3- lamp driver, 45W (system), 6000+ delivered lumens, SYLVANI		Recessed	LED Lamp and Driver	3	45 12	1460	0.3 0	.2 502	263	0.16 2.	0 239	0	-1 13	252 \$ 30
757 Main Bldg.	09.01-FS18	1st Floor	Entry 101	24 Hour Areas	724 \$			Downlight 13	3CFL02	Downlight / Compact Fluorescent, 13W PL / N/A	4	L12	Retrofit Lamp	LED PL Bypass Lamp Upgrade, (2) Horizontal mount lamp with internal driver and remove existing ballast, 5.5W each, 550 delivered lumens, GREEN CREATIVE: PL H 5.5W HYBM		Recessed	LED Integral Driver	2	11 8	8760	0.1 0	.0 981	385	0.07 0.	8 596	0	-2 32	627 \$ 42
										2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /		12		LED 4FT T8 Lamp and Driver Upgrade, (3) lamps with (1) 3-			LED Lamp and			4380				0.12 1	5 500			567 \$ 44
758 Main Bldg.	09.01-FS18	1st Floor	Office 102	Offices	712 \$			zx4 Parabolic 32	210UJË	Electronic, T8 2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	3		Lamp and Driver	lamp driver, 45W (system), 6000+ delivered lumens, SYLVANI LED 4FT T8 Lamp and Driver Upgrade, (3) lamps with (1) 3-	3	Recessed	LED Lamp and	3	43 9	4380	0.3 0	1,130	591	0.12 1.	539	U	-2 29	5 44
759 Main Bldg.	09.01-FS18	1st Floor	Laundry 105	Storage Areas - Active	705 \$			2x4 Parabolic 32		Electronic, T8	1	L3	Lamp and Driver	lamp driver, 45W (system), 6000+ delivered lumens, SYLVANI	A 1	Recessed	Driver	3	45 3	1825	0.1 0	.0 157	82	0.04 0.	5 75	0	0 4	79 \$ 8
760 Main Bldg.	09.01-FS18	1st Floor	Janitor 106	Janitor Closet	702 \$			4' Acrylic Wrap 32	2T802E	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1	N	No Retrofit - Payback/Budget	No Retrofit Proposed	1	Surface	N/A	0	63 2	730	0.1 0	46	46	0.00 0.	0 0	0	0 0	0 \$ -
761 Main Bldg.	09.01-FS18	1st Floor	Public Restroom 107	Restrooms, private	710 \$			1x4 Paracube 32	2T802E	1x4 Paracube / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2	L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANI	A 2	Surface	LED Lamp and Driver	2	30 4	3650	0.1 0	.1 460	219	0.07 0.	8 241	0	-1 13	254 \$ 21
762 Main Bldg.	09.01-FS18	1st Floor	Dining / Kit/ Day Rm	Cafeteria	712L-D \$			Undercabinet 17	7T801E	Undercabinet / 17W Fluorescent, 2'-0" T8 / Electronic, T8	2	L8	Retrofit Lamp	LED 2FT T8 Bypass lamp Upgrade, (1) lamp, 9W (system), 1100 delivered lumens, SYLVANIA	2	Surface	LED Integral Driver	1	9 2	4380	0.0 0	.0 158	79	0.02 0.	2 79	0	0 4	83 \$ 6
	09.01-FS18	1st Floor	Dining / Kit/ Day Rm		712L-D \$			Downlight LE		Downlight / LED Fixture / LED Driver	18	N		No Retrofit Proposed		Recessed	N/A	0	12 10	4380	0.2	2 046	946	0.00	0	0	0	0.5
763 Main Bldg.	05.01-1 510	251 1 1001	Dining / Kic/ Ddy Kill	Carecerild	,120-0 \$			Sowingit LE		Somalgie / LED Tixture / LED Driver	10		NO NEU OIL - LED	no reardine Proposeu	18	Recessed	.4/4	0	12 18	4000	0.2 0	946	940	0.00 0.	0	0	0	U \$ -



									Existing				Proposed	d											Energy				
ID Building	FIM Name	Floor/General Area	Room Name	ASHRAE Space Types	Time Code	Switching	Fixture Schedule		Lamp & Ballast Type	Description	# of Fixtures Fixture Code	Retrofit Type (Current Scope)			Mounting (different from existing)		# of Lamps per per Fixture Fixtur				g Proposed kW	Existing kWh		kW Savings		avings per Pe	Penalty Penalt	ty Credit Sa	et kWh Cost avings per ear Year
764 Main Bldg.	09.01-FS18	1st Floor	Dining / Kit/ Day Rm	Cafeteria	712L-D	\$		2x2 Troffer	32T8U02E	2x2 Troffer / U-Bend 6" 32W Fluorescent,T8 / Electronic, T8	5 L6K	Lamp and Driver	LED 2FT T8 Lamp and Driver Upgrade with Centering Kit, (3) lamps with (1) 3-lamp driver, 30W (system), 2000+ delivered lumens, SYLVANIA	1	5 Recessed	LED Lamp and Driver	3	30	15 43	80	0.3 0	.2 1,38	65	0.17	2.0	723	0	-3 39	761 \$ 59
765 Main Bldg.	09.01-FS18	1st Floor	Men 111	Restrooms	71!	5 \$		1x4 Paracube	32T802E	1x4 Paracube / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA	:	2 Surface	LED Lamp and Driver	2	30	4 54	75	0.1 0	.1 69	329	0.07	0.8	361	0	-1 19	381 \$ 28
766 Main Bldg.	09.01-FS18	1st Floor	Men 111	Restrooms	71!	5 \$		Downlight	13CFL02	Downlight / Compact Fluorescent, 13W PL / N/A	5 L12	Retrofit Lamp	LED PL Bypass Lamp Upgrade, (2) Horizontal mount lamp with Internal driver and remove existing ballast, 5.5W each, 550 delivered lumens, GREEN CREATIVE: PL H 5.5W HYBM		5 Recessed	LED Integral Driver	2	11	10 54	75	0.1 0	.1 76	7 30:	L 0.09	1.0	465	0	-2 25	490 \$ 36
767 Main Bldg.	09.01-FS18	1st Floor	Woman 112	Restrooms, private	710) \$		1x4 Paracube	32T802E	1x4 Paracube / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1 L2	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA		L Surface	LED Lamp and Driver	2	30	2 36	50	0.1 0	.0 23	110	0.03	0.4	120	0	0 6	127 \$ 10
768 Main Bldg.	09.01-FS18	1st Floor	Woman 112	Restrooms, private	710	s		Downlight	13CFL02	Downlight / Compact Fluorescent, 13W PL / N/A	2 L12	Retrofit Lamp	LED PL Bypass Lamp Upgrade, (2) Horizontal mount lamp with Internal driver and remove existing ballast, 5.5W each, 550 delivered lumens, GREEN CREATIVE: PL H 5.5W HYBM	:	2 Recessed	LED Integral Driver	2	11	4 36	50	0.1 0	.0 20	8	0.03	0.4	124	0	0 7	131 \$ 11
769 Main Bldg.	09.01-FS18	1st Floor	Hall 113	Halls & common areas	71	s		Undercabinet	25T801E	Undercabinet / 25W Fluorescent, 3'-0" T8 / Electronic, T8	2 L9	Retrofit Lamp	LED 3FT T8 Bypass Lamp Upgrade, (1) lamp, 12W (system), 1600+ delivered lumens, SYLVANIA	:	2 Surface	LED Integral Driver	1	12	2 43	80	0.1 0	.0 22	3 10	5 0.03	0.3	123	0	0 7	129 \$ 10
770 Main Bldg.	09.01-FS18	1st Floor	Hall 113	Halls & common areas	71:	s		Downlight	13CFL02	Downlight / Compact Fluorescent, 13W PL / N/A	1 L12	Retrofit Lamp	LED PL Bypass Lamp Upgrade, (2) Horizontal mount lamp with internal driver and remove existing ballast, S.SW each, 550 delivered lumens, GREEN CREATIVE: PL H 5.5W HYBM		L Recessed	LED Integral Driver	2	11	2 43	80	0.0 0	.0 12	3 48	3 0.02	0.2	74	0	0 4	78 \$ 6
771 Main Bldg.	09.01-FS18	1st Floor	Hall 113	Halls & common areas	71!	\$3		2x4 Parabolic	32T803E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	8 L3	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (3) lamps with (1) 3- lamp driver, 45W (system), 6000+ delivered lumens, SYLVANIA		3 Recessed	LED Lamp and Driver	3	45	24 54	75	0.7 0	.4 3,76	1,97	0.33	3.9	1,796	0	-7 96	1,892 \$ 140
772 Main Bldg.	09.01-FS18	1st Floor	Storage 118	Storage Areas	70:	\$		4' Acrylic Wrap	32T802E	4' Acrylic Wrap / 32W Fluorescent, 4'-0" T8 / Electronic, T8	2 N	No Retrofit - Payback/Budget	No Retrofit Proposed	:	2 Surface	N/A	0	63	4 7	30	0.1 0	.1 9	2 92	2 0.00	0.0	0	0	0 0	0 \$ -
773 Main Bldg.	09.01-FS18	1st Floor	Dorm 116	Bedroom, Housing Authority	70	s		Wall Bracket	LED	Wall Bracket / LED Fixture / LED Driver	1 N	No Retrofit - LED	No Retrofit Proposed		L Wall	N/A	0	12	1 21	90	0.0 0	.0 21	5 26	5 0.00	0.0	0	0	0 0	0 \$ -
774 Main Bldg.	09.01-FS18	1st Floor	Dorm 116	Bedroom, Housing Authority	70	s		2x4 Parabolic	32T803E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1 L3	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (3) lamps with (1) 3- lamp driver, 45W (system), 6000+ delivered lumens, SYLVANIA		L Recessed	LED Lamp and Driver	3	45	3 21	90	0.1 0	.0 18	3 99	0.04	0.5	90	0	0 5	95 \$ 9
775 Main Bldg.	09.01-FS18	1st Floor	Dorm 115	Bedroom, Housing Authority	70	is		Wall Bracket	LED	Wall Bracket / LED Fixture / LED Driver	1 N	No Retrofit - LED	No Retrofit Proposed		L Wall	N/A	0	12	1 21	90	0.0 0	.0 2	5 26	5 0.00	0.0	0	0	0 0	0 s -
776 Main Bldg.	09.01-FS18	1st Floor	Dorm 115	Bedroom, Housing Authority	70	s		2x4 Parabolic	32T803E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1 L3	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (3) lamps with (1) 3- lamp driver, 45W (system), 6000+ delivered lumens, SYLVANIA		L Recessed	LED Lamp and Driver	3	45	3 21	90	0.1 0	.0 18	3 99	0.04	0.5	90	0	0 5	95 \$ 9
777 Main Bldg.	09.01-FS18	1st Floor	Dorm 114	Bedroom, Housing Authority	70	s		Wall Bracket	LED	Wall Bracket / LED Fixture / LED Driver	1 N	No Retrofit - LED	No Retrofit Proposed		L Wall	N/A	0	12	1 21	90	0.0 0	.0 21	5 26	5 0.00	0.0	0	0	0 0	0 \$ -
778 Main Bldg.	09.01-FS18	1st Floor	Dorm 114	Bedroom, Housing Authority	70	s		2x4 Parabolic	32T803E	2x4 Parabolic / 32W Fluorescent, 4'-0" T8 / Electronic, T8	1 L3	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (3) lamps with (1) 3- lamp driver, 45W (system), 6000+ delivered lumens, SYLVANIA		L Recessed	LED Lamp and Driver	3	45	3 21	90	0.1 0	.0 18	3 99	0.04	0.5	90	0	0 5	95 \$ 9
779 Main Bldg.	09.01-FS18	1st Floor	Exercise 117	Gyms	71	s		Uplight	32T802E	Uplight / 32W Fluorescent, 4'-0" T8 / Electronic, T8	4 12	Lamp and Driver	LED 4FT T8 Lamp and Driver Upgrade, (2) lamps with (1) 2- lamp driver. 30W (system), 4300+ delivered lumens, SYLVANIA		4 Wall	LED Lamp and Driver	2	30	8 43	80	0.3 0	.1 1.10	526	0.13	1.6	578	0	-2 31	609 \$ 47
780 Main Bldg.	09.01-FS18	1st Floor	Exercise 117	Gyms	713	\$\$		2x4 Parabolic		2x4 Parabolic / 32W Fluorescent, 4'-0" T8 /	5 L2 Bi-level	Lamp and Driver	LED 4FT T8 Lamp and Bi-Level Driver/Ballast Upgrade, (2) lamps with (1) 2-lamp driver, 30W (system), 4300+ delivered lumens, SYLVANIA		5 Recessed	LED Lamp and Driver	2	32	10 43	80	0.4 0	.2 1,88	3 70:	0.27	3.2	1,183	0	-4 63	1,246 \$ 97
781 Main Bldg.	09.01-FS18	1st Floor	Exterior	Outside Areas		st				Wallpack / MH 100W / HID Magnetic	5 N	No Retrofit - Payback/Budget	No Retrofit Proposed		5 Wall	N/A	0	129	5 43	80	0.6 0	.6 2,82	2,82	5 0.00	0.0	0	0	0 0	0 \$ -
782 Main Bldg.	09.01-FS18	1st Floor	Exterior	Outside Areas, Housing Authority	711					Downlight / HPS 50W / HID Magnetic	11 N	No Retrofit - Payback/Budget	No Retrofit Proposed	1	L Recessed	N/A	0	68	11 43	80	0.7 0	.7 3,27			0.0	0	0	0 0	0 \$ -
783 Main Bldg.	09.01-FS18	2nd Floor	Exterior	Outside Areas		st.				Area / MH 250W / HID Magnetic	7 N	No Retrofit - Payback/Budget	No Retrofit Proposed		7 Pole	N/A	0	295			2.1 2				0.0	0	0	0 0	0 \$ -
784 Tot															2	0	0	0	0	0	0.0 0	.0) (0.00	0.0		0	0 0	0 \$ -
al	777					1	1			I	3,214			3,214	1			5,8	53	28	1 17	1 891,616	544,272	110		347,344			365,869 \$ 31,484

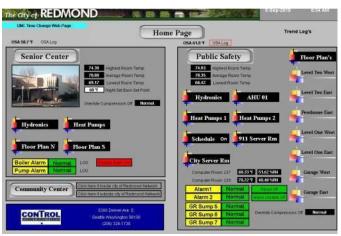
5.4 FACILITY IMPROVEMENT MEASURES - ADDITIONAL SCOPE DOCUMENTS

REDMOND PUBLIC SAFETY BUILDING (PSB) BUILDING AUTOMATION SYSTEM (BAS) DATA LIGHT LOGGER ANALYSIS



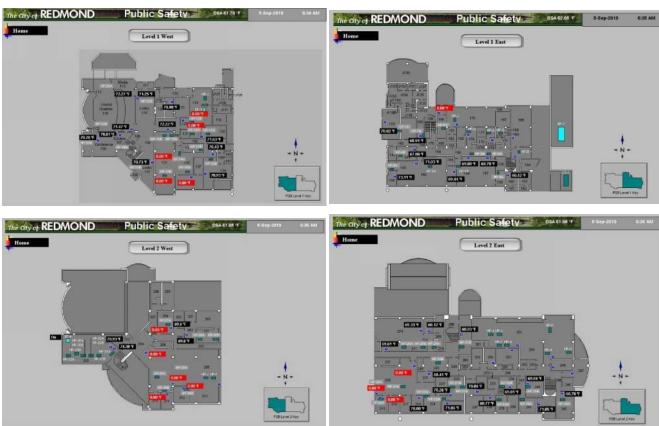
Redmond Public Safety Building (PSB) Building Automation System (BAS) Data GENERAL

See below for the main BAS home page.



FLOOR PLANS

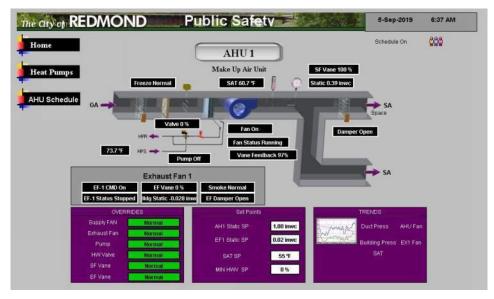
Temperature status of heat pumps.





AIR HANDLING UNITS

See below for AHU-1 serving OA to the heat pumps.



HEAT PUMPS

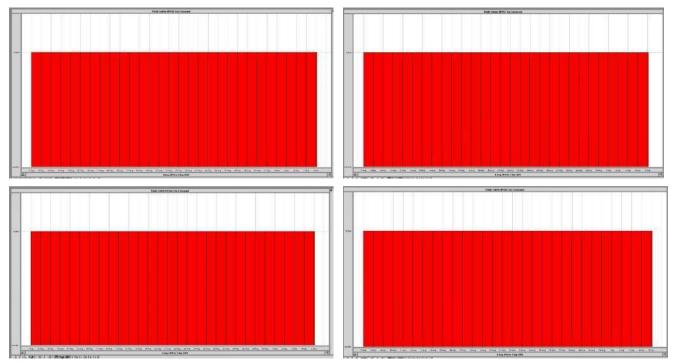
Heat pump set points are generally at set points between 65°F and 74°F, with most around 69°F.

he City of Home Heat Pump					Heat Pr OK to RaintP C Loop Discon fee	Compressions						The City of Home Heat Pump				Contraction of the local division of the loc	Pumps 2					
Unit	TAN	COMP	SPACE 1	FACES	NODE	Unit	FAN	COMP	SPACE	PACESP	WOCE	UNIT	TAN	CONT	SPACE SPACE	ESP BODE	UNIT	TÁN	COMP	UNCE	Diverse Div	MOCK
ant Pump DA.A	00	-		10.11	HARRY	Heat Pump 12.4	(e .)	110	-	0.4	Nector	HeatPamp 22 A	01 🔍	001:	(REN. 7) (R	w ventiating	ASC AMPARTMENTS	.or	07	110.0	0.0.90	Neretado
	04	- 011		11.4	Vatiliates		08	-04	100010-0	0.9	Veriliates	Please Plantas 22 8	dei 🥥	or	19.28.9 21	Wentlating	Heat Pump 390	0e 🥥	00	COLUMN ST	0.4	Versial
Kat Purcha 10 B	20: 2	Oie.	70.38**	415	Ventuting	and the second second second second	OH Q	07	72.34 %	124	VOUTINEOU	Heat Pump 22 A	on 🌒	or	0.007 0	F Verdisting	HeatPurse 31A	On 100	or	74.61 T	18.5	Worktat
Int Purp IRA	08 3	or	COLUMN ST	14	twentieterg	Visial Purg 128	On 13	01	70.87 4	To M	Sections	Ment Pump 24 8	04	00	88.45 T E	· Cours	InestPump 318	00 2	08	70.734	11.7	Geola
ATTINE OT A	DA LO	or	70.03 %	117	Unimating	Institute 14.0	CF	OF.	EDITOR	54	www.mand	Hest Parip 24.8	174 🥥	98	88.28.7 62	7 Costra	Heathums 32A	on 💽	185	12.25 T	22.7	Cool
at Pump OF B	DH	Of.		62.4	Unitione	Heat Parent 4 0	00 Q	128	THURSDAY	0.95	Verminered	Heat Plamp 25 A	Qu 🚅	04	88.94.97 72	19 Verklahig	HeatPure 32.9	011	Q4	11.22.9	10.4	Cool
athing the	2m 🔾	out	70.01-7	124	WILLIAM	HeatPlane 17.0	On 103	128	19.43.9	10.1	Versiend	Heat Plang 15 B	64 🥥	Oli	1131 7 11		HeatPune 33A	on 🞑	07	78.21 %	117	Munkti
eat Pung 10 B	Dei 🔾	OF.	88.527	11.7	Vettixing	Heat Paris 12.8	CH D	de	88.78 9	1271	Cauting	Heat Plang 26 K	fin 🥥	00	88.6.4° 81	T Verdixing	HeatPume 33.0	00 2	CH .	19.219	715	Mereta
A BO BRANC	01	or	78.86%	784	Variation	HastParent 19.0	-On	0.0	70.83 %	725	Vacationa	HeatPump 25 B	Qn 🥥	On.	192.0-97 - 21	er Hanter	Haathuna 35A	00	00	12,214	54.4	Vertilia
ALPANY CO.E	De O	ort	10.00**	51.9	Vanturing	Aread Paging 10.0	On D	at	80.14 T	10.1	Verillating	Meat Pump 37 A	CE 🌙	01		Verdiating	HeatPump 35 B	On 🤳	00	12.85.97	114	Mankla
ATTINIPITA	01 10	or	0.0015	71.15	trentestep	Hist Pump 25.0	On I.	- 10	80.78*	72.42	Ventuand	A BC qma/4 looks	04 🌖	or	0.007 0		Contract Contract States		00	TAILEF	12.4	Verda
at Pumpiting (06.	or	7045%	nit	Verstaare	Head Plane 20.0	01	:07	10.01.1	857	VOTELEND	Heat Puters 10 B	CH 🌙	01	000000000	1	HastPuns 396		07	7433.9	31.7	Vincitia
ALTIMOTICS.	01.	108	11 63.9	114	Vertitions	HAATPump 21.8	Ce 🔾	at	70.00.7	10.10	Venturing	Heat Parts 29 A	and the second sec	106	9.0015		HaidPutte 37A	On 💽	-00	88.42%	-11-5	Cook
												Heat Pamp 29 #			0.00115	Worksone						



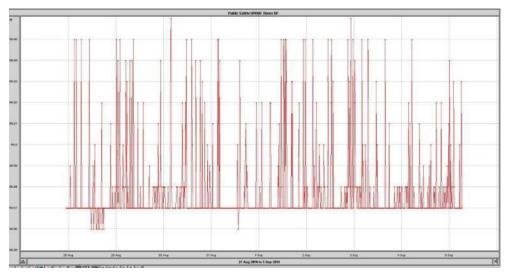
FAN STATUS

Trend data shows the heat pumps serving PSB are operating 24x7.



SETPOINTS

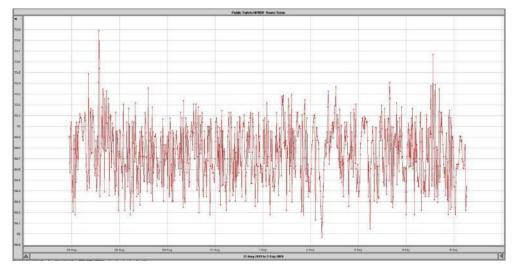
See below for trend data on HP-08B's set points. Setpoints range between 68 and 69°F.





SPACE TEMPS

See below for trend data on HP-08B's space temperature. Setpoints range between 69 and 71°F.





Light Logger Analysis



Lighting Hours Calculation Summary City of Redmond Ph2

Logger

City of Redition	Logger #	1												
	Data Description	Lighting Hours	Lighting Hours	Lighting Hours	Lighting Hours	Lighting Hours	Lighting Hours	Lighting Hours	Lighting Hours	Lighting Hours	Lighting Hours	Lighting Hours	Lighting Hours	Lighting Hours
	Building	MOC - Parks	MOC - Support Pole	MOC - Main	MOC - Bldg 3	FS-17	MOC	MOC	FS-17	MOC	FS-17	MOC	FS-17	FS-17
	General Location	Dry Room	Trinity Garage	Break Room	Break Room	Class 206	Mens Restroom	Main Hall	Kitchen Dining	Private Office	Upper Hall @ elevator	0	Stari 133 Main Fl.	Hall 115
	Logger ID #	ES00378	ES00565	ES00612	ES00619	SBC-1303	SBC-623	SBC-628	SBC-639	SBC-642	SBC-914	SBC-924	SBC-929	SBC-1302
	Space Type	Storage	Garage	Break Room	Break Room	Classroom	Restroom	Hallway	Dining	Private Office	Hallway	Open Office	Stairwell	Hallway
Date	Day													
7	7/24/2019 Wed	0.	0 0.	0	0.0		12.1	0.0	0.0 1		.2 4.	.7 0	.0 17	0 10.7
7	7/25/2019 Thu	4.:	2 1.	4	3.7	2.7	10.5	5.1				.3 4	.0 15	5 0.0
7	7/26/2019 Fri	15.		-	9.5			17.9		5.9 13	3.2 3.	.0 13	.2 24	
7	7/27/2019 Sat	0.			1.9	1.1	10.8	24.0		2.5 10		.3 4	.1 24	
7	7/28/2019 Sun	0.	1 0.	0	5.9	0.5	10.5	17.9	10.9 1	0.3 13	5.2 2.	.2 5		
	7/29/2019 Mon	8.		-	10.8			15.1		2.4 10		.1 11	.8 22	5 0.0
7	7/30/2019 Tue	9.			13.2			16.7		7.8 11		.3 13	.4 1	6 4.0
	7/31/2019 Wed	12.		7				14.3	-	9.9 10		.0 13	.5 2	
	8/1/2019 Thu	16.	7 4.	4	10.3	15.0		17.8		2.5 10	0.0 4.	.3 13	.3 5	7 11.4
	8/2/2019 Fri	15.			9.2	9.9		24.0		9.8 11		.2 10	· · · · · · · · · · · · · · · · · · ·	
	8/3/2019 Sat	17.		-	4.7			24.0		3.7 12		.0	.0	
	8/4/2019 Sun	15.			6.0	0.1		19.1		0.0 12			.2 9	
	8/5/2019 Mon	16.						14.5		0.1 13		.5 14		
	8/6/2019 Tue	15.						13.7		3.5 13		.0 10	-	
	8/7/2019 Wed	11.		-		10.1		14.7		0.8 12				
	8/8/2019 Thu	8.		-		14.5		15.0			3.0 3.			
	8/9/2019 Fri	9.		-	9.1			22.9		4.3 11				-
	3/10/2019 Sat	17.		-	6.1	0.3		24.0			.8 5.		.9 24	
-	3/11/2019 Sun	15.			1.4	0.2		19.7				•	.0 24	
	3/12/2019 Mon	12.		-	10.9			14.5		1.5 12			-	
	3/13/2019 Tue	9.						17.7		3.0 12		-	.0 0	
	3/14/2019 Wed	10.		-	17.2			22.9		1.7 12		-	.0 0	
Weekday	Average	11.			-			16.4		1.3 11		.0 10	-	· · · · · · · · · · · · · · · · · · ·
Weekend	Average	10.		-	4.3	0.3	-	21.4		0.9 11			.3 18	-
Wks/yr		5	-		52	52	52	52						2 52
Yearly	Average	419	8 126	5 3	3311 2	731	3740	6521	3952 40	95 40	18 175	55 31	25 382	5 1447

Lighting Hours are hours when the logger showed the lights to be or Occ savings with 15 minute delay

= Weekend = Holiday

Summary and Average Savings Hours Calculation

				Light Hours -		Occ Savings -	Occ Savings -	
Space Type	Bldg	Logger ID	Light Hours - Weekday	Weekend	Light Hours - Annual	Weekday	Weekend	Occ Savings - Annual
Break Room	MOC - Main	ES00612	11.0	4.3	3311	1.0	2.6	531
Break Room	MOC - Bldg 3	ES00619	10.3	0.3	2731	4.8	0.0	1260
Classroom	FS-17	SBC-1303	10.7	9.2	3740	9.7	8.7	3436
Dining	FS-17	SBC-639	11.3	10.9	4095	1.5	1.2	507
Garage	MOC - Support Pole	ES00565	2.1	6.8	1265	0.6	6.0	774
Hallway	MOC	SBC-628	10.8	10.9	3952	1.3	9.6	1342
Hallway	FS-17	SBC-914	5.0	4.4	1755	3.6	3.6	1324
Hallway	FS-17	SBC-1302	4.9	1.6	1447	1.9	0.6	552
Open Office	MOC	SBC-924	10.3	4.3	3125	3.9	3.2	1340
Private Office	MOC	SBC-642	11.0	11.0	4018	4.1	10.5	2166
Restroom	MOC	SBC-623	16.4	21.4	6521	6.8	20.8	3949
Stairwell	FS-17	SBC-929	7.4	18.1	3825	6.7	17.0	3521
Storage	MOC - Parks	ES00378	11.8	10.8	4198	9.1	10.6	3470

Lighting Hours Calculation Summary City of Redmond Ph2

City of Realito		1												
	Data Description	Occ Savings	Occ Savings	Occ Savings	Occ Savings	Occ Savings	Occ Savings	Occ Savings	Occ Savings	Occ Savings	Occ Savings	Occ Savings	Occ Savings	Occ Savings
	Building	MOC - Parks	MOC - Support Pole	MOC - Main	MOC - Bldg 3	FS-17	MOC	MOC	FS-17	MOC	FS-17	MOC	FS-17	FS-17
	General Location	Dry Room	Trinity Garage	Break Room	Break Room	Class 206	Mens Restroom	Main Hall	Kitchen Dining	Private Office	Upper Hall @ elevato	0	Stari 133 Main Fl.	Hall 115
	Logger ID #	ES00378	ES00565	ES00612	ES00619	SBC-1303	SBC-623	SBC-628	SBC-639	SBC-642	SBC-914	SBC-924	SBC-929	SBC-1302
	Space Type	Storage	Garage	Break Room	Break Room	Classroom	Restroom	Hallway	Dining	Private Office	Hallway	Open Office	Stairwell	Hallway
Date	Day	15 min delay	15 min delay	15 min delay	15 min delay	15 min delay	15 min delay	15 min delay	15 min delay	15 min delay	15 min delay	15 min delay	15 min delay	15 min delay
7/24/2019	Wed	0.0	0.0	0.0	0.0	11.6	0.0	0.0	1.7	0.0	3.2	0.0	16.2	4.2
7/25/2019	Thu	3.4	0.0	0.0	0.3	8.7	3.7	1.1			3.2	2.8	10.0	0.0
7/26/2019	Fri	12.3	0.1	0.5	3.4	8.8	10.2	2.6	2.8	5.4	1.7	4.4	21.3	0.0
7/27/2019	Sat	0.0	0.0	0.8	0.1	10.3	23.1	9.7	1.6	9.6	6.2	2.7	23.1	0.0
7/28/2019	Sun	0.0	0.0	3.9	0.0	10.0	16.6	9.5	0.3	12.4	1.9	3.7	21.8	0.4
7/29/2019	Mon	7.3	0.2	0.5	5.6	9.9	4.7	0.9	2.2	1.4	2.0	5.0	21.3	0.0
7/30/2019	Tue	7.2	0.4	2.2	4.5	10.5	6.7	0.8	0.7	5.2	4.5	5.6	1.1	1.9
7/31/2019	Wed	9.2	0.0	0.2	5.3	10.0	4.0	0.5	1.5	4.1	2.4	5.8	2.7	0.0
8/1/2019		14.0	1.3	0.1	8.7	8.8	7.1		1.5	2.5	2.4	4.8	4.8	5.1
8/2/2019	Fri	11.1	0.1	0.0	5.7	8.8	15.8	1.7	1.3	4.4	6.3	3.4	0.0	0.1
8/3/2019	Sat	17.0	0.0	4.2	0.0	10.3	24.0	10.3	1.5	12.2	3.4	5.1	2.6	0.0
8/4/2019	Sun	15.1		4.6	0.0	9.5	18.2	10.1	2.4	12.0	2.1	4.2	7.9	
8/5/2019	Mon	13.6	0.0	3.6	4.0	11.6	4.7	1.9	1.3	6.2	4.4	5.2	2.1	0.0
8/6/2019	Tue	12.9	0.1	0.3	3.9	12.8	3.8	1.4	0.1		3.7	4.0	2.8	0.0
8/7/2019		8.1		0.5	4.7	9.1	4.2		2.5		2.7	4.1	1.9	6.6
8/8/2019		6.3	0.0	0.5	7.0	6.0	3.7		1.8		2.6	0.8	3.0	1.0
8/9/2019		6.4			5.7	10.4	13.4		-		7.6		13.3	3.6
8/10/2019		16.7			0.0	6.7	23.7				4.3		23.4	2.8
8/11/2019		14.7		0.0	0.0	5.6	19.3		0.3		3.8		23.5	0.0
8/12/2019		9.5		0.2	3.6	10.0	4.2	-			4.2		12.1	0.0
8/13/2019		7.0		0.4	7.9	8.6	5.8		0.7		3.0	-	1.6	4.1
8/14/2019	Wed	8.0			2.1	11.3	10.3				3.8		2.1	5.7
Weekday	Average	9.1		-	4.8	9.7	6.8							
Weekend	Average	10.6		2.6	0.0	8.7	20.8	9.6	1.2	10.5	3.6	3.2	17.0	0.6
Wks/yr		52		-	52	52	52		-		52	-		52
Yearly	Average	3470	774	531	1260	3436	3949	1342	507	2166	1324	1340	3521	552

5.5 UTILITY DATA



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ry of Redmond Lighting and PSB Ph 2 HPs	nvironmental Impact Calculator
City of	Environ



Non-Baseload	Load Factor to Use		
NWPP	Select eGRID Subregion	1.53381	lbs CO ₂ e/kWh (eGRID Subregion Electricity Emissions Factor)

Amount Each Utility Type Will Be Reduced Per Year

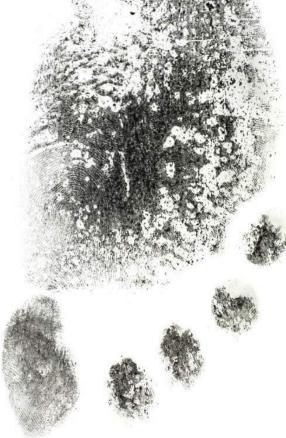
Electricity					
391,941 kWh	Ш	601,163 lbs CO ₂	272.7 Metric Tonnes CO ₂	This Annual Emi	This Annual Emissions Reduction Is Equivalent To The Following:
Natural Gas				49	Number of Vehicles Removed From Roads (Avg Size); or
-2,981 Therms	Ш	-34,899 lbs CO ₂	-15.8 Metric Tonnes CO ₂	959,770	Number of Miles Not Driven <u>Per Year</u> (Avg Size); or
Steam				7,078	Number of 75 Watt Light bulbs Not Energized; or
0 MIbs	Ш	0 lbs CO ₂	0.0 Metric Tonnes CO ₂	25	Number of Avg Sized Houses Removed From Power Grid; or
Fuel Oil				70	Acres of Trees Planted; or
0 Gallons	II	0 lbs CO ₂	0.0 Metric Tonnes CO ₂	264,609	Pounds of Coal Not Burned Per Year
Propane					
0 Gallons	II	0 lbs CO ₂	0.0 Metric Tonnes CO ₂		
Total Reduction =	 _	566,264 lbs CO ₂	256.9 Metric Tonnes CO ₂		

Other Emissions Factors

Propane: 12.5 lbs CO_2 / gal Conversion: 2,204.623 lbs CO_2 / Metric Tonnes CO_2 Steam: 195.3636 lbs CO_2 / Mlbs (Seattle Steam) Natural Gas: 11.707 lbs CO_2 / Therm Fuel Oil: 22.384 lbs CO_2 / gal

75 W Light Bulb Emmissions: 80 lbs CO_2 / Light Bulb / yr Tree Carbon Sequestation: 8,066 lbs CO_2 / acre / yr Tree Carbon Sequestation: 8,066 lbs CO_2/ acre / yr Vehicle Mileage Emmissions: 0.59 lbs CO_2/ mile Coal Emmisions: 2.14 lbs CO $_2$ / pound Coal Houses Removed: 22,880 lbs CO $_2$ / house **Equivalents Conversions** Car Emmissions: 11,470 lbs $CO_2/$ car / yr

Sources: * Energy Information Agency (EIA) * Environmental Protection Agency (EPA) * ENERGY STAR * eGRID 2014



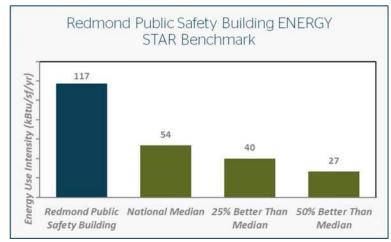
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City of Redmond (COR), Public Safety Building Analysis

ANALYSIS SUMMARY

Energy		Cost			
Electricity Use	1,475,523	kWh	Electricity Cost	\$126,162	\$/kWh/yr
Natural Gas Use	12,255	therms	Natural Gas Cost	\$9,263	\$/therm/yr
CO2e Emissions	632	metric tons/yr	Total Cost	\$135,425	\$/yr
Total Energy Use	6,260,009	kBtu	Square Footage	53,328	sf
		Energy Use	Metrics		
Electricity Use Intensity	94	kBtu/sf/yr	Electricity Cost Intensity	\$2.37	\$/sf/yr
Natural Gas Use Intensity	23	kBtu/sf/yr	Natural Gas Cost Intensity	\$0.17	\$/sf/yr
Energy Use Intensity	117.39	kBtu/sf/yr	Energy Cost Intensity	\$2.54	\$/sf/yr
Baseline Performance Period	<i>Start Date</i> 5/1/2016	End Date 5/1/2019			

McKinstry has gathered energy use benchmark data in order to compare City of Redmond Public Safety Building's energy use with similar facilities. Energy Use Intensity refers to the total annual energy use for a facility divided by the facility's square footage. By normalizing energy use by square footage, we are able to compare City of Redmond Public Safety Building's energy with similar facilities.

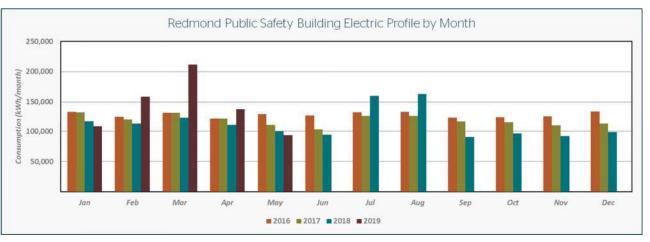


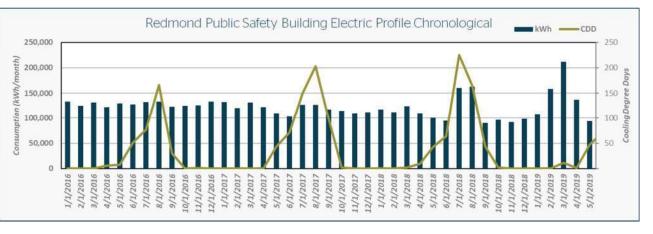
Redmond Public Safety Building ENERGY STAR Database Benchmark					
Redmond Public Safety Building	117	kBtu/sf/yr			
National Median	54	kBtu/sf/yr			
25% Better Than Median	40	kBtu/sf/yr			
50% Better Than Median	27	kBtu/sf/yr			

Insights

The property type of the Redmond Public Safety Building is not eligible for an ENERGY STAR score. In this analysis we have compared Redmond Public Safety Building's energy usage to building's of similar property type and size using ENERGY STAR's database. In this case Redmond Public Safety Building is a poor performer, performing worse than the national median.

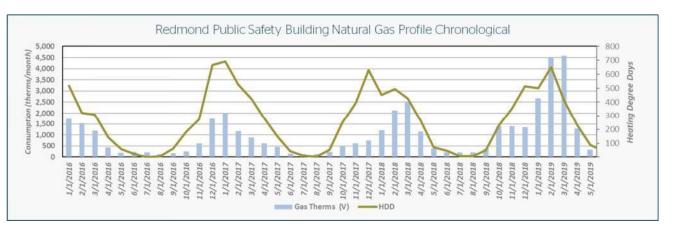
MONTHLY UTILITY DATA PROFILES





The figure above shows the building's chronological electric profile from January 2016 through May 2019. The electric use at the Public Safety Building is slightly dependent on the outside air temperature. This can be seen by comparing the increase in consumption with the increase in cooling degree days (base 65°F). An increase in electrical and gas consumption occurred in March of 2019.

The figure below shows the natural gas profile from January 2016 through May 2019. The natural gas use is also dependent on the outside air temperature. This can be seen by comparing the increase in consumption with the increase in heating degree days (base 60°F).





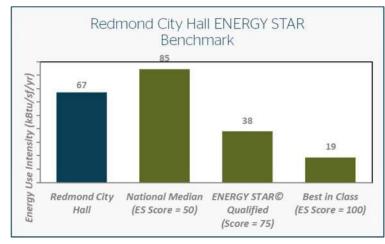


City of Redmond (COR), City Hall Analysis

ANALYSIS SUMMARY

Energy		Cost				
Electricity Use	1,370,058	kWh	Electricity Cost	\$126,487	\$/kWh/yr	
Natural Gas Use	25,228	therms	Natural Gas	\$19,259	\$/therm/yr	
CO2e Emissions	660	metric tons/yr	Total Cost	\$145,746	\$/yr	
Total Energy Use	7,197,478	kBtu	Square Footage	107,212	sf	
	Energy Use Metrics					
Electricity Use Intensity	44	kBtu/sf/yr	Electricity Cost Intensity	\$1.36	\$/sf/yr	
Natural Gas Use Intensity	24	kBtu/sf/yr	Natural Gas Cost Intensity	\$0.18	\$/sf/yr	
Energy Use Intensity	67	kBtu/sf/yr	Energy Cost Intensity	\$1.54	\$/sf/yr	
Baseline Performance	Start Date	End Date				
Period	5/1/2016	5/1/2019				

McKinstry has gathered energy use benchmark data in order to compare City of Redmond City Hall's energy use with similar facilities. Energy Use Intensity refers to the total annual energy use for a facility divided by the facility's square footage. By normalizing energy use by square footage, we are able to compare City of Redmond City Hall's energy with similar facilities.

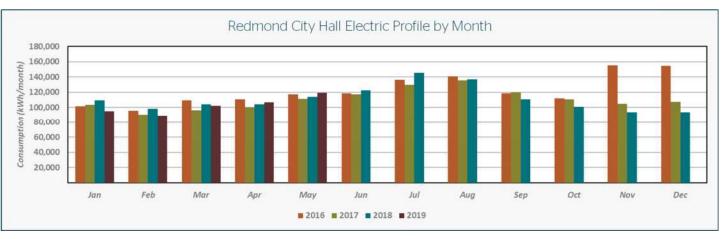


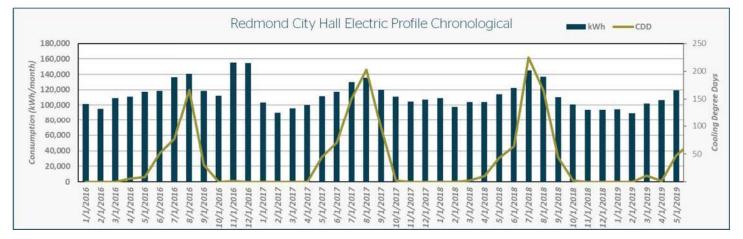
Redmond City Hall ENERGY STAR Benchmark						
Redmond City Hall	67	kBtu/sf/yr				
National Median (ES Score = 50)	85	kBtu/sf/yr				
ENERGY STAR [©] Qualified	20					
(Score = 75)	38	kBtu/sf/yr				
Best in Class (ES Score = 100)	19	kBtu/sf/yr				

Insights

An ENERGY STAR score of 75 indicates that a facility performs better than 75% of similar facilities. In this case City Hall is a better than average performer, achieving an ENERGY STAR score between 50 and 75.

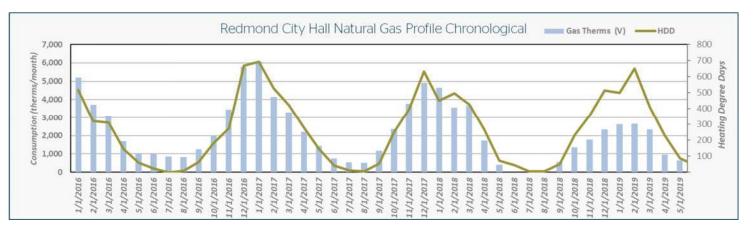
MONTHLY UTILITY DATA PROFILES





The figure above shows the building's chronological electric profile from January 2016 through May 2019. The electric use at the City Hall is slightly dependent on the outside air temperature. This can be seen by comparing the increase in consumption with the increase in cooling degree days (base 65°F).

The figure below shows the natural gas profile from January 2016 through May 2019. The natural gas use is also dependent on the outside air temperature. This can be seen by comparing the increase in consumption with the increase in heating degree days (base 60°F). There was a decrease in natural gas use over the last year despite a similar amount of heating degree days.





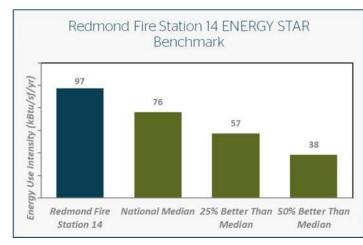


City of Redmond (COR), Fire Station 14 Analysis

ANALYSIS SUMMARY

Energy		Cost				
Electricity Use	86,729	kWh	Electricity Cost	\$8,829	\$/kWh/yr	
Natural Gas Use	6,218	therms	Natural Gas	\$5,396	\$/therm/yr	
CO2e Emissions	66	metric tons/yr	Total Cost	\$14,225	\$/yr	
Total Energy Use	917,735	kBtu	Square Footage	9,441	sf	
	Energy Use Metrics					
Electricity Use Intensity	31	kBtu/sf/yr	Electricity Cost Intensity	\$2.44	\$/sf/yr	
Natural Gas Use Intensity	66	kBtu/sf/yr	Natural Gas Cost Intensity	\$0.57	\$/sf/yr	
Energy Use Intensity	97	kBtu/sf/yr	Energy Cost Intensity	\$3.01	\$/sf/yr	
Baseline Performance	Start Date	End Date				
Period	11/1/2016	2/1/2018				

McKinstry has gathered energy use benchmark data in order to compare City of Redmond Fire Station 14's energy use with similar facilities. Energy Use Intensity refers to the total annual energy use for a facility divided by the facility's square footage. By normalizing energy use by square footage, we are able to compare City of Redmond Fire Station 14's energy with similar facilities.

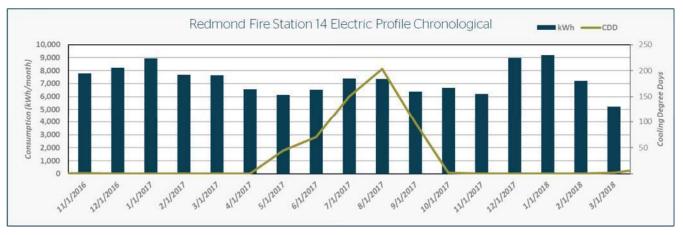


Redmond Fire Station 14 ENERGY	STAR Dat	abase Benchmark
Redmond Fire Station 14	97	kBtu/sf/yr
National Median	76	kBtu/sf/yr
25% Better Than Median	57	kBtu/sf/yr
50% Better Than Median	38	kBtu/sf/yr

Insights

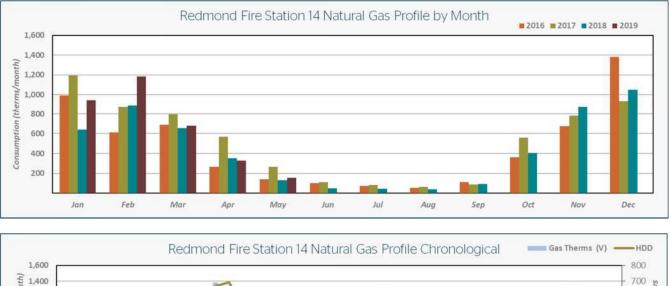
The property type of Fire Station 14 is not eligible for an ENERGY STAR score. In this analysis we have compared Fire Station 16's energy usage to building's of similar property type and size using ENERGY STAR's database. In this case Fire Station 16 is poor performer, performing worse than the national median.

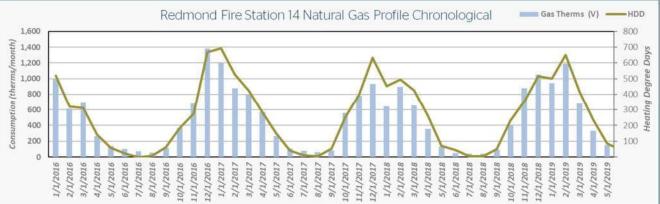
MONTHLY UTILITY DATA PROFILES



The figure above shows the building's chronological electric profile from November 2016 through March 2018. The electric use at the Fire Station 14 is dependent on the outside air temperature. This can be seen by comparing the increase in consumption with the increase in cooling degree days (base 65°F). Electric use in winter increases as well, likely due to increased lighting use

The figure below shows the natural gas profile from January 2016 through May 2019. The natural gas use is also dependent on the outside air temperature. This can be seen by comparing the increase in consumption with the increase in heating degree days (base 60°F).





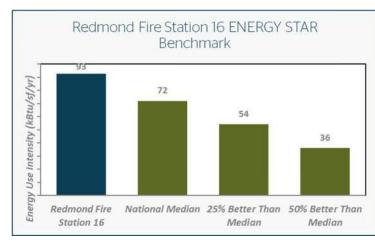


City of Redmond (COR), Fire Station 16 Analysis

ANALYSIS SUMMARY

Energy			Cost		
Electricity Use	94,549	kWh	Electricity Cost	\$9,422	\$/kWh/yr
Natural Gas Use	5,896	therms	Natural Gas	\$4,748	\$/therm/yr
CO2e Emissions	68	metric tons/yr	Total Cost	\$14,169	\$/yr
Total Energy Use	912,212	kBtu	Square Footage	9,852	sf
		Energy Use	e Metrics		
Electricity Use Intensity	33	kBtu/sf/yr	Electricity Cost Intensity	\$2.39	\$/sf/yr
Natural Gas Use Intensity	60	kBtu/sf/yr	Natural Gas Cost Intensity	\$0.48	\$/sf/yr
Energy Use Intensity	93	kBtu/sf/yr	Energy Cost Intensity	\$2.88	\$/sf/yr
Baseline Performance Period	<i>Start Date 5/1/2016</i>	End Date 5/1/2019			

McKinstry has gathered energy use benchmark data in order to compare City of Redmond Fire Station 16's energy use with similar facilities. Energy Use Intensity refers to the total annual energy use for a facility divided by the facility's square footage. By normalizing energy use by square footage, we are able to compare City of Redmond Fire Station 16's energy with similar facilities.

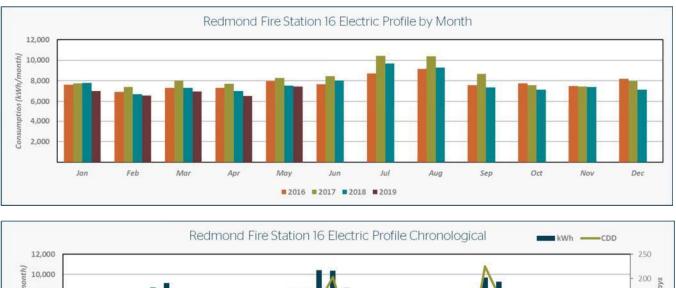


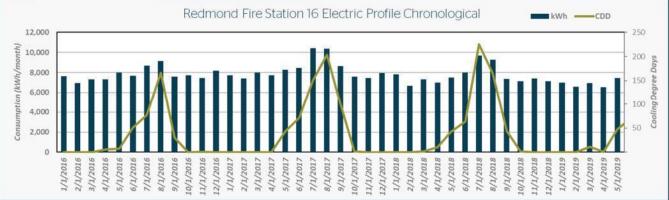
Redmond Fire Station 16 ENERGY STAR Database Benchmark						
Redmond Fire Station 16	93	kBtu/sf/yr				
National Median	72	kBtu/sf/yr				
25% Better Than Median	54	kBtu/sf/yr				
50% Better Than Median	36	kBtu/sf/yr				

Insights

The property type of Fire Station 16 is not eligible for an ENERGY STAR score. In this analysis we have compared Fire Station 16's energy usage to building's of similar property type and size using ENERGY STAR's database. In this case Fire Station 16 is poor performer, performing worse than the national median.

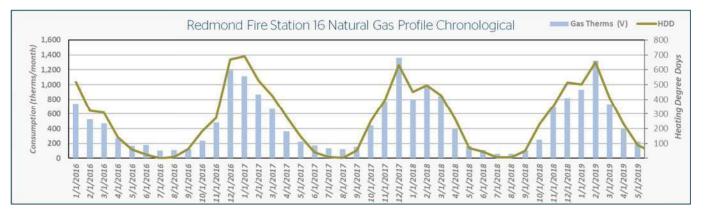
MONTHLY UTILITY DATA PROFILES



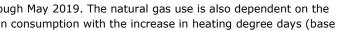


The figure above shows the building's chronological electric profile from January 2016 through May 2019. The electric use at the Fire Station 16 is dependent on the outside air temperature. This can be seen by comparing the increase in consumption with the increase in cooling degree days (base 65°F).

The figure below shows the natural gas profile from January 2016 through May 2019. The natural gas use is also dependent on the outside air temperature. This can be seen by comparing the increase in consumption with the increase in heating degree days (base 60°F).







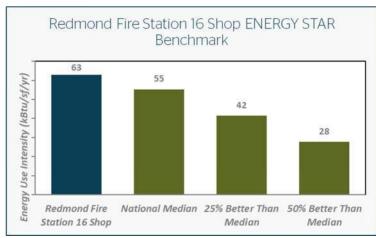


City of Redmond (COR), Fire Station 16 Shop Analysis

ANALYSIS SUMMARY

Energy			Cost		
Electricity Use	41,500	kWh	Electricity Cost	\$4,310	\$/kWh/yr
Natural Gas Use	2,117	therms	Natural Gas	\$1,975	\$/therm/yr
CO2e Emissions	27	metric tons/yr	Total Cost	\$6,284	\$/yr
Total Energy Use	353,281	kBtu	Square Footage	5,625	sf
		Energy Use	Metrics		
Electricity Use Intensity	25	kBtu/sf/yr	Electricity Cost Intensity	\$1.88	\$/sf/yr
Natural Gas Use Intensity	38	kBtu/sf/yr	Natural Gas Cost Intensity	\$0.35	\$/sf/yr
Energy Use Intensity	63	kBtu/sf/yr	Energy Cost Intensity	\$2.23	\$/sf/yr
Baseline Performance Period	<i>Start Date 5/1/2016</i>	End Date 5/1/2019			

McKinstry has gathered energy use benchmark data in order to compare City of Redmond Fire Station 16 Shop's energy use with similar facilities. Energy Use Intensity refers to the total annual energy use for a facility divided by the facility's square footage. By normalizing energy use by square footage, we are able to compare City of Redmond Fire Station 16 Shop's energy with similar facilities.

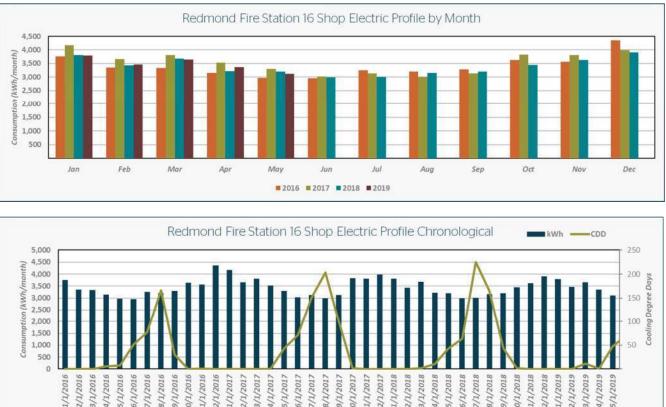


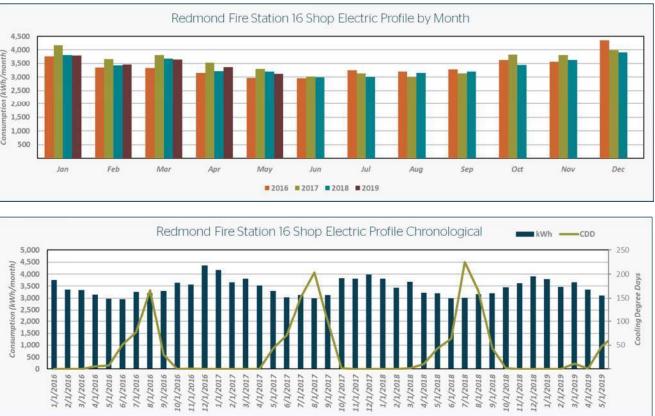
Redmond Fire Station 16 Shop ENERGY STAR Database Benchmark					
Redmond Fire Station 16 Shop	63	kBtu/sf/yr			
National Median	55	kBtu/sf/yr			
25% Better Than Median	42	kBtu/sf/yr			
50% Better Than Median	28	kBtu/sf/yr			

Insights

The property type of Fire Station 16 Shop is not eligible for an ENERGY STAR score. In this analysis we have compared Fire Station 16 Shop's energy usage to building's of similar property type and size using ENERGY STAR's database. In this case Fire Station 16 Shop is poor performer, performing worse than the national median.

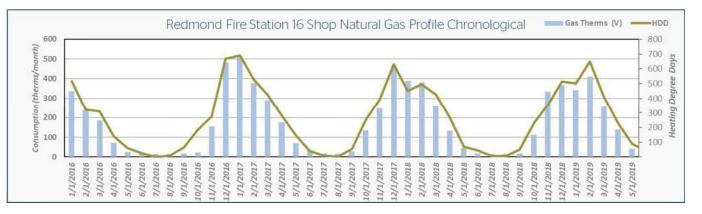
MONTHLY UTILITY DATA PROFILES





The figure above shows the building's chronological electric profile from January 2016 through May 2019. The electric use at the Fire Station 16 Shop is not dependent on the outside air temperature. This can be seen by comparing the electric consumption with the increase in cooling degree days (base 65°F). Electrical use increases in the winter likely due to exterior lighting.

The figure below shows the natural gas profile from January 2016 through May 2019. The natural gas use is also dependent on the outside air temperature. This can be seen by comparing the increase in consumption with the increase in heating degree days (base 60°F).



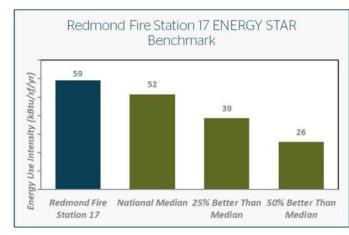


City of Redmond (COR), Fire Station 17 Analysis

ANALYSIS SUMMARY

Energy		Cost			
Electricity Use	218,418	kWh	Electricity Cost	\$21,080	\$/kWh/yr
Natural Gas Use	2,519	therms	Natural Gas	\$2,319	\$/therm/yr
CO2e Emissions	97	metric tons/yr	Total Cost	\$23,399	\$/yr
Total Energy Use	997,133	kBtu	Square Footage	16,899	sf
		Energy Use	Metrics		
Electricity Use Intensity	44	kBtu/sf/yr	Electricity Cost Intensity	\$1.38	\$/sf/yr
Natural Gas Use Intensity	15	kBtu/sf/yr	Natural Gas Cost Intensity	\$0.14	\$/sf/yr
Energy Use Intensity	59	kBtu/sf/yr	Energy Cost Intensity	\$1.52	\$/sf/yr
Baseline Performance Period	<i>Start Date</i> <i>5/1/2016</i>	End Date 5/1/2019			

McKinstry has gathered energy use benchmark data in order to compare City of Redmond Fire Station 17's energy use with similar facilities. Energy Use Intensity refers to the total annual energy use for a facility divided by the facility's square footage. By normalizing energy use by square footage, we are able to compare City of Redmond Fire Station 17's energy with similar facilities.

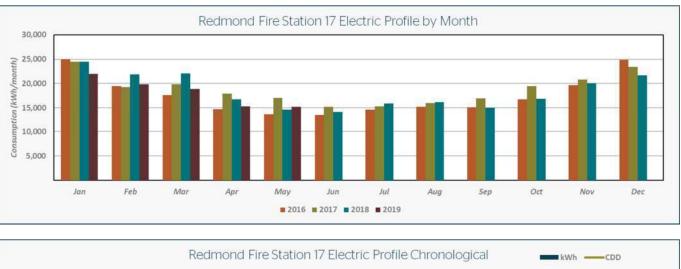


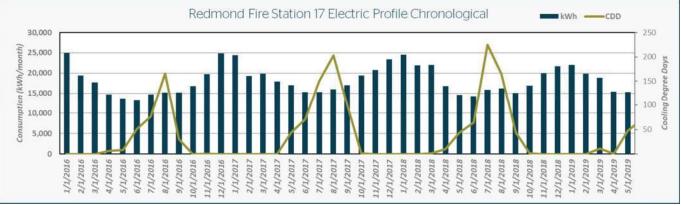
Redmond Fire Station 17 ENERGY STAR Database Benchmark						
Redmond Fire Station 17	59	kBtu/sf/yr				
National Median	52	kBtu/sf/yr				
25% Better Than Median	39	kBtu/sf/yr				
50% Better Than Median	26	kBtu/sf/yr				

Insights

The property type of Fire Station 17 is not eligible for an ENERGY STAR score. In this analysis we have compared Fire Station 17's energy usage to building's of similar property type and size using ENERGY STAR's database. In this case Fire Station 17 is an average performer, performing near the national median.

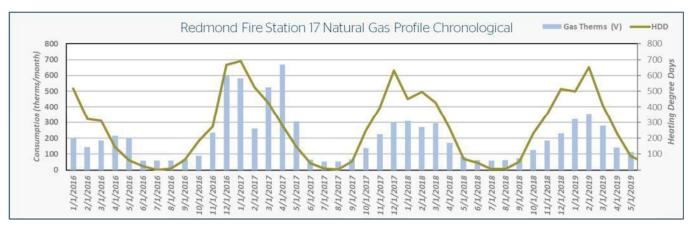
MONTHLY UTILITY DATA PROFILES





The figure above shows the building's chronological electric profile from January 2016 through May 2019. The electric use at the Fire Station 17 is not dependent on the outside air temperature during the summer months. This can be seen by comparing the increase in consumption with the increase in cooling degree days (base 65°F).

The figure below shows the natural gas profile from January 2016 through May 2019. The natural gas use is also dependent on the outside air temperature. This can be seen by comparing the increase in consumption with the increase in heating degree days (base 60°F).





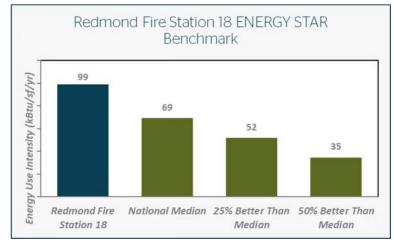


City of Redmond (COR), Fire Station 18 Analysis

ANALYSIS SUMMARY

Er	iergy		Cost								
Electricity Use	91,281	kWh	Electricity Cost	\$9,115	\$/kWh/yr						
Natural Gas Use	4,527	therms	Natural Gas	\$3,790	\$/therm/yr						
CO2e Emissions	59	metric tons/yr	Total Cost	\$12,905)5 \$/yr						
Total Energy Use	764,171	kBtu	Square Footage	7,714	sf						
Energy Use Metrics											
Electricity Use Intensity	40	kBtu/sf/yr	Electricity Cost Intensity	\$2.85	\$/sf/yr						
Natural Gas Use Intensity	59	kBtu/sf/yr	Natural Gas Cost Intensity	\$0.49	\$/sf/yr						
Energy Use Intensity	99	kBtu/sf/yr	Energy Cost Intensity	\$3.35	\$/sf/yr						
Baseline Performance Period	<i>Start Date 5/1/2016</i>	End Date 5/1/2019									

McKinstry has gathered energy use benchmark data in order to compare City of Redmond Fire Station 18's energy use with similar facilities. Energy Use Intensity refers to the total annual energy use for a facility divided by the facility's square footage. By normalizing energy use by square footage, we are able to compare City of Redmond Fire Station 18's energy with similar facilities.

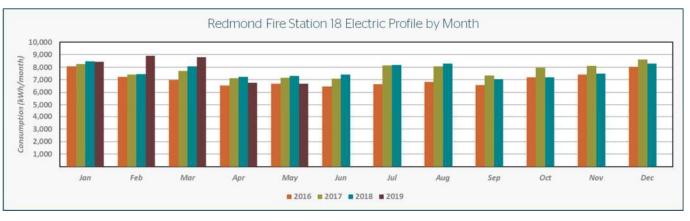


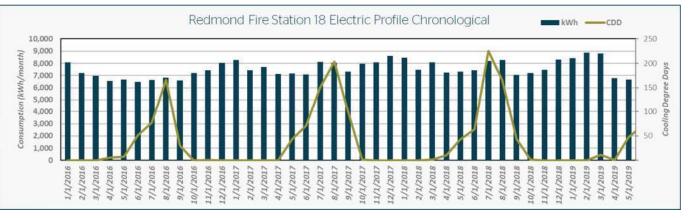
Redmond Fire Station 18 ENERGY STAR Database Benchmark Redmond Fire Station 18 99 kBtu/sf/yr National Median 69 kBtu/sf/yr 25% Better Than Median 52 kBtu/sf/yr 50% Better Than Median 35 kBtu/sf/yr

Insights

The property type of Fire Station 18 is not eligible for an ENERGY STAR score. In this analysis we have compared Fire Station 18's energy usage to building's of similar property type and size using ENERGY STAR's database. In this case Fire Station 18 is an average performer, performing near the national median.

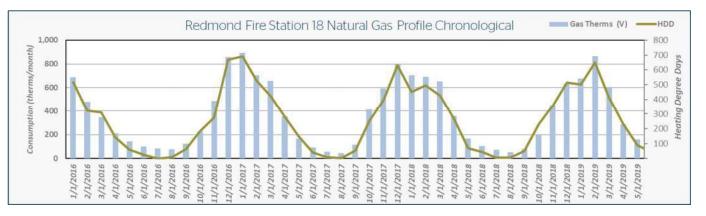
MONTHLY UTILITY DATA PROFILES



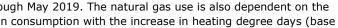


The figure above shows the building's chronological electric profile from January 2016 through May 2019. The electric use at the Fire Station 18 is slightly dependent on the outside air temperature. This can be seen by comparing the increase in consumption with the increase in cooling degree days (base 65°F).

The figure below shows the natural gas profile from January 2016 through May 2019. The natural gas use is also dependent on the outside air temperature. This can be seen by comparing the increase in consumption with the increase in heating degree days (base 60°F).







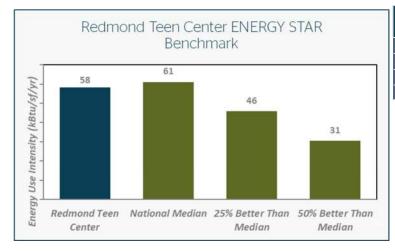


City of Redmond (COR), Teen Center Analysis

ANALYSIS SUMMARY

Er	nergy		Cost								
Electricity Use	62,234	kWh	Electricity Cost	\$6,135	\$/kWh/yr						
Natural Gas Use	2,919	therms	Natural Gas	\$3,382	\$/therm/yr						
CO2e Emissions	39	metric tons/yr	Total Cost	\$9,517	\$/yr						
Total Energy Use	504,259	kBtu	Square Footage	8,650	650 sf						
Energy Use Metrics											
Electricity Use Intensity	25	kBtu/sf/yr	Electricity Cost Intensity	\$1.81	\$/sf/yr						
Natural Gas Use Intensity	34	kBtu/sf/yr	Natural Gas Cost Intensity	\$0.39	\$/sf/yr						
Energy Use Intensity	58	kBtu/sf/yr	Energy Cost Intensity	\$2.20	\$/sf/yr						
Baseline Performance Period	<i>Start Date 5/1/2016</i>	End Date 5/1/2019									

McKinstry has gathered energy use benchmark data in order to compare City of Redmond Teen Center's energy use with similar facilities. Energy Use Intensity refers to the total annual energy use for a facility divided by the facility's square footage. By normalizing energy use by square footage, we are able to compare City of Redmond Teen Center's energy with similar facilities.

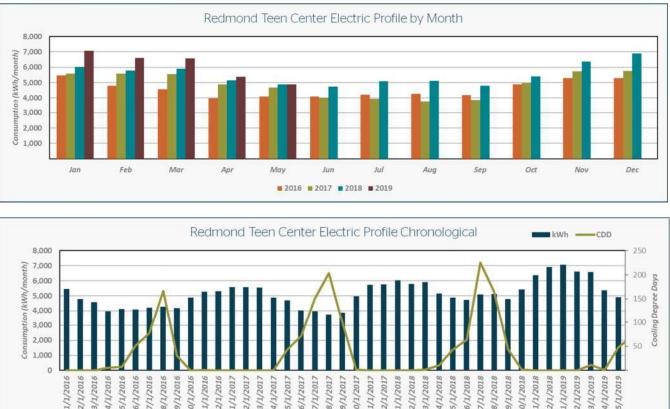


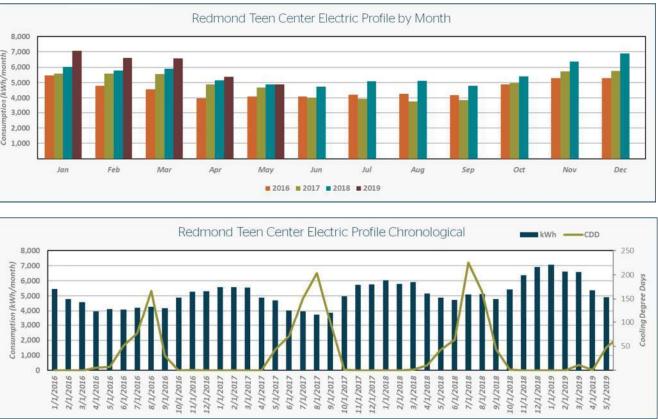
Redmond Teen Center ENERGY STAR Database Benchmark Redmond Teen Center 58 kBtu/sf/yr National Median 61 kBtu/sf/yr 25% Better Than Median 46 kBtu/sf/yr 50% Better Than Median 31 kBtu/sf/yr

Insights

The property type of Teen Center is not eligible for an ENERGY STAR score. In this analysis we have compared Teen Center's energy usage to building's of similar property type and size using ENERGY STAR's database. In this case Teen Center is an average performer, performing near the national median.

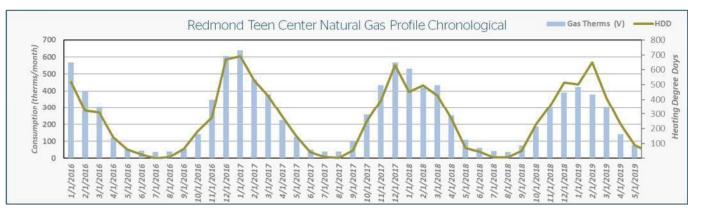
MONTHLY UTILITY DATA PROFILES



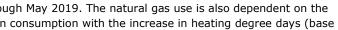


The figure above shows the building's chronological electric profile from January 2016 through May 2019. The electric use at the Teen Center is not dependent on the outside air temperature. This can be seen by comparing the increase in consumption with the increase in cooling degree days (base 65°F). Electric consumption at the Teen Center has increased slightly year by year.

The figure below shows the natural gas profile from January 2016 through May 2019. The natural gas use is also dependent on the outside air temperature. This can be seen by comparing the increase in consumption with the increase in heating degree days (base 60°F). Natural gas usage decreased slightly in 2019.





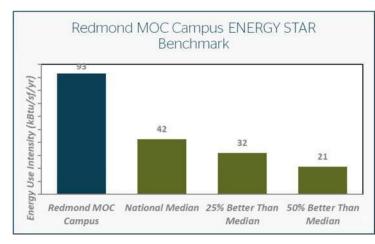


City of Redmond (COR), MOC Campus Analysis

ANALYSIS SUMMARY

Er	iergy		Cost									
Electricity Use	683,984	kWh	Electricity Cost	\$68,175	\$/kWh/yr							
Natural Gas Use	15,720	therms	Natural Gas	\$13,232	\$/therm/yr							
CO2e Emissions	346	metric tons/yr	Total Cost	\$81,408	\$/yr							
Total Energy Use	3,905,774	kBtu	Square Footage	42,000	sf							
	Energy Use Metrics											
Electricity Use Intensity	56	kBtu/sf/yr	Electricity Cost Intensity	\$3.56	\$/sf/yr							
Natural Gas Use Intensity	37	kBtu/sf/yr	Natural Gas Cost Intensity	\$0.32	\$/sf/yr							
Energy Use Intensity	93	kBtu/sf/yr	Energy Cost Intensity	\$3.88	\$/sf/yr							
Baseline Performance Period	<i>Start Date 5/1/2016</i>	End Date 5/1/2019										

McKinstry has gathered energy use benchmark data in order to compare City of Redmond MOC Campus's energy use with similar facilities. Energy Use Intensity refers to the total annual energy use for a facility divided by the facility's square footage. By normalizing energy use by square footage, we are able to compare City of Redmond MOC Campus's energy with similar facilities.

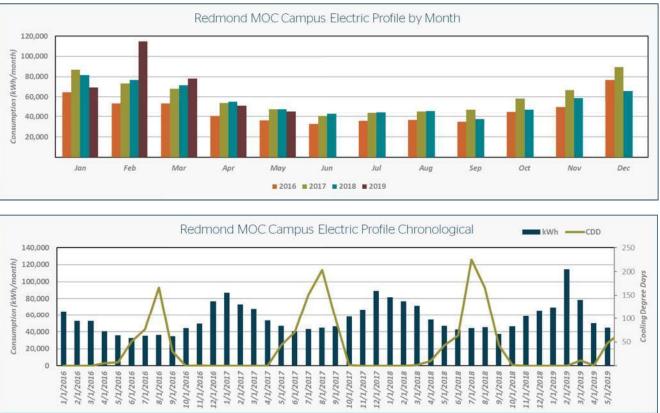


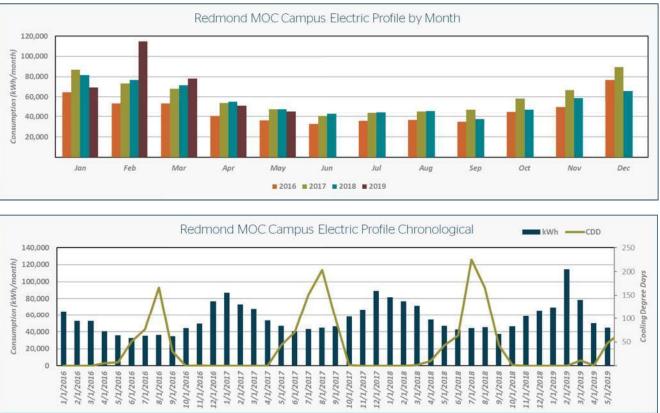
Redmond MOC Campus ENERGY STAR Database Benchmark							
Redmond MOC Campus	93	kBtu/sf/yr					
National Median	42	kBtu/sf/yr					
25% Better Than Median	32	kBtu/sf/yr					
50% Better Than Median	21	kBtu/sf/yr					

Insights

The property type of MOC Campus is not eligible for an ENERGY STAR score. In this analysis we have compared MOC Campus's energy usage to building's of similar property type and size using ENERGY STAR's database. In this case MOC Campus is an average performer, performing near the national median.

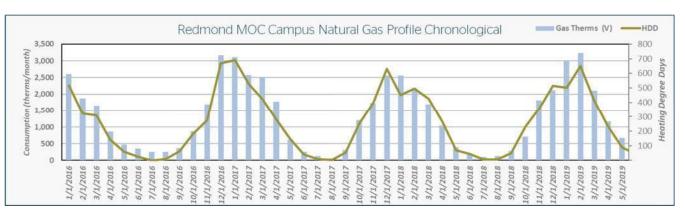
MONTHLY UTILITY DATA PROFILES





The figure above shows the building's chronological electric profile from January 2016 through May 2019. The electric use at the MOC Campus is not dependent on the outside air temperature. This can be seen by comparing the increase in consumption with the increase in cooling degree days (base 65°F). Electric consumption increases during the winter, likely as a result of exterior lighting and electric heat.

The figure below shows the natural gas profile from January 2016 through May 2019. The natural gas use is also dependent on the outside air temperature. This can be seen by comparing the increase in consumption with the increase in heating degree days (base 60°F).







Before and After Energy Utilization Index (EUI) Analysis PSB Ph 2 HPs 1 2 Upgrades - Final

Project	City of Redmond Lighting and PS
Scenario	Lighting and PSB Heat Pump Ph 2
Date	September 20, 2019

			Existing Tota		Proposed Total Proposed Savings		Existing kBtu		Proposed kBtu		Existing EUI			Proposed EUI			I		
Building Sq Ft	Electric	Gas	Total Energy	Electric	Gas	Electric [kWh]	Gas	Electric [kBtu]	Gas [kBtu]	Electric [kBtu]	Gas [kBtu]	Electric	Gas FUI	Total	Electric	Gas	Total	%	
	[kWh]	[Therms]	Cost	[kWh]	[Therms]		[Therm]					EUI	005 201	EUI	EUI	EUI	EUI	Savings	
Redmond Public Safety Building	53,328	1,475,523	12,255	\$135,425	1,405,902	13,675	69,621	-1,420	5,034,485	1,225,525	4,796,938	1,367,525	94.4	23.0	117.4	90.0	25.6	115.6	1.5%
City of Redmond	228,698	2,648,753	65,144	\$307,653	2,282,884	66,434	365,869	-1,290	9,037,545	6,514,400	7,789,200	6,643,400	39.5	28.5	68.0	34.1	29.0	63.1	7.2%
Total	531,803	4,124,276	77,399	\$443,078	3,688,786	80,109	435,490	-2,710	14,072,030	7,739,925	12,586,138	8,010,925	26.5	14.6	41.0	23.7	15.1	38.7	5.6%