Local Government Energy Audit:
Energy Audit Report

Building #37 - Housing 3 - L-P Dorms

101 Vera King Farris Drive

Galloway, New Jersey 08205

Stockton University

July 15, 2019

Draft Report by:

TRC Energy Services

Disclaimer

The goal of this audit report is to identify potential energy efficiency opportunities, help prioritize specific measures for implementation, and provide information about financial incentives that may be available. Most energy conservation measures have received preliminary analysis of feasibility that identifies expected ranges of savings and costs. This level of analysis is usually considered sufficient to establish a basis for further discussion and to help prioritize energy measures.

TRC Energy Services (TRC) reviewed the energy conservation measures and estimates of energy savings were reviewed for technical accuracy. Actual, achieved energy savings depend on behavioral factors and other uncontrollable variables and, therefore, estimates of final energy savings are not guaranteed. TRC and the New Jersey Board of Public Utilities (NJBPU) shall in no event be liable should the actual energy savings vary.

TRC bases estimated installation costs on our experience at similar facilities, pricing from local contractors and vendors, and/or cost estimates from RS Means. We encourage the owner of the facility to independently confirm these cost estimates and to obtain multiple estimates when considering measure installations. Actual installation costs can vary widely based on individual measures and conditions. TRC and NJBPU do not guarantee installed cost estimates and shall in no event be held liable should actual installed costs vary from estimates.

New Jersey's Clean Energy Program (NJCEP) incentive values provided in this report are estimates based on program information available at the time of the report. Incentive levels are not guaranteed. The NJBPU reserves the right to extend, modify, or terminate programs without prior notice. Please review all available program incentives and eligibility requirements prior to selecting and installing any energy conservation measures.

The customer and their respective contractor(s) are responsible to implement energy conservation measures in complete conformance with all applicable local, state and federal requirements.

Table of Contents

Table of Figures

1 EXECUTIVE SUMMARY

The New Jersey Board of Public Utilities (NJBPU) has sponsored this Local Government Energy Audit (LGEA) report for Building #37 - Housing 3 - L-P Dorms (Building #37).

The goal of an LGEA report is to provide you with information on how your facility uses energy, identify energy conservation measures (ECMs) that can reduce your energy use, and provide information and assistance to help facilities implement ECMs. The LGEA report also contains valuable information on financial incentives from New Jersey's Clean Energy Program (NJCEP) for implementing ECMs.

This study was conducted by TRC Energy Services (TRC), as part of a comprehensive effort to assist New Jersey universities in controlling energy costs and protecting our environment by offering a wide range of energy management options and advice.

1.1 Facility Summary

Building #37 is a 58,500 square foot facility comprised of five wings and various space types within a single building. It has three floors and includes dorm rooms, common areas, restrooms, laundry rooms, electrical and mechanical spaces.

Interior lighting at Building #37 consists of linear T8 and T12 fluorescent and compact fluorescent lamps (CFL). Exterior lighting consists of metal halide fixtures. Heating is provided by two boilers in each wing that supply air-handlers with hot water. Cooling is provided by split-system air-conditioning units on the roofs of each wing. A thorough description of the facility and our observations are located in Section 2.

1.2 Your Cost Reduction Opportunities

Energy Conservation Measures

TRC evaluated and recommends six measures that present an opportunity for Building #37 to reduce annual energy costs by roughly $17,356 and annual greenhouse gas emissions by 147,937 pounds of CO_2e. We estimate that if all measures were implemented as recommended, the project would pay for itself in 2.6 years. The breakdown of existing and potential utility costs after project implementation are illustrated in Figure 1 and Figure 2, respectively. These measures could potentially reduce Building 37 - Housing 3 L-P Dorms's annual energy use by 12%.

Figure 1 – Previous 12 Month's Utility Costs

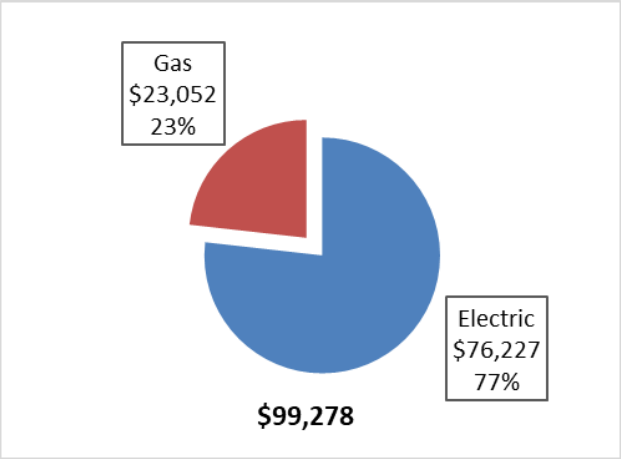
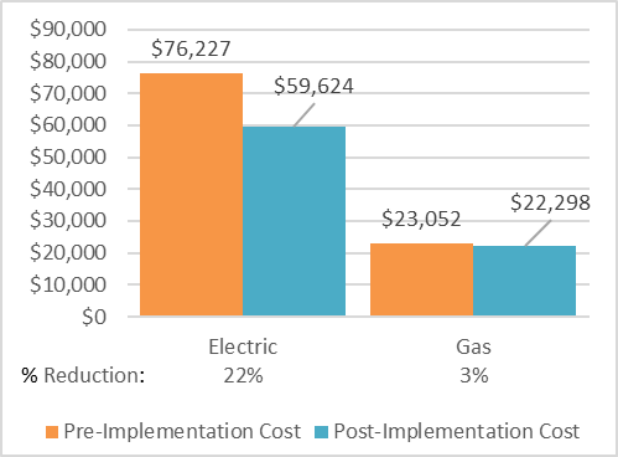


Figure 2 – Potential Post-Implementation Costs



A detailed description of Building #37 - existing energy use can be found in Section 3, "Site Energy Use and Costs."

Estimates of the total cost, energy savings, and financial incentives for the proposed energy efficient upgrades are summarized below in Figure 3. A brief description of each category can be found below and a description of savings opportunities is contained in Section 4, "Energy Conservation Measures."

Figure 3 – Summary of Energy Reduction Opportunities

Energy Conservation Measure		Recommend?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated Install Cost ($)	Estimated Incentive ($)*	Estimated Net Cost ($)	Simple Payback Period (yrs)**	CO_2e Emissions Reduction (lbs)
Lighting Upgrades			**124,735**	**18.2**	**0.0**	**$14,980.65**	**$37,022.71**	**$8,675.00**	**$28,347.71**	**1.9**	**125,607**
ECM 1	Install LED Fixtures	Yes	4,522	0.7	0.0	$543.13	$4,829.83	$500.00	$4,329.83	8.0	4,554
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	Yes	8,403	1.5	0.0	$1,009.19	$3,788.63	$375.00	$3,413.63	3.4	8,462
ECM 3	Retrofit Fixtures with LED Lamps	Yes	111,810	16.0	0.0	$13,428.32	$28,404.26	$7,800.00	$20,604.26	1.5	112,591
Lighting Control Measures			**13,505**	**1.2**	**0.0**	**$1,621.97**	**$11,100.00**	**$1,050.00**	**$10,050.00**	**6.2**	**13,600**
ECM 4	Install Occupancy Sensor Lighting Controls	Yes	9,647	0.8	0.0	$1,158.55	$8,100.00	$1,050.00	$7,050.00	6.1	9,714
ECM 5	Install High/Low Lighitng Controls	Yes	3,859	0.3	0.0	$463.42	$3,000.00	$0.00	$3,000.00	6.5	3,886
Domestic Water Heating Upgrade			**0**	**0.0**	**74.6**	**$753.53**	**$7,127.70**	**$0.00**	**$7,127.70**	**9.5**	**8,730**
ECM 6	Install Low-Flow Domestic Hot Water Devices	Yes	0	0.0	74.6	$753.53	$7,127.70	$0.00	$7,127.70	9.5	8,730
TOTALS FOR HIGH PRIORITY MEASURES			**138,240**	**19.3**	**74.6**	**$17,356.15**	**$55,250.41**	**$9,725.00**	**$45,525.41**	**2.6**	**147,937**
TOTALS FOR ALL EVALUATED MEASURES			**138,240**	**19.3**	**74.6**	**$17,356.15**	**$55,250.41**	**$9,725.00**	**$45,525.41**	**2.6**	**147,937**

* - All incentives presented in this table are based on NJ Smart Start Building equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

** - Simple Payback Period is based on net measure costs (i.e. after incentives).

Lighting Upgrades generally involve the replacement of existing lighting components, such as lamps and ballasts, or the entire fixture, with higher efficiency lighting components. These measures save energy by reducing the power used by the components through improved electrical efficiency.

Lighting Control measures generally involve the installation of automated controls to turn off or reduce light output when it's not needed. Automated controls reduce reliance on occupant behavior for activating lights. These measures save energy by minimizing the time lights are on.

Domestic Hot Water (DHW) upgrade measures generally involve replacing older, inefficient, domestic water heating systems with modern energy efficient systems. New DHW heating systems can provide equivalent, or greater, water heating capacity compared to older systems at a reduced energy cost. These measures save energy by reducing fuel use for heating through improved heating efficiency and reduced standby losses.

Energy Efficient Practices

TRC also identified six low-cost, or no-cost, energy efficient practices. A facility's energy performance can be significantly improved by employing certain behavioral or operational adjustments, and by performing better routine maintenance on building systems. These practices can extend equipment life, improve occupant comfort, provide better health and safety, as well as reduce annual energy, operations, and maintenance costs. Potential opportunities identified at Building #37:

- Perform Proper Lighting Maintenance
- Develop a Lighting Maintenance Schedule
- Clean Evaporator/Condenser Coils on AC Systems
- Perform Proper Boiler Maintenance
- Perform Proper Water Heater Maintenance
- Water Conservation

For details on these energy efficient practices, please refer to Section 5.

On-Site Generation Measures

TRC evaluated the potential for installing on-site generation for Building #37. Based on the configuration of the site and its loads, there is a moderate potential for installing a photovoltaic (PV) array.

Figure 4 – Photovoltaic Potential

Potential	Medium	
System Potential	54	kW DC STC
Electric Generation	64,334	kWh/yr
Displaced Cost	$5,600	/yr
Installed Cost	$140,400	

For details on our evaluation and on-site generation potential, please refer to Section 6.

1.3 Implementation Planning

To realize the energy savings from the ECMs listed in this report, a project implementation plan must be developed. Available capital must be considered and whether it is best to pursue individual ECMs separately, groups of ECMs, or a comprehensive approach in which all ECMs are implemented together, possibly in conjunction with other facility upgrades or improvements.

Rebates, incentives, and financing are available from NJCEP, as well as other sources, to help reduce the costs associated with the implementation of energy efficiency projects. Prior to implementing any measures, please review the relevant incentive program guidelines. This is an important step because, in most cases, you will need to submit applications for the incentives prior to purchasing materials or starting installation.

The ECMs outlined in this report may qualify under the following program(s):

- SmartStart
- Energy Savings Improvement Program

For facilities that want only selected individual measures, or are planning to implement selected measures over a period of multiple years, incentives are available through the SmartStart program. To participate, you may use internal resources or an outside firm or contractor to perform the final design of the ECM(s) and the installation. Program pre-approval is required for some SmartStart incentives, so only after this step should you proceed with ECM installation. The incentive estimates listed above in Figure 3 are based on the SmartStart program. More details on this program and others are available in Section 8.

For larger facilities with limited capital availability to implement ECMs, project financing may be available through the Energy Savings Improvement Program (ESIP). Supported directly by the NJBPU, ESIP provides government agencies with project development, design, and implementation support services, as well as attractive financing, for implementing ECMs. An LGEA report, or other approved energy audit, is required for participation in ESIP. Please refer to Section 8.3 for additional information on the ESIP Program.

The Demand Response (DR) Energy Aggregator is a non-NJCEP program designed to reduce electric loads at commercial facilities when wholesale electricity prices are high or the reliability of the electric grid is threatened due to peak power demand. DR service providers, known as curtailment service providers (CSPs) are registered with PJM, the independent system operator for the mid-Atlantic state region responsible for maintaining the electric grid reliability. By enabling grid operators to call upon commercial facilities to reduce their electric usage during peak demand, the grid becomes more reliable and overall transmission costs are reduced for all ratepayers. CSPs make regular payments to medium and large consumers of electric power for their participation in DR programs. Program participation is voluntary, and facilities receive payments whether or not they are called upon to curtail their electric load during peak demand. Refer to Section 7 for additional information on the DR program.

Additional information on relevant incentive programs is located in Section 8. You may also check the following website for more details: www.njcleanenergy.com/ci

2 FACILITY INFORMATION AND EXISTING CONDITIONS

2.1 Project Contacts

Figure 5 – Project Contacts

Name	Role	E-Mail	Phone #
Customer			
Charles (Skip) West , AIA	Director, Office of Facilities Planning & Construction	Charles.West@stockton.edu	(609) 626-5522
Designated Representative			
Michael J. Ferraro II	Energy Systems Specialist	Michael.Ferraro@stockton.edu	(609) 652-4884
TRC Energy Services			
Vish Nimbalkar, P.E.	Auditor	VNaikNimbalkar@trcsolutions.com	(732) 855-0033

2.2 General Site Information

On June 22, 2018, TRC performed an energy audit at Building #37 located in Galloway, New Jersey. TRC's team met with Michael J. Ferraro II to review the facility operations and help focus our investigation on specific energy-using systems.

Building #37 is a 58,500 square foot facility comprised of various space types within a single building and has five wings. The building is three floors and includes dorm rooms, common areas, restrooms, laundry rooms, electrical and mechanical spaces.

Interior lighting at Building #37 consists of linear T8 and T12 fluorescent and compact fluorescent lamps (CFL). Exterior lighting consists of metal halide fixtures. Heating is provided by two boilers in each wing that supply air handlers with hot water coils. Cooling is provided by split-system air-conditioning units on the roof of each wing.

The building was constructed in 1986.

2.3 Building Occupancy

The facility is open and accessible to residents 24 hours a day, every day, ten months of the year. The typical schedule is presented below. During a typical day, the facility is occupied by approximately 300 students.

Figure 6 - Building Schedule

Building Name	Weekday/Weekend	Operating Schedule
Building 37 - Housing 3 - L-P Dorms	Weekday	12:00 AM to 12:00 AM
Building 37 - Housing 3 - L-P Dorms	Weekend	12:00 AM to 12:00 AM

2.4 Building Envelope

The building is constructed of concrete block and structural steel, with a stone façade or stucco. The building has pitched roofs with asphalt tiles that were recently replaced, and small areas with flat roofs covered with rolled asphalt. The flat roof area is in need of repair and should be further studied/confirmed by a qualified roofing contractor. The building has double-pane windows that are in good condition and show little sign of excessive infiltration. The exterior doors are constructed of aluminum and are in good condition.

Figure 7 - Building Envelope

2.5 On-Site Generation

Stockton University installed a 1,200 kW, direct current (DC) solar energy project in March 2015. The project included PV arrays on parking lot canopies, one of which is interconnected near Building #37. The system provides 6% of the electricity required by the campus.

Marina Energy is the power purchase agreement provider and financier of the solar energy system.

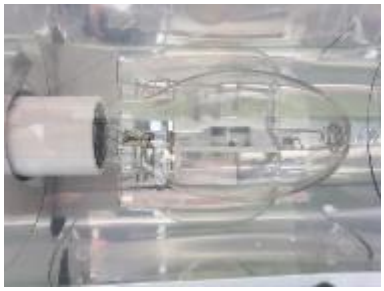
2.6 Energy-Using Systems

Lighting System

Interior lighting at the facility is provided mostly by linear, 32-Watt, fluorescent T8 lamps with electronic ballasts, as well as some linear, T12 fluorescent and compact fluorescent lamps (CFL). Most of the linear fluorescent fixtures are 1-lamp or 2-lamp, 4-foot long troffers with diffusers.

Lighting control in most spaces is provided by wall switches. The building's exterior lighting is minimal and consists of metal halide fixtures that are controlled by photocells.

Figure 8 – Lighting Technologies



Please see **Appendix A: Equipment Inventory & Recommendations** for a list of the facility's lighting equipment.

Hot Water Heating System

The hot water system consists of five, Slat/Fin 112 kBtu/hr output condensing boilers and five Weil-McLain 140 kBtu/hr output non-condensing boilers. The condensing boilers have a nominal combustion efficiency of 93% and the non-condensing boilers have a nominal combustion efficiency of 83%. The boilers are configured in a constant flow primary distribution each with two hot water pumps. Each boiler is supplied by a dedicated 0.25 horse power (HP) pump. The boilers provide hot water to air handlers in the attics throughout the facility.

The boilers are relatively new, in good condition, and well maintained.

Figure 9 – Heating Hot Water Equipment

Please see **Appendix A: Equipment Inventory & Recommendations** for an inventory of facility's heating equipment.

Direct Expansion Air Conditioning System (DX)

Each wing has five, Trane® split-system air-conditioning units (a total of 25 in the facility) on the roof which provide cooling to the building. Each wing has a unit with cooling capacities of 2.5 tons, 3 tons, 4 tons, 5 tons, and 7.5 tons. There are five air handlers per wing associated with the split AC units. Each air handler has a constant volume supply fan – one with a 0.5 HP motor, three with a 1 HP motor, and one with a 3 HP motor.

The units are controlled by individual thermostats located in zones.

Figure 10 – Air-Conditioning Equipment


Please see **Appendix A: Equipment Inventory & Recommendations** for a list of the facility's air conditioning equipment.

Domestic Hot Water Heating System

The domestic hot water heating system for the facility consists of five Slate® gas-fired, hot water heaters with an input rating of 250 kBtu/hr and a nominal efficiency of 90%. Each water heater has a 75-gallon storage tank. Five 1/8 HP recirculation pumps distribute hot water to the wings of the building. The recirculation pumps operate continuously.

Figure 11 – Domestic Hot Water Equipment


Please see **Appendix A: Equipment Inventory & Recommendations** for an inventory of the facility's domestic hot water equipment.

Building Plug Load

There are a variety of plug-load appliances throughout the facility, including TVs, mini-fridges, and microwaves, in each room as well as clothes washers and dryers in each wing.

Figure 12 – Plug Load Appliances



Please see **Appendix A: Equipment Inventory & Recommendations** for an inventory of the facility's plug load equipment.

2.7 Water-Using Systems

There are 15 restrooms in this facility, one per floor of each wing, each with showers. A sampling of restrooms showed faucets that are rated for 1.5 gallons per minute (gpm) or higher and the showerheads are rated for 2.5 gpm or higher.

3 SITE ENERGY USE AND COSTS

Utility data for electricity and natural gas was analyzed to identify opportunities for savings. In addition, data for electricity and natural gas was evaluated to determine the annual energy performance metrics for the building in energy cost per square foot and energy usage per square foot. These metrics are an estimate of the relative energy efficiency of this building. There are a number of factors that could cause the energy use of this building to vary from the "typical" energy usage profile for facilities with similar characteristics. Local weather conditions, building age and insulation levels, equipment efficiency, daily occupancy hours, changes in occupancy throughout the year, equipment operating hours, and energy efficient behavior of occupants all contribute to benchmarking scores. Please refer to the Benchmarking section within Section 3.4 for additional information.

3.1 Total Cost of Energy

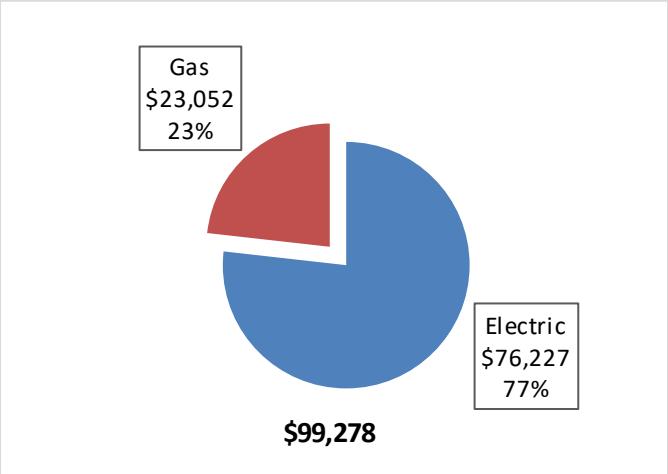
The following energy consumption and cost data is based on the last 12-month period of utility billing data that was provided for each utility. A profile of the annual energy consumption and energy cost of the facility was developed from this information.

Figure 13 - Utility Summary

Utility Summary for Building 37 - Housing 3 - L-P Dorms		
Fuel	Usage	Cost
Electricity	634,693 kWh	$76,227
Natural Gas	22,810 Therms	$23,052
Total		$99,278

The current annual energy cost for this facility is $99,278 as shown in the chart below.

Figure 14 - Energy Cost Breakdown



3.2 Electricity Usage

Electricity is provided by Atlantic City Electric. The average electric cost over the past 12 months was $0.120/kWh, which is the blended rate that includes energy supply, distribution, and other charges. This rate is used throughout the analyses in this report to assess energy costs and savings. Electricity demand and consumption is greatest in August due to increased cooling loads served by electric air-conditioning equipment. The monthly electricity consumption and peak demand are shown in the chart below.

Figure 15 - Graph of 12 Months of Electric Usage & Demand

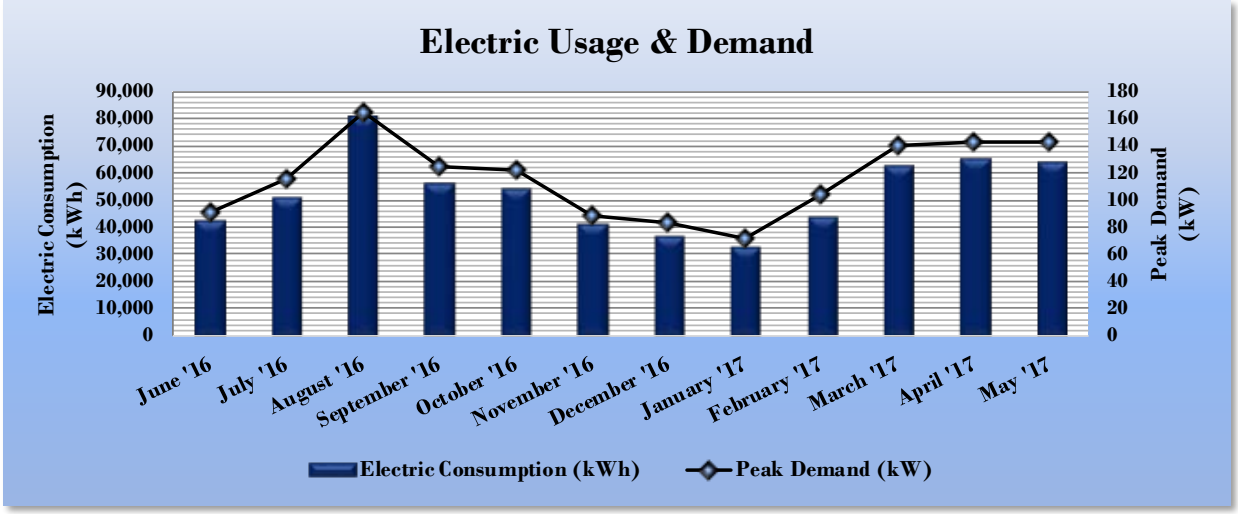


Figure 16 - Table of 12 Months of Electric Usage & Demand

Electric Billing Data for Building 37 - Housing 3 - L-P Dorms						
Period Ending	Days in Period	Electric Usage (kWh)	Demand (kW)	Demand Cost	Total Electric Cost	TRC Estimated Usage?
6/30/16	30	42,636	91		$5,121	Yes
7/31/16	31	51,300	116		$6,161	Yes
8/31/16	31	81,363	165		$9,772	Yes
9/30/16	30	56,390	125		$6,772	Yes
10/31/16	31	54,410	122		$6,535	Yes
11/30/16	30	41,477	89		$4,981	Yes
12/31/16	31	37,061	83		$4,451	Yes
1/31/17	31	33,286	72		$3,998	Yes
2/28/17	28	43,980	104		$5,282	Yes
3/31/17	31	63,128	140		$7,582	Yes
4/30/17	30	65,709	143		$7,892	Yes
5/31/17	31	63,954	143		$7,681	Yes
Totals	365	634,693	165	$0	$76,227	12
Annual	365	634,693	165	$0	$76,227	

3.3 Natural Gas Usage

Natural gas is provided by South Jersey Gas. The average gas cost for the past 12 months is $1.011/therm, which is the blended rate used throughout the analyses in this report. The monthly gas consumption is shown in the chart below, reflecting a gas, space-heating profile.

Figure 17 - Graph of 12 Months of Natural Gas Usage

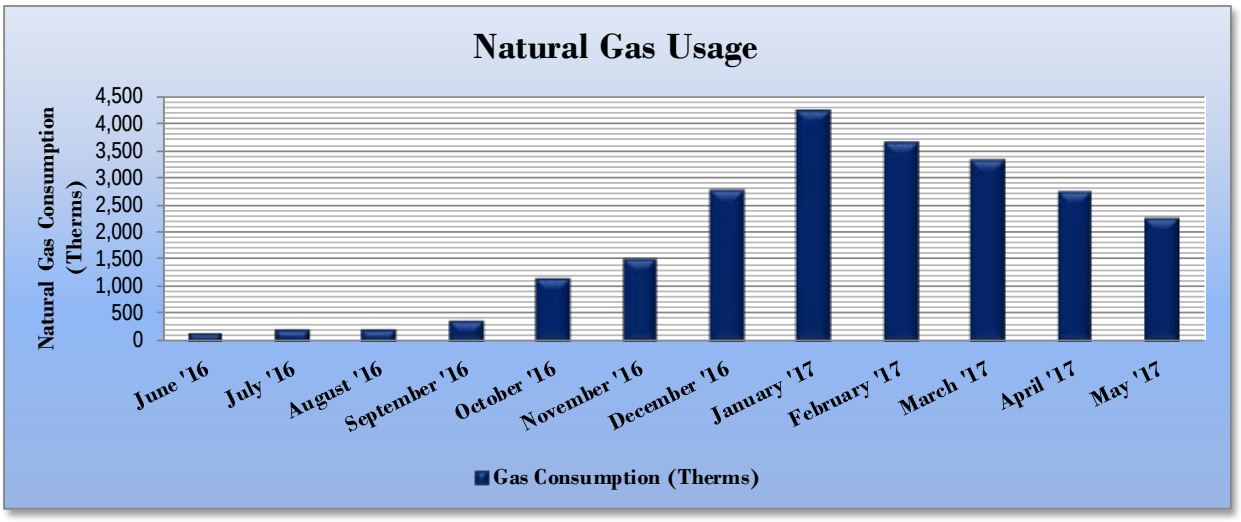


Figure 18 - Table of 12 Months of Natural Gas Usage

Gas Billing Data for Building 37 - Housing 3 - L-P Dorms				
Period Ending	Days in Period	Natural Gas Usage (Therms)	Natural Gas Cost	TRC Estimated Usage?
6/30/16	30	179	$181	Yes
7/31/16	31	238	$241	Yes
8/31/16	31	224	$226	Yes
9/30/16	30	383	$387	Yes
10/31/16	31	1,180	$1,193	Yes
11/30/16	30	1,525	$1,541	Yes
12/31/16	31	2,809	$2,839	Yes
1/31/17	31	4,255	$4,300	Yes
2/28/17	28	3,660	$3,698	Yes
3/31/17	31	3,335	$3,371	Yes
4/30/17	30	2,761	$2,791	Yes
5/31/17	31	2,260	$2,284	Yes
Totals	365	22,810	$23,052	12
Annual	365	22,810	$23,052	

3.4 Benchmarking

This facility was benchmarked using *Portfolio Manager®*, an online tool created and managed by the U.S. Environmental Protection Agency (EPA) through the ENERGY STAR® program. Portfolio Manager® analyzes your building's consumption data, cost information, and operational use details and then compares its performance against a national median for similar buildings of its type. Metrics provided by this analysis are energy use intensity (EUI) and an ENERGY STAR® score for select building types.

EUI is a measure of a facility's energy consumption per square foot, and it is the standard metric for comparing buildings' energy performance. Comparing the EUI of a building with the national median EUI for that building type indicates whether the building uses more or less energy than similar buildings of its type on a square foot basis. EUI is presented in terms of "site energy" and "source energy". Site energy is the amount of fuel and electricity consumed by a building as reflected in utility bills. Source energy includes fuel consumed to generate electricity consumed at the site, factoring in electric production and distribution losses for the region.

Figure 19 - Energy Use Intensity Comparison – Existing Conditions

Energy Use Intensity Comparison - Existing Conditions		
	Building 37 - Housing 3 - L-P Dorms	National Median Building Type: Higher Education - Public
Source Energy Use Intensity (kBtu/ft^2)	157.2	262.6
Site Energy Use Intensity (kBtu/ft^2)	76.0	130.7

Implementation of all recommended measures in this report would improve the building's estimated EUI significantly, as shown in the table below:

Figure 20 - Energy Use Intensity Comparison – Following Installation of Recommended Measures

Energy Use Intensity Comparison - Following Installation of Recommended Measures		
	Building 37 - Housing 3 - L-P Dorms	National Median Building Type: Higher Education - Public
Source Energy Use Intensity (kBtu/ft^2)	130.5	262.6
Site Energy Use Intensity (kBtu/ft^2)	66.7	130.7

Many types of commercial buildings are also eligible to receive an ENERGY STAR® score. This score is a percentile ranking from 1 to 100. It compares your building's energy performance to similar buildings nationwide. A score of 50 represents median energy performance, while a score of 75 shows your building performs better than 75 percent of all similar buildings nationwide and may be eligible for ENERGY STAR® certification. This facility has a current score of 60.

A Portfolio Manager® Statement of Energy Performance (SEP) was generated for this facility, see **Appendix B: EPA Statement of Energy Performance**.

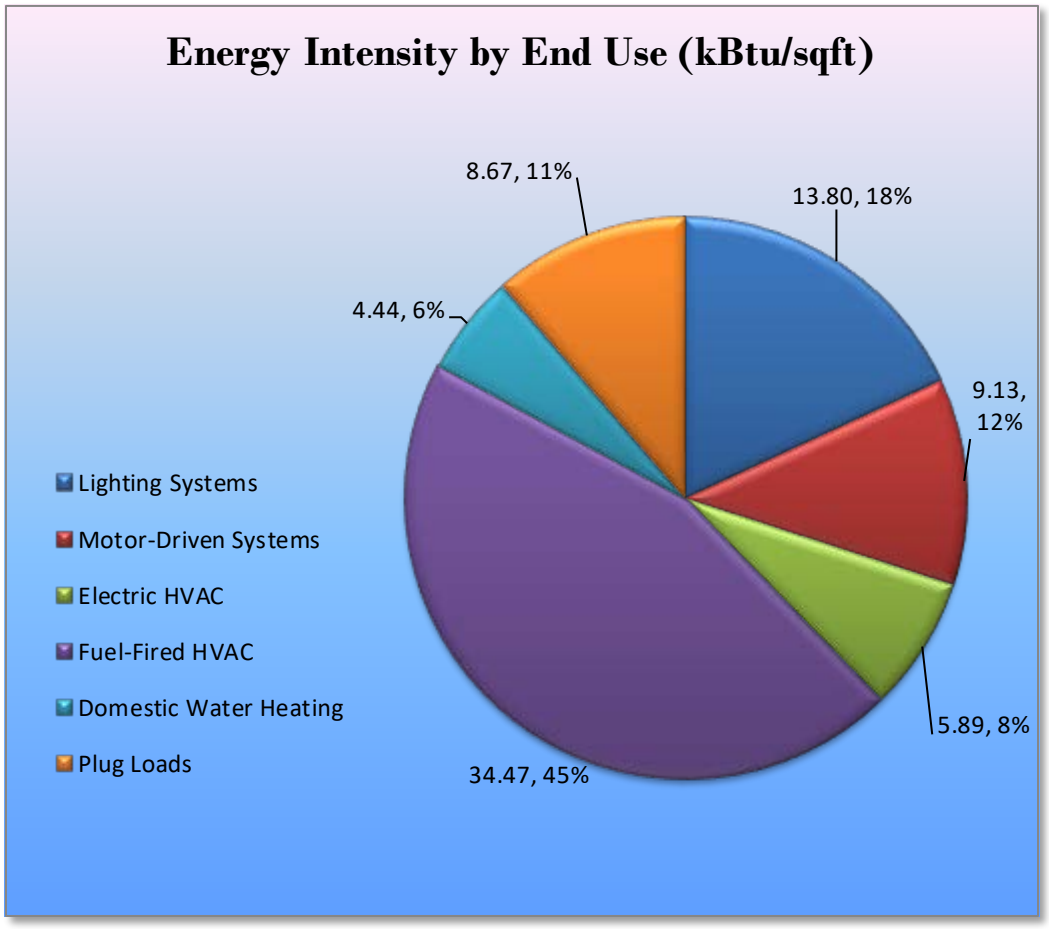
For more information on ENERGY STAR® certification go to: https://www.energystar.gov/buildings/facility-owners-and-managers/existing-buildings/earn-recognition/energy-star-certification/how-app-1

A Portfolio Manager® account has been created online for your facility and you will be provided with the login information for the account. We encourage you to update your utility information in Portfolio Manager® regularly, so that you can keep track of your building's performance. Free online training is available to help you use ENERGY STAR® Portfolio Manager® to track your building's performance at: https://www.energystar.gov/buildings/training.

3.5 Energy End-Use Breakdown

In order to provide a complete overview of energy consumption across building systems, an energy balance was performed at this facility. An energy balance utilizes standard practice engineering methods to evaluate all components of the various electric and fuel-fired systems found in a building to determine their proportional contribution to overall building energy usage. This chart of energy end uses highlights the relative contribution of each equipment category to total energy usage. This can help determine where the greatest benefits might be found from energy efficiency measures.

Figure 21 - Energy Balance (% and kBtu/SF)



4 Energy Conservation Measures

Level of Analysis

The goal of this audit report is to identify potential energy efficiency opportunities, help prioritize specific measures for implementation, and provide information to Building #37 regarding financial incentives that they may qualify for in order to implement the recommended measures. For this report, most measures have received only a preliminary analysis of feasibility, which identifies expected ranges of savings and costs. This level of analysis is usually considered sufficient to demonstrate project cost-effectiveness and help prioritize energy measures. Savings are based on the New Jersey's Clean Energy Program protocols to measure resource savings dated June 29, 2016, approved by the New Jersey Board of Public Utilities. Further analysis or investigation may be required to calculate more precise savings based on specific circumstances. A higher level of investigation may be necessary to support any custom SmartStart or Pay for Performance, or Direct Install incentive applications. Financial incentives for the ECMs identified in this report have been calculated based the NJCEP prescriptive SmartStart program. Some measures and proposed upgrade projects may be eligible for higher incentives than those shown below through other NJCEP programs as described in Section 8.

The following sections describe the evaluated measures.

4.1 Recommended ECMs

The measures below have been evaluated by the auditor and are recommended for implementation at the facility.

Figure 22 – Summary of Recommended ECMs

Energy Conservation Measure		Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated Install Cost ($)	Estimated Incentive ($)*	Estimated Net Cost ($)	Simple Payback Period (yrs)**	CO_2e Emissions Reduction (lbs)
Lighting Upgrades		**124,735**	**18.2**	**0.0**	**$14,980.65**	**$37,022.71**	**$8,675.00**	**$28,347.71**	**1.9**	**125,607**
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ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	8,403	1.5	0.0	$1,009.19	$3,788.63	$375.00	$3,413.63	3.4	8,462
ECM 3	Retrofit Fixtures with LED Lamps	111,810	16.0	0.0	$13,428.32	$28,404.26	$7,800.00	$20,604.26	1.5	112,591
Lighting Control Measures		**13,505**	**1.2**	**0.0**	**$1,621.97**	**$11,100.00**	**$1,050.00**	**$10,050.00**	**6.2**	**13,600**
ECM 4	Install Occupancy Sensor Lighting Controls	9,647	0.8	0.0	$1,158.55	$8,100.00	$1,050.00	$7,050.00	6.1	9,714
ECM 5	Install High/Low Lighitng Controls	3,859	0.3	0.0	$463.42	$3,000.00	$0.00	$3,000.00	6.5	3,886
Domestic Water Heating Upgrade		**0**	**0.0**	**74.6**	**$753.53**	**$7,127.70**	**$0.00**	**$7,127.70**	**9.5**	**8,730**
ECM 6	Install Low-Flow Domestic Hot Water Devices	0	0.0	74.6	$753.53	$7,127.70	$0.00	$7,127.70	9.5	8,730
TOTALS		**138,240**	**19.3**	**74.6**	**$17,356.15**	**$55,250.41**	**$9,725.00**	**$45,525.41**	**2.6**	**147,937**

* - All incentives presented in this table are based on NJ Smart Start Building equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

** - Simple Payback Period is based on net measure costs (i.e. after incentives).

4.1.1 Lighting Upgrades

Recommended upgrades to existing lighting fixtures are summarized in Figure 23 below.

Figure 23 – Summary of Lighting Upgrade ECMs

Energy Conservation Measure		Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated Install Cost ($)	Estimated Incentive ($)	Estimated Net Cost ($)	Simple Payback Period (yrs)	CO_2e Emissions Reduction (lbs)
Lighting Upgrades		124,735	18.2	0.0	$14,980.65	$37,022.71	$8,675.00	$28,347.71	1.9	125,607
ECM 1	Install LED Fixtures	4,522	0.7	0.0	$543.13	$4,829.83	$500.00	$4,329.83	8.0	4,554
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	8,403	1.5	0.0	$1,009.19	$3,788.63	$375.00	$3,413.63	3.4	8,462
ECM 3	Retrofit Fixtures with LED Lamps	111,810	16.0	0.0	$13,428.32	$28,404.26	$7,800.00	$20,604.26	1.5	112,591

During lighting upgrade planning and design, we recommend a comprehensive approach that considers both the efficiency of the lighting fixtures and how they are controlled. Please see **Appendix A: Equipment Inventory & Recommendations** for a detailed list of the locations and recommended upgrades for each lighting measure.

ECM 1: Install LED Fixtures

Summary of Measure Economics

Interior/ Exterior	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated Install Cost ($)	Estimated Incentive ($)	Estimated Net Cost ($)	Simple Payback Period (yrs)	CO_2e Emissions Reduction (lbs)
Interior	0	0.0	0.0	$0.00	$0.00	$0.00	$0.00	0.0	0
Exterior	4,522	0.7	0.0	$543.13	$4,829.83	$500.00	$4,329.83	8.0	4,554

Measure Description

We recommend replacing exterior fixtures containing metal halide lamps with new high performance LED light fixtures. This measure saves energy by installing LEDs which use less power than other technologies with a comparable light output.

Additional savings from lighting maintenance can be anticipated since LEDs have longer lifetimes than existing sources.

ECM 2: Retrofit Fluorescent Fixtures with LED Lamps and Drivers

Summary of Measure Economics

Interior/ Exterior	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated Install Cost ($)	Estimated Incentive ($)	Estimated Net Cost ($)	Simple Payback Period (yrs)	CO_2e Emissions Reduction (lbs)
Interior	8,403	1.5	0.0	$1,009.19	$3,788.63	$375.00	$3,413.63	3.4	8,462
Exterior	0	0.0	0.0	$0.00	$0.00	$0.00	$0.00	0.0	0

Measure Description

We recommend retrofitting interior linear T12 fluorescent fixtures by removing fluorescent tubes and ballasts and replacing them with LEDs and LED drivers (if necessary), which are designed to be used with retrofitted, fluorescent fixtures. The measure uses the existing fixture housing, but replaces the rest of the components with more efficient lighting technology. This measure saves energy with the use of LEDs, which use less power than other lighting technologies yet provide equivalent lighting output for the space.

Additional savings from lighting maintenance can be anticipated since LEDs have lifetimes which are more than twice that of fluorescent tubes.

ECM 3: Retrofit Fixtures with LED Lamps

Summary of Measure Economics

Interior/ Exterior	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated Install Cost ($)	Estimated Incentive ($)	Estimated Net Cost ($)	Simple Payback Period (yrs)	CO_2e Emissions Reduction (lbs)
Interior	111,810	16.0	0.0	$13,428.32	$28,404.26	$7,800.00	$20,604.26	1.5	112,591
Exterior	0	0.0	0.0	$0.00	$0.00	$0.00	$0.00	0.0	0

Measure Description

We recommend retrofitting interior linear T8 fluorescent and CFL lighting technologies with LED lamps. Many LED tube lamps are direct replacements for existing fluorescent lamps and can be installed while leaving the fluorescent fixture ballast in place. LED bulbs can be used in existing fixtures as a direct replacement for most other lighting technologies. This measure saves energy by installing LEDs which use less power than other lighting technologies, yet provide equivalent lighting output for the space.

Additional savings from lighting maintenance can be anticipated since LEDs have lifetimes that are more than twice that of fluorescent sources.

4.1.2 Lighting Control Measures

Figure 24 – Summary of Lighting Control ECMs

Energy Conservation Measure		Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated Install Cost ($)	Estimated Incentive ($)	Estimated Net Cost ($)	Simple Payback Period (yrs)	CO_2e Emissions Reduction (lbs)
Lighting Control Measures		13,505	1.2	0.0	$1,621.97	$11,100.00	$1,050.00	$10,050.00	6.2	13,600
ECM 4	Install Occupancy Sensor Lighting Controls	9,647	0.8	0.0	$1,158.55	$8,100.00	$1,050.00	$7,050.00	6.1	9,714
ECM 5	Install High/Low Lighitng Controls	3,859	0.3	0.0	$463.42	$3,000.00	$0.00	$3,000.00	6.5	3,886

During lighting upgrade planning and design, we recommend a comprehensive approach that considers both the efficiency of the lighting fixtures and how they are controlled. Please see **Appendix A: Equipment Inventory & Recommendations** for a detailed list of the locations and recommended lighting controls upgrades for each lighting measure.

ECM 4: Install Occupancy Sensor Lighting Controls

Summary of Measure Economics

Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated Install Cost ($)	Estimated Incentive ($)	Estimated Net Cost ($)	Simple Payback Period (yrs)	CO_2e Emissions Reduction (lbs)
9,647	0.8	0.0	$1,158.55	$8,100.00	$1,050.00	$7,050.00	6.1	9,714

Measure Description

We recommend installing occupancy sensors to control lighting fixtures that are currently controlled by manual switches in restrooms and common spaces. Lighting sensors detect occupancy using ultrasonic and/or infrared sensors. For most spaces, we recommend lighting controls that use dual technology sensors, which can eliminate the possibility of any lights turning off unexpectedly. Lighting systems are enabled when an occupant is detected. Fixtures are automatically turned off after an area has been vacant for a preset period. Some controls also provide dimming options and all modern occupancy controls can be easily over-ridden by room occupants to allow them to manually turn fixtures on or off, as desired. Energy savings results from only operating lighting systems when they are required.

Occupancy sensors may be mounted on the wall at existing switch locations, mounted on the ceiling, or in remote locations. In general, wall switch replacement sensors are recommended for single occupant offices and other small rooms. Ceiling-mounted or remote mounted sensors are used in locations without local switching or where wall switches are not in the line-of-sight of the main work area or in large spaces. We recommend a comprehensive approach to lighting design that upgrades both the lighting fixtures and the controls for maximum energy savings and improved lighting for occupants.

ECM 5: Install High/Low Lighting Controls

Summary of Measure Economics

Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated Install Cost ($)	Estimated Incentive ($)	Estimated Net Cost ($)	Simple Payback Period (yrs)	CO_2e Emissions Reduction (lbs)
3,859	0.3	0.0	$463.42	$3,000.00	$0.00	$3,000.00	6.5	3,886

Measure Description

We recommend installing occupancy sensors to provide dual level lighting control for lighting fixtures in spaces that are infrequently occupied but may require some level of continuous lighting for safety and security. Recommended areas for such lighting controls are interior corridors.

Lighting fixtures with these controls operate at default low levels when the area is not occupied to provide minimal lighting to meet security or safety requirements. Sensors detect occupancy using ultrasonic and/or infrared sensors. The lighting systems are switched to full lighting levels whenever an occupant is detected. Fixtures are automatically switched back to low level after an area has been vacant for a preset period of time. Energy savings results from only providing full lighting levels when it is required.

For this type of measure, the occupancy sensors will generally be ceiling- or fixture-mounted. Sufficient sensor coverage needs to be provided to ensure that lights turn on in each area as an occupant approaches.

Additional savings from reduced lighting maintenance may also result from this measure, due to reduced lamp operation.

4.1.3 Domestic Hot Water Heating System Upgrades

Our recommendations for domestic hot water (DHW) heating system improvements are summarized in Figure 25 below.

Figure 25 - Summary of Domestic Water Heating ECMs

Energy Conservation Measure		Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated Install Cost ($)	Estimated Incentive ($)	Estimated Net Cost ($)	Simple Payback Period (yrs)	CO_2e Emissions Reduction (lbs)
Domestic Water Heating Upgrade		**0**	**0.0**	**74.6**	**$753.53**	**$7,127.70**	**$0.00**	**$7,127.70**	**9.5**	**8,730**
ECM 6	Install Low-Flow Domestic Hot Water Devices	0	0.0	74.6	$753.53	$7,127.70	$0.00	$7,127.70	9.5	8,730

Please see **Appendix A: Equipment Inventory & Recommendations** for more details on the facility's existing DHW equipment and recommended system upgrades.

ECM 6: Install Low-Flow DHW Devices

Summary of Measure Economics

Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated Install Cost ($)	Estimated Incentive ($)	Estimated Net Cost ($)	Simple Payback Period (yrs)	CO_2e Emissions Reduction (lbs)
0	0.0	74.6	$753.53	$7,127.70	$0.00	$7,127.70	9.5	8,730

Measure Description

We evaluated installing low-flow DHW devices to reduce overall hot water demand on lavatory aerators and showerheads and recommend them on lavatory aerators. Energy demand from DHW heating systems can be reduced by minimizing water usage in general. Faucet aerators and low-flow showerheads can reduce hot water usage, relative to standard showerheads and aerators, which saves energy.

Low-flow devices reduce the overall water flow from the fixture, while still providing adequate pressure for washing. This reduces the amount of water used per day resulting in energy and water savings.

5 ENERGY EFFICIENT PRACTICES

In addition to the quantifiable savings estimated in Section 4, a facility's energy performance can also be improved through application of many low-cost or no-cost energy efficiency strategies. By employing certain behavioral and operational changes, and performing routine maintenance on building systems, equipment lifetime can be extended, and occupant comfort, health and safety can be improved. Energy and operation and maintenance costs can be reduced. The recommendations below are provided as a framework for developing a whole building maintenance plan that is customized to your facility. Consult with qualified equipment specialists for details on proper maintenance and system operation.

Perform Proper Lighting Maintenance

In order to sustain optimal lighting levels, lighting fixtures should undergo routine maintenance. Light levels decrease over time due to lamp aging, lamp and ballast failure, and buildup of dirt and dust on lamps, fixtures and reflective surfaces. Together, these factors can reduce total illumination by 20% - 60% or more, while operating fixtures continue drawing full power. To limit this reduction, lamps, reflectors and diffusers should be thoroughly cleaned of dirt, dust, oil, and smoke film buildup approximately every 6 – 12 months.

Develop a Lighting Maintenance Schedule

In addition to routine fixture cleaning, development of a maintenance schedule can both ensure maintenance is performed regularly and can reduce the overall cost of fixture re-lamping and re-ballasting. By re-lamping and re-ballasting fixtures in groups, lighting levels are better maintained and the number of site visits by a lighting technician or contractor can be minimized, decreasing the overall cost of maintenance.

Clean Evaporator/Condenser Coils on AC Systems

Dirty evaporators and condensers coils cause a restriction of air flow and heat transfer. This results in increased evaporator and condenser fan load and a decrease in cooling system performance. Keeping the coils clean allows the fans and cooling system to operate more efficiently.

Perform Proper Boiler Maintenance

Many boiler problems develop slowly over time, so regular inspection and maintenance is essential to retain proper functionality and efficiency of the heating system. Fuel burning equipment should undergo yearly tune-ups to ensure they are operating as safely and efficiently as possible from a combustion standpoint. A tune-up should include a combustion analysis to examine the exhaust from the boilers and to ensure the boiler is operating safely. Buildup of dirt, dust, or deposits on the internal surfaces of a boiler can greatly affect its heat transfer efficiency. These deposits can accumulate on the water side or fire side of the boiler. Boilers should be cleaned regularly according to the manufacturer's instructions to remove this build up to sustain efficiency and equipment life.

Perform Proper Water Heater Maintenance

At least once a year, drain a few gallons out of the water heater using the drain valve. If there is a lot of sediment or debris, then a full flush is recommended. Turn the temperature down and then completely drain the tank. Once a year, check for any leaks or heavy corrosion on the pipes and valves. For gas water heaters, check the draft hood and make sure it is placed properly, with a few inches of air space between the tank and where it connects to the vent. Look for any corrosion or wear on the gas line and the piping. If you notice any black residue, soot or charred metal, this is a sign you may be having combustion issues and should have the unit serviced by a professional. For electric water heaters, look for any signs of leaking, such as rust streaks or residue around the upper and lower panels covering the electrical components on the tank. For water heaters over three to four years old, have a technician inspect the sacrificial anode annually.

Water Conservation

Installing low-flow faucets or faucet aerators, low-flow showerheads, and kitchen sink pre-rinse spray valves saves both energy and water. These devices save energy by reducing the overall amount of hot water used, hence reducing the energy used to heat the water. The flow ratings for EPA WaterSense™ (http://www3.epa.gov/watersense/products) labeled devices are 1.5 gpm for bathroom faucets, 2.0 gpm for showerheads, and 1.28 gpm for pre-rinse spray valves.

Installing dual-flush or low-flow toilets, and low-flow or waterless urinals, are additional ways to reduce the sites' water use, however, these devices do not provide energy savings at the site level. Any reduction in water use does however ultimately reduce grid-level electricity use, since a significant amount of electricity is used to deliver water from reservoirs to end users. The EPA WaterSense™ ratings for urinals is 0.5 gallons per flush (gpf) and toilets that use as little as 1.28 gpf (this is lower than the current 1.6 gpf federal standard).

6 On-Site Generation Measures

On-site generation measure options include both renewable (e.g., solar, wind) and non-renewable (e.g., fuel cells) on-site technologies that generate power to meet all, or a portion, of the electric energy needs of a facility, often repurposing any waste heat where applicable. Also referred to as distributed generation, these systems contribute to greenhouse gas emission reductions, demand reductions and reduced customer electricity purchases, resulting in the electric system reliability through improved transmission and distribution system utilization.

The State of New Jersey's Energy Master Plan (EMP) encourages new distributed generation of all forms and specifically focuses on expanding use of combined heat and power (CHP) by reducing financial, regulatory and technical barriers and identifying opportunities for new entries. The EMP also outlines a goal of 70% of the State's electrical needs to be met by renewable sources by 2050.

Preliminary screenings were performed to determine the potential that a generation project could provide a cost-effective solution for your facility. Before making a decision to implement, a feasibility study should be conducted that would take a detailed look at existing energy profiles, siting, interconnection, and the costs associated with the generation project including interconnection costs, departing load charges, and any additional special facilities charges.

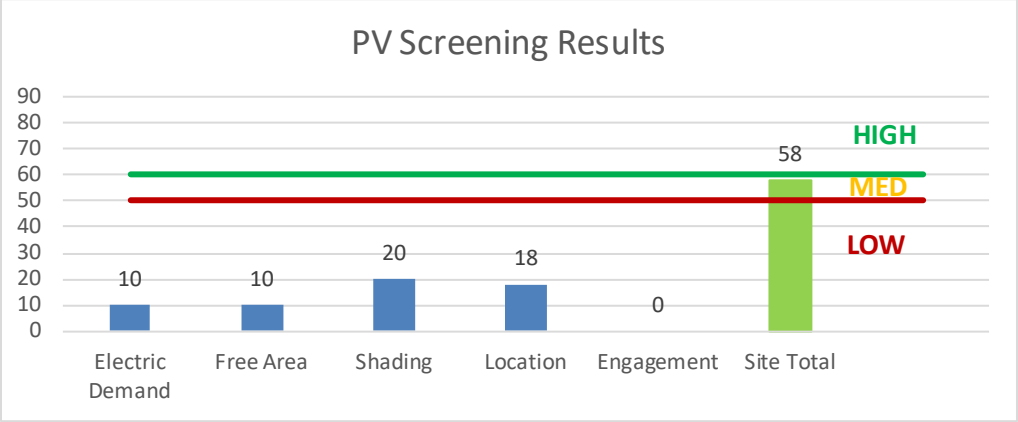
6.1 Photovoltaic

Sunlight can be converted into electricity using photovoltaics PV modules. Modules are racked together into an array that produces direct current (DC) electricity. The DC is converted to alternating current (AC) through an inverter. The inverter is interconnected to the facility's electrical distribution system. The amount of unobstructed area available determines how large of a solar array can be installed. The size of the array, combined with the orientation, tilt, and shading elements, determines the energy produced.

A preliminary screening based on the facility's electric demand, size and location of free area, as well as shading elements, shows that the facility has a **medium** potential for installing a PV array.

The amount of free area, ease of installation (location), and the lack of shading elements contribute to the potential for additional PV at the site. An additional PV array located on the roof of the building may be feasible. If Building 37 is interested in pursuing the installation of PV, we recommended that a full feasibility study be conducted.

Figure 26 - Photovoltaic Screening



Solar projects must register their projects in the SREC Registration Program prior to the start of construction in order to establish the project's eligibility to earn solar renewable energy certificates (SRECs). Registration of the intent to participate in New Jersey's solar marketplace provides market participants with information about developed new solar projects and insight into future SREC pricing. Refer to Section 8.2 for additional information.

For more information on solar PV technology and commercial solar markets in New Jersey, or to find a qualified solar installer who can provide a more detailed assessment of the specific costs and benefits of solar develop of the site, please visit the following links below:

- **Basic information on solar PV in New Jersey**: http://www.njcleanenergy.com/whysolar
- **New Jersey solar market facts**: http://www.njcleanenergy.com/renewable-energy/program-updates-and-background-information/solar-transition/solar-market-faqs
- **Approved solar installers in the New Jersey market**: http://www.njcleanenergy.com/commercial-industrial/programs/nj-smartstart-buildings/tools-and-resources/tradeally/approved_vendorsearch/?id=60&start=1

6.2 Combined Heat and Power

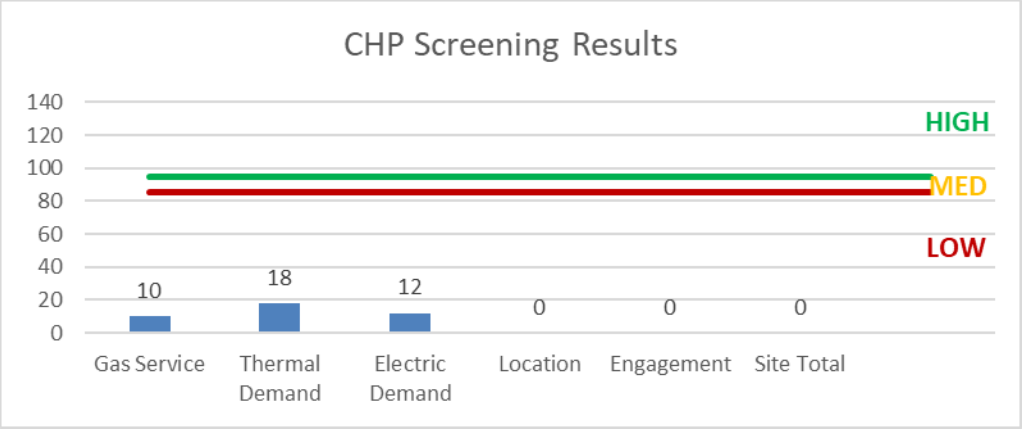
Combined heat and power (CHP) are the on-site generation of electricity along with the recovery of heat energy, which is put to beneficial use. Common technologies for CHP include reciprocating engines, microturbines, fuel cells, backpressure steam turbines and, at large facilities, gas turbines. Electric generation from a CHP system is typically interconnected to local power distribution systems. Heat is recovered from exhaust and ancillary cooling systems and interconnected to the existing hot water (or steam) distribution systems.

CHP systems are typically used to produce a portion of the electric power used onsite by a facility, with the balance of electric power needs supplied by grid purchases. The heat is used to supplement – or supplant – existing boilers for the purpose of space heating and/or domestic hot water heating. Waste heat can also be routed through absorption chillers for the purpose of space cooling. The key criteria used for screening, however, is the amount of time the system operates at full load and the facility's ability to use the recovered heat. Facilities with continuous use for large quantities of waste heat are the best candidates for CHP.

A preliminary screening based on heating and electrical demand, siting, and interconnection, shows that the facility has a **low** potential for installing a cost-effective CHP system.

Low and infrequent thermal load and lack of space near the existing boilers are the most significant factors contributing to the potential for CHP at the site. In our opinion, the facility does not appear to meet the minimum requirements for a cost-effective CHP installation.

Figure27 – Combined Heat & Power Screening



7 DEMAND RESPONSE

Demand Response (DR) is a program designed to reduce the electric load of commercial facilities when electric wholesale prices are high or when the reliability of the electric grid is threatened due to peak demand. Demand Response service providers, also called curtailment service providers, are registered with PJM, the independent system operator for the mid-Atlantic state region that is responsible for maintaining electric grid reliability.

By enabling grid operators to call upon curtailment service providers and commercial facilities to reduce electric usage during times of peak demand, the grid is made more reliable and overall transmission costs are reduced for all ratepayers. curtailment service providers provide regular payments to medium and large consumers of electric power for their participation in DR programs. Program participation is voluntary and participants receive payments whether or not their facility is called upon to curtail their electric usage.

Typically, an electric customer needs to be capable of reducing their electric demand, within minutes, by at least 100 kW or more in order to participate in a DR program. Customers with a greater capability to quickly curtail their demand during peak hours will receive higher payments. Customers with back-up generators onsite may also receive additional DR payments for their generating capacity if they agree to run the generators for grid support when called upon. Eligible customers who have chosen to participate in DR programs often find it to be a valuable source of revenue for their facility because the payments can significantly offset annual electric costs.

Participating customers can often quickly reduce their peak load through simple measures, such as temporarily raising temperature set points on thermostats so that air conditioning units run less frequently, or by agreeing to dim or shut off less critical lighting. This usually requires some level of building automation and control capability to ensure rapid load reduction during a DR curtailment event. DR program participants may need to install smart meters or may need to also sub-meter larger energy-using equipment, such as chillers, in order to demonstrate compliance with DR program requirements.

DR does not include the reduction of electricity consumption based on normal operating practice or behavior. For example, if a company's normal schedule is to close for a holiday, the reduction of electricity due to this closure or scaled-back operation is not considered a DR activity in most situations.

The first step toward participation in a DR program is to contact a curtailment service provider. A list of these providers is available on PJM's website and it includes contact information for each company, as well as the states where they have active businesses (www.pjm.com/markets-and-operations/demand-response/csps.aspx). PJM also posts training materials that are developed for program members interested in specific rules and requirements regarding DR activity (www.pjm.com/training/trainingmaterial.aspx), along with a variety of other DR program information.

Curtailment service providers typically offer free assessments to determine a facility's eligibility to participate in a DR program. They will provide details regarding program rules and requirements for metering and controls, assess a facility's ability to temporarily reduce electric load, and provide details on payments to be expected for participation in the program. Providers usually offer multiple options for DR to larger facilities and may also install controls or remote monitoring equipment of their own to help ensure compliance with all terms and conditions of a DR contract.

All Stockton University buildings have participated in electricity demand response since 2012. The curtailment service provider is awarded by bid. The program meets or exceeds its goal every year.

8 PROJECT FUNDING / INCENTIVES

The NJCEP is able to provide the incentive programs described below, and other benefits to ratepayers, because of the Societal Benefits Charge (SBC) Fund. The SBC was created by the State of New Jersey's Electricity Restructuring Law (1999), which requires all customers of investor-owned electric and gas utilities to pay a surcharge on their monthly energy bills. As a customer of a state-regulated electric or gas utility, and therefore a contributor to the fund, your organization is eligible to participate in the LGEA program and also eligible to receive incentive payments for qualifying energy efficiency measures. Also available through the NJBPU are some alternative financing programs described later in this section. Please refer to Figure 27 for a list of the eligible programs identified for each recommended ECM.

Figure 27 - ECM Incentive Program Eligibility

Energy Conservation Measure		SmartStart Prescriptive	SmartStart Custom	Direct Install	Pay For Performance Existing Buildings	Large Energy Users Program	Combined Heat & Power and Fuel Cell
ECM 1	Install LED Fixtures	X					
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	X					
ECM 3	Retrofit Fixtures with LED Lamps	X					
ECM 4	Install Occupancy Sensor Lighting Controls	X					
ECM 5	Install High/Low Lighitng Controls						
ECM 6	Install Low-Flow Domestic Hot Water Devices						

SmartStart is generally well-suited for implementation of individual measures or small group of measures. It provides flexibility to install measures at your own pace using in-house staff or a preferred contractor. Direct Install caters to small to mid-size facilities that can bundle multiple ECMs together. This can greatly simplify participation and may lead to higher incentive amounts, but requires the use of pre-approved contractors. The Pay for Performance program is a "whole-building" energy improvement program designed for larger facilities. It requires implementation of multiple measures meeting minimum savings thresholds, as well as use of pre-approved consultants. The Large Energy Users Program (LEUP) is available for New Jersey's largest energy users, giving them the flexibility to install as many measures as they wish in a single facility or several facilities. The incentives are capped based on the entity's annual energy consumption. LEUP applicants can use in-house staff or a preferred contractor.

Generally, the incentive values provided throughout the report assume the SmartStart program is utilized because it provides a consistent basis for comparison of available incentives for various measures, though in many cases incentive amounts may be higher through participation in other programs.

Brief descriptions of all relevant financing and incentive programs are located in the sections below. Further information, including most current program availability, requirements, and incentive levels, can be found at www.njcleanenergy.com/ci.

8.1 SmartStart

Overview

The SmartStart program offers incentives for installing prescriptive and custom energy efficiency measures at your facility. Routinely the program adds, removes, or modifies incentives from year to year for various energy efficiency equipment based on market trends and new technologies.

Equipment with Prescriptive Incentives Currently Available:

Electric Chillers
Electric Unitary HVAC
Gas Cooling
Gas Heating
Gas Water Heating
Ground Source Heat Pumps
Lighting
Lighting Controls
Refrigeration Doors
Refrigeration Controls
Refrigerator/Freezer Motors
Food Service Equipment
Variable Frequency Drives

Most equipment sizes and types are served by the SmartStart program. The program provides an effective mechanism for securing incentives for energy efficiency measures that are installed individually or as part of a package of energy upgrades.

Incentives

The SmartStart prescriptive incentive program provides fixed incentives for specific energy efficiency measures, whereas the custom SmartStart program provides incentives for more unique or specialized technologies, or systems that are not addressed through prescriptive incentive offerings for specific devices.

Since your facility is an existing building, only the Retrofit incentives have been applied in this report. Custom Measure incentives are calculated at $0.16/kWh and $1.60/therm based on estimated annual savings, capped at 50% of the total installed incremental project cost, or a project cost buy down to a one-year payback, whichever is less. Program incentives are capped at $500,000 per electric account and $500,000 per natural gas account, per fiscal year.

How to Participate

To participate in the SmartStart program you will need to submit an application for the specific equipment to be installed. Many applications are designed as rebates, although others require application approval prior to installation. Applicants may work with a contractor of their choosing and can also utilize internal personnel, which provides added flexibility to the program. Using internal personnel also helps improve the economics of the ECM by reducing the labor cost that is included in the tables of this report.

Detailed program descriptions, instructions for applying, and applications can be found at www.njcleanenergy.com/SSB.

8.2 SREC Registration Program

The Solar Renewable Energy Credit (SREC) Registration Program (SRP) is used to register the intent to install solar projects in New Jersey. Rebates are not available for solar projects, but owners of solar projects *must* register their projects in the SRP prior to the start of construction to establish the project's eligibility to earn SRECs. Registration of intent to participate in New Jersey's solar marketplace provides market participants with information about the pipeline of anticipated new solar capacity and insight into future SREC pricing.

After the registration is accepted, construction completed, and final paperwork has been submitted and approved, the project is issued a New Jersey certification number which generates New Jersey energy credits. The SRECs are accrued once the Electric Distribution Company has been authorized to power the solar project.

Each time a solar installation generates 1,000 kilowatt-hours (kWh) of electricity, a SREC is earned. Solar project owners report the energy production to the SREC Tracking System. This reporting allows SRECs to be put into the customer's electronic account. SRECs can then be sold on the SREC Tracking System, providing revenue for the first 15 years of the project's life.

Electricity suppliers, the primary purchasers of SRECs, are required to pay a Solar Alternative Compliance Payment (SACP) if they do not meet the requirements of New Jersey's Solar Renewable Portfolio Standard (RPS). One way suppliers can meet the RPS requirements is by purchasing SRECs. As SRECs are traded in a competitive market, the price can vary significantly. The actual price of an SREC during a trading period will fluctuate depending on supply and demand.

Information about the this program can be found at www.njcleanenergy.com/srec.

8.3 Energy Savings Improvement Program

The Energy Savings Improvement Program (ESIP) is an alternate method for New Jersey's government agencies to finance the implementation of energy conservation measures. An ESIP is a type of "performance contract", whereby school districts, counties, municipalities, housing authorities and other public and state entities enter into contracts to help finance building energy upgrades. This is done in a manner that ensures that annual payments are lower than the savings projected from the ECMs, ensuring that ESIP projects are cash flow positive in year one, and every year thereafter. ESIP provides government agencies in New Jersey with a flexible tool to improve and reduce energy usage with a minimal expenditure of financial resources. NJCEP incentive programs can be leveraged to help further reduce the total project cost of eligible measures.

This LGEA report is the first step to participating in ESIP. Next, you will need to select an approach for implementing the desired ECMs:

(1) Use an Energy Services Company or "ESCO."
(2) Use independent engineers and other specialists, or your own qualified staff, to provide and manage the requirements of the program through bonds or lease obligations.
(3) Use a hybrid approach of the two options described above where the ESCO is utilized for some services and independent engineers, or other specialists or qualified staff, are used to deliver other requirements of the program.

After adopting a resolution with a chosen implementation approach, the development of the Energy Savings Plan (ESP) can begin. The ESP demonstrates that the total project costs of the ECMs are offset by the energy savings over the financing term, not to exceed 15 years. The verified savings will then be used to pay for the financing.

The ESIP approach may not be appropriate for all energy conservation and energy efficiency improvements. Entities should carefully consider all alternatives to develop an approach that best meets their needs. Detailed program description and application can be found at www.njcleanenergy.com/ESIP.

Please note that ESIP is a program delivered directly by the NJBPU and is not an NJCEP incentive program. As mentioned above, you may utilize NJCEP incentive programs to help further reduce costs when developing the ESP. You should refer to the ESIP guidelines at the link above for further information and guidance on next steps.

9 ENERGY PURCHASING AND PROCUREMENT STRATEGIES

9.1 Retail Electric Supply Options

In 1999, the New Jersey State Legislature passed the Electric Discount & Energy Competition Act (EDECA) to restructure the electric power industry in New Jersey. This law deregulated the retail electric markets, allowing all consumers to shop for service from competitive electric suppliers. The intent was to create a more competitive market for electric power supply in New Jersey. As a result, utilities were allowed to charge cost of service and customers were given the ability to choose a third party (i.e. non-utility) energy supplier.

Energy deregulation in New Jersey has increased energy buyers' options by separating the function of electricity distribution from that of electricity supply. So, though you may choose a different company from which to buy your electric power, responsibility for your facility's interconnection to the grid and repair to local power distribution will still reside with the traditional utility company serving your region.

If your facility is not purchasing electricity from a third party supplier, consider shopping for a reduced rate from third party electric suppliers. If your facility is purchasing electricity from a third party supplier, review and compare prices at the end of the current contract or every couple of years.

A list of third party electric suppliers licensed to provide service in New Jersey can be found online at www.state.nj.us/bpu/commercial/shopping.html.

9.2 Retail Natural Gas Supply Options

The natural gas market in New Jersey has also been deregulated. Most customers that remain with the utility for natural gas service pay rates that are market-based and fluctuate on a monthly basis. The utility provides basic gas supply service to customers who choose not to buy from a third party supplier for natural gas.

A customer's decision to buy natural gas from a retail supplier is typically dependent upon whether a customer seeks budget certainty and/or longer-term rate stability. Customers can secure longer-term fixed prices by signing up for service through a third-party retail, natural gas supplier. Many larger natural gas customers may seek the assistance of a professional consultant to assist in the procurement process.

If your facility is not purchasing natural gas from a third party supplier, consider shopping for a reduced rate from third party natural gas suppliers. If your facility is purchasing natural gas from a third party supplier, review and compare prices at the end of the current contract or every several years.

A list of third party natural gas suppliers licensed to provide service in New Jersey can be found online at www.state.nj.us/bpu/commercial/shopping.html.

Appendix A: Equipment Inventory & Recommendations

Lighting Inventory & Recommendations

	Existing Conditions					Proposed Conditions							Energy Impact & Financial Analysis						
Location	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
P-3rd Flr Common Spaces	10	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	Yes	10	LED - Linear Tubes: (1) 4' Lamp	Occupancy Sensor	15	5,174	0.14	1,615	0.0	$193.98	$452.58	$85.00	1.89
P-3rd Flr Common Space	5	Compact Fluorescent: one lamp CFL fixture	Wall Switch	15	7,392	Relamp	No	5	LED Screw-In Lamps: One lamp screw-in LED fixture	Wall Switch	11	7,392	0.02	191	0.0	$22.97	$86.13	$25.00	2.66
P-3rd Flr Hallways	4	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	No	4	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.05	595	0.0	$71.47	$73.03	$20.00	0.74
P-3rd Flr Hallways	4	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	Yes	4	LED - Linear Tubes: (2) 4' Lamps	High/Low Control	29	5,174	0.12	1,418	0.0	$170.29	$346.06	$40.00	1.80
P-3rd Flr Hallways	6	Exit Signs: LED - 2 W Lamp	None	6	8,760	None	No	6	Exit Signs: LED - 2 W Lamp	None	6	8,760	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
Room P301	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P302	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P303	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P304	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P305	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P306	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P307	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P308	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P309	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P310	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P311	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P312	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P313	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
P-3rd Flr Restroom	1	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	114	7,392	Relamp	No	1	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	7,392	0.04	476	0.0	$57.17	$73.03	$20.00	0.93
P-3rd Flr Restroom	5	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	Yes	5	LED - Linear Tubes: (2) 4' Lamps	Occupancy Sensor	29	5,174	0.15	1,772	0.0	$212.87	$452.58	$85.00	1.73
P-3rd Flr Laundry	1	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	No	1	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.01	149	0.0	$17.87	$18.26	$5.00	0.74
P-3rd Flr Laundry	2	Linear Fluorescent - T12: 4' T12 (40W) - 1L	Wall Switch	46	7,392	Relamp & Reballast	No	2	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.05	536	0.0	$64.32	$101.03	$10.00	1.42
P-3rd Flr Mechanical Room	6	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	1,000	Relamp	No	6	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	1,000	0.08	121	0.0	$14.50	$109.55	$30.00	5.49
P-3rd Flr Mechanical Room	3	Linear Fluorescent - T12: 4' T12 (40W) - 1L	Wall Switch	46	1,000	Relamp & Reballast	No	3	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	1,000	0.07	109	0.0	$13.05	$151.55	$15.00	10.46
P-Stairwell	6	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	No	6	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	7,392	0.15	1,683	0.0	$202.15	$219.09	$60.00	0.79

	Existing Conditions					Proposed Conditions							Energy Impact & Financial Analysis						
Location	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
P-2nd Flr Common Spaces	10	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	Yes	10	LED - Linear Tubes: (1) 4' Lamp	Occupancy Sensor	15	5,174	0.16	1,857	0.0	$223.08	$452.58	$85.00	1.65
P-2nd Flr Common Spaces	5	Compact Fluorescent: one lamp CFL fixture	Wall Switch	15	7,392	Relamp	No	5	LED Screw-In Lamps: One lamp screw-in LED fixture	Wall Switch	11	7,392	0.02	191	0.0	$22.97	$86.13	$25.00	2.66
P-2nd Flr Hallways	4	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	No	4	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.05	595	0.0	$71.47	$73.03	$20.00	0.74
P-2nd Flr Hallways	4	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	Yes	4	LED - Linear Tubes: (2) 4' Lamps	High/Low Control	29	5,174	0.12	1,418	0.0	$170.29	$346.06	$40.00	1.80
P-2nd Flr Hallways	6	Exit Signs: LED - 2 W Lamp	None	6	8,760	None	No	6	Exit Signs: LED - 2 W Lamp	None	6	8,760	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
Room P201	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P202	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P203	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P204	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P205	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P206	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P207	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P208	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P209	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P210	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P211	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P212	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P213	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
P-2nd Flr Restroom	1	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	114	7,392	Relamp	No	1	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	7,392	0.04	476	0.0	$57.17	$73.03	$20.00	0.93
P-2nd Flr Restroom	5	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	Yes	5	LED - Linear Tubes: (2) 4' Lamps	Occupancy Sensor	29	5,174	0.15	1,772	0.0	$212.87	$452.58	$85.00	1.73
P-2nd Flr Laundry	1	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	No	1	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.01	149	0.0	$17.87	$18.26	$5.00	0.74
P-2nd Flr Laundry	2	Linear Fluorescent - T12: 4' T12 (40W) - 1L	Wall Switch	46	7,392	Relamp & Reballast	No	2	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.05	536	0.0	$64.32	$101.03	$10.00	1.42
P-2nd Flr Mechanical Room	6	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	1,000	Relamp	No	6	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	1,000	0.08	121	0.0	$14.50	$109.55	$30.00	5.49
P-2nd Flr Mechanical Room	3	Linear Fluorescent - T12: 4' T12 (40W) - 1L	Wall Switch	46	1,000	Relamp & Reballast	No	3	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	1,000	0.07	109	0.0	$13.05	$151.55	$15.00	10.46
P-1st Flr Common Spaces	10	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	Yes	10	LED - Linear Tubes: (1) 4' Lamp	Occupancy Sensor	15	5,174	0.16	1,857	0.0	$223.08	$452.58	$85.00	1.65

	Existing Conditions					Proposed Conditions							Energy Impact & Financial Analysis						
Location	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
P-1st Flr Common Spaces	5	Compact Fluorescent: one lamp CFL fixture	Wall Switch	15	7,392	Relamp	No	5	LED Screw-In Lamps: One lamp screw-in LED fixture	Wall Switch	11	7,392	0.02	191	0.0	$22.97	$86.13	$25.00	2.66
P-1st Flr Hallways	4	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	No	4	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.05	595	0.0	$71.47	$73.03	$20.00	0.74
P-1st Flr Hallways	4	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	Yes	4	LED - Linear Tubes: (2) 4' Lamps	High/Low Control	29	5,174	0.12	1,418	0.0	$170.29	$346.06	$40.00	1.80
P-1st Flr Hallways	6	Exit Signs: LED - 2 W Lamp	None	6	8,760	None	No	6	Exit Signs: LED - 2 W Lamp	None	6	8,760	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
Room P101	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P102	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P103	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P104	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P105	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P106	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P107	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P108	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P109	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P110	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P111	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P112	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room P113	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
P-1st Flr Restroom	1	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	114	7,392	Relamp	No	1	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	7,392	0.04	476	0.0	$57.17	$73.03	$20.00	0.93
P-1st Flr Restroom	5	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	Yes	5	LED - Linear Tubes: (2) 4' Lamps	Occupancy Sensor	29	5,174	0.15	1,772	0.0	$212.87	$452.58	$85.00	1.73
P-1st Flr Laundry	1	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	No	1	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.01	149	0.0	$17.87	$18.26	$5.00	0.74
P-1st Flr Laundry	2	Linear Fluorescent - T12: 4' T12 (40W) - 1L	Wall Switch	46	7,392	Relamp & Reballast	No	2	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.05	536	0.0	$64.32	$101.03	$10.00	1.42
P-1st Flr Mechanical Room	6	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	1,000	Relamp	No	6	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	1,000	0.08	121	0.0	$14.50	$109.55	$30.00	5.49
P-1st Flr Mechanical Room	3	Linear Fluorescent - T12: 4' T12 (40W) - 1L	Wall Switch	46	1,000	Relamp & Reballast	No	3	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	1,000	0.07	109	0.0	$13.05	$151.55	$15.00	10.46
Exterior Fixtures	5	Metal Halide: (1) 250W Lamp	None	295	4,380	Fixture Replacement	No	5	LED - Fixtures: Outdoor Wall-Mounted Area Fixture	None	89	4,380	0.76	5,201	0.0	$624.60	$4,829.83	$500.00	6.93
L-3rd Flr Common Spaces	10	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	Yes	10	LED - Linear Tubes: (1) 4' Lamp	Occupancy Sensor	15	5,174	0.16	1,857	0.0	$223.08	$452.58	$85.00	1.65

	Existing Conditions					Proposed Conditions							Energy Impact & Financial Analysis						
Location	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
L-3rd Flr Common Space	5	Compact Fluorescent: one lamp CFL fixture	Wall Switch	15	7,392	Relamp	No	5	LED Screw-In Lamps: One lamp screw-in LED fixture	Wall Switch	11	7,392	0.02	191	0.0	$22.97	$86.13	$25.00	2.66
L-3rd Flr Hallways	4	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	No	4	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.05	595	0.0	$71.47	$73.03	$20.00	0.74
L-3rd Flr Hallways	4	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	Yes	4	LED - Linear Tubes: (2) 4' Lamps	High/Low Control	29	5,174	0.12	1,418	0.0	$170.29	$346.06	$40.00	1.80
L-3rd Flr Hallways	6	Exit Signs: LED - 2 W Lamp	None	6	8,760	None	No	6	Exit Signs: LED - 2 W Lamp	None	6	8,760	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
Room L301	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L302	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L303	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L304	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L305	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L306	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L307	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L308	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L309	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L310	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L311	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L312	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L313	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
L-3rd Flr Restroom	1	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	114	7,392	Relamp	No	1	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	7,392	0.04	476	0.0	$57.17	$73.03	$20.00	0.93
L-3rd Flr Restroom	5	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	Yes	5	LED - Linear Tubes: (2) 4' Lamps	Occupancy Sensor	29	5,174	0.15	1,772	0.0	$212.87	$452.58	$85.00	1.73
L-3rd Flr Laundry	1	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	No	1	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.01	149	0.0	$17.87	$18.26	$5.00	0.74
L-3rd Flr Laundry	2	Linear Fluorescent - T12: 4' T12 (40W) - 1L	Wall Switch	46	7,392	Relamp & Reballast	No	2	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.05	536	0.0	$64.32	$101.03	$10.00	1.42
L-3rd Flr Mechanical Room	6	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	1,000	Relamp	No	6	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	1,000	0.08	121	0.0	$14.50	$109.55	$30.00	5.49
L-3rd Flr Mechanical Room	3	Linear Fluorescent - T12: 4' T12 (40W) - 1L	Wall Switch	46	1,000	Relamp & Reballast	No	3	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	1,000	0.07	109	0.0	$13.05	$151.55	$15.00	10.46
L-Stairwell	6	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	No	6	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	7,392	0.15	1,683	0.0	$202.15	$219.09	$60.00	0.79
L-2nd Flr Common Spaces	10	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	Yes	10	LED - Linear Tubes: (1) 4' Lamp	Occupancy Sensor	15	5,174	0.16	1,857	0.0	$223.08	$452.58	$85.00	1.65

	Existing Conditions					Proposed Conditions							Energy Impact & Financial Analysis						
Location	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
L-2nd Flr Common Spaces	5	Compact Fluorescent: one lamp CFL fixture	Wall Switch	15	7,392	Relamp	No	5	LED Screw-In Lamps: One lamp screw-in LED fixture	Wall Switch	11	7,392	0.02	191	0.0	$22.97	$86.13	$25.00	2.66
L-2nd Flr Hallways	4	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	No	4	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.05	595	0.0	$71.47	$73.03	$20.00	0.74
L-2nd Flr Hallways	4	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	Yes	4	LED - Linear Tubes: (2) 4' Lamps	High/Low Control	29	5,174	0.12	1,418	0.0	$170.29	$346.06	$40.00	1.80
L-2nd Flr Hallways	6	Exit Signs: LED - 2 W Lamp	None	6	8,760	None	No	6	Exit Signs: LED - 2 W Lamp	None	6	8,760	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
Room L201	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L202	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L203	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L204	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L205	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L206	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L207	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L208	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L209	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L210	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L211	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L212	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L213	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
L-2nd Flr Restroom	1	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	114	7,392	Relamp	No	1	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	7,392	0.04	476	0.0	$57.17	$73.03	$20.00	0.93
L-2nd Flr Restroom	5	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	Yes	5	LED - Linear Tubes: (2) 4' Lamps	Occupancy Sensor	29	5,174	0.15	1,772	0.0	$212.87	$452.58	$85.00	1.73
L-2nd Flr Laundry	1	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	No	1	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.01	149	0.0	$17.87	$18.26	$5.00	0.74
L-2nd Flr Laundry	2	Linear Fluorescent - T12: 4' T12 (40W) - 1L	Wall Switch	46	7,392	Relamp & Reballast	No	2	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.05	536	0.0	$64.32	$101.03	$10.00	1.42
L-2nd Flr Mechanical Room	6	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	1,000	Relamp	No	6	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	1,000	0.08	121	0.0	$14.50	$109.55	$30.00	5.49
L-2nd Flr Mechanical Room	3	Linear Fluorescent - T12: 4' T12 (40W) - 1L	Wall Switch	46	1,000	Relamp & Reballast	No	3	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	1,000	0.07	109	0.0	$13.05	$151.55	$15.00	10.46
L-1st Flr Common Spaces	10	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	Yes	10	LED - Linear Tubes: (1) 4' Lamp	Occupancy Sensor	15	5,174	0.16	1,857	0.0	$223.08	$452.58	$85.00	1.65
L-1st Flr Common Spaces	5	Compact Fluorescent: one lamp CFL fixture	Wall Switch	15	7,392	Relamp	No	5	LED Screw-In Lamps: One lamp screw-in LED fixture	Wall Switch	11	7,392	0.02	191	0.0	$22.97	$86.13	$25.00	2.66

	Existing Conditions					Proposed Conditions							Energy Impact & Financial Analysis						
Location	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
L-1st Flr Hallways	4	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	No	4	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.05	595	0.0	$71.47	$73.03	$20.00	0.74
L-1st Flr Hallways	4	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	Yes	4	LED - Linear Tubes: (2) 4' Lamps	High/Low Control	29	5,174	0.12	1,418	0.0	$170.29	$346.06	$40.00	1.80
L-1st Flr Hallways	6	Exit Signs: LED - 2 W Lamp	None	6	8,760	None	No	6	Exit Signs: LED - 2 W Lamp	None	6	8,760	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
Room L101	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L102	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L103	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L104	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L105	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L106	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L107	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L108	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L109	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L110	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L111	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L112	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room L113	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
L-1st Flr Restroom	1	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	114	7,392	Relamp	No	1	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	7,392	0.04	476	0.0	$57.17	$73.03	$20.00	0.93
L-1st Flr Restroom	5	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	Yes	5	LED - Linear Tubes: (2) 4' Lamps	Occupancy Sensor	29	5,174	0.15	1,772	0.0	$212.87	$452.58	$85.00	1.73
L-1st Flr Laundry	1	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	No	1	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.01	149	0.0	$17.87	$18.26	$5.00	0.74
L-1st Flr Laundry	2	Linear Fluorescent - T12: 4' T12 (40W) - 1L	Wall Switch	46	7,392	Relamp & Reballast	No	2	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.05	536	0.0	$64.32	$101.03	$10.00	1.42
L-1st Flr Mechanical Room	6	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	1,000	Relamp	No	6	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	1,000	0.08	121	0.0	$14.50	$109.55	$30.00	5.49
L-1st Flr Mechanical Room	3	Linear Fluorescent - T12: 4' T12 (40W) - 1L	Wall Switch	46	1,000	Relamp & Reballast	No	3	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	1,000	0.07	109	0.0	$13.05	$151.55	$15.00	10.46
M-3rd Flr Common Spaces	10	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	Yes	10	LED - Linear Tubes: (1) 4' Lamp	Occupancy Sensor	15	5,174	0.16	1,857	0.0	$223.08	$452.58	$85.00	1.65
M-3rd Flr Common Space	5	Compact Fluorescent: one lamp CFL fixture	Wall Switch	15	7,392	Relamp	No	5	LED Screw-In Lamps: One lamp screw-in LED fixture	Wall Switch	11	7,392	0.02	191	0.0	$22.97	$86.13	$25.00	2.66
M-3rd Flr Hallways	4	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	No	4	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.05	595	0.0	$71.47	$73.03	$20.00	0.74

	Existing Conditions					Proposed Conditions							Energy Impact & Financial Analysis						
Location	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
M-3rd Flr Hallways	4	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	Yes	4	LED - Linear Tubes: (2) 4' Lamps	High/Low Control	29	5,174	0.12	1,418	0.0	$170.29	$346.06	$40.00	1.80
M-3rd Flr Hallways	6	Exit Signs: LED - 2 W Lamp	None	6	8,760	None	No	6	Exit Signs: LED - 2 W Lamp	None	6	8,760	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
Room M301	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M302	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M303	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M304	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M305	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M306	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M307	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M308	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M309	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M310	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M311	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M312	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M313	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
M-3rd Flr Restroom	1	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	114	7,392	Relamp	No	1	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	7,392	0.04	476	0.0	$57.17	$73.03	$20.00	0.93
M-3rd Flr Restroom	5	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	Yes	5	LED - Linear Tubes: (2) 4' Lamps	Occupancy Sensor	29	5,174	0.15	1,772	0.0	$212.87	$452.58	$85.00	1.73
M-3rd Flr Laundry	1	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	No	1	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.01	149	0.0	$17.87	$18.26	$5.00	0.74
M-3rd Flr Laundry	2	Linear Fluorescent - T12: 4' T12 (40W) - 1L	Wall Switch	46	7,392	Relamp & Reballast	No	2	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.05	536	0.0	$64.32	$101.03	$10.00	1.42
M-3rd Flr Mechanical Room	6	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	1,000	Relamp	No	6	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	1,000	0.08	121	0.0	$14.50	$109.55	$30.00	5.49
M-3rd Flr Mechanical Room	3	Linear Fluorescent - T12: 4' T12 (40W) - 1L	Wall Switch	46	1,000	Relamp & Reballast	No	3	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	1,000	0.07	109	0.0	$13.05	$151.55	$15.00	10.46
M-Stairwell	6	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	No	6	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	7,392	0.15	1,683	0.0	$202.15	$219.09	$60.00	0.79
M-2nd Flr Common Spaces	10	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	Yes	10	LED - Linear Tubes: (1) 4' Lamp	Occupancy Sensor	15	5,174	0.16	1,857	0.0	$223.08	$452.58	$85.00	1.65
M-2nd Flr Common Spaces	5	Compact Fluorescent: one lamp CFL fixture	Wall Switch	15	7,392	Relamp	No	5	LED Screw-In Lamps: One lamp screw-in LED fixture	Wall Switch	11	7,392	0.02	191	0.0	$22.97	$86.13	$25.00	2.66
M-2nd Flr Hallways	4	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	No	4	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.05	595	0.0	$71.47	$73.03	$20.00	0.74

	Existing Conditions					Proposed Conditions							Energy Impact & Financial Analysis						
Location	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
M-2nd Flr Hallways	4	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	Yes	4	LED - Linear Tubes: (2) 4' Lamps	High/Low Control	29	5,174	0.12	1,418	0.0	$170.29	$346.06	$40.00	1.80
M-2nd Flr Hallways	6	Exit Signs: LED - 2 W Lamp	None	6	8,760	None	No	6	Exit Signs: LED - 2 W Lamp	None	6	8,760	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
Room M201	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M202	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M203	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M204	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M205	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M206	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M207	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M208	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M209	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M210	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M211	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M212	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M213	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
M-2nd Flr Restroom	1	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	114	7,392	Relamp	No	1	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	7,392	0.04	476	0.0	$57.17	$73.03	$20.00	0.93
M-2nd Flr Restroom	5	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	Yes	5	LED - Linear Tubes: (2) 4' Lamps	Occupancy Sensor	29	5,174	0.15	1,772	0.0	$212.87	$452.58	$85.00	1.73
M-2nd Flr Laundry	1	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	No	1	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.01	149	0.0	$17.87	$18.26	$5.00	0.74
M-2nd Flr Laundry	2	Linear Fluorescent - T12: 4' T12 (40W) - 1L	Wall Switch	46	7,392	Relamp & Reballast	No	2	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.05	536	0.0	$64.32	$101.03	$10.00	1.42
M-2nd Flr Mechanical Room	6	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	1,000	Relamp	No	6	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	1,000	0.08	121	0.0	$14.50	$109.55	$30.00	5.49
M-2nd Flr Mechanical Room	3	Linear Fluorescent - T12: 4' T12 (40W) - 1L	Wall Switch	46	1,000	Relamp & Reballast	No	3	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	1,000	0.07	109	0.0	$13.05	$151.55	$15.00	10.46
M-1st Flr Common Spaces	10	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	Yes	10	LED - Linear Tubes: (1) 4' Lamp	Occupancy Sensor	15	5,174	0.16	1,857	0.0	$223.08	$452.58	$85.00	1.65
M-1st Flr Common Spaces	5	Compact Fluorescent: one lamp CFL fixture	Wall Switch	15	7,392	Relamp	No	5	LED Screw-In Lamps: One lamp screw-in LED fixture	Wall Switch	11	7,392	0.02	191	0.0	$22.97	$86.13	$25.00	2.66
M-1st Flr Hallways	4	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	No	4	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.05	595	0.0	$71.47	$73.03	$20.00	0.74
M-1st Flr Hallways	4	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	Yes	4	LED - Linear Tubes: (2) 4' Lamps	High/Low Control	29	5,174	0.12	1,418	0.0	$170.29	$346.06	$40.00	1.80

	Existing Conditions					Proposed Conditions							Energy Impact & Financial Analysis						
Location	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
M-1st Flr Hallways	6	Exit Signs: LED - 2 W Lamp	None	6	8,760	None	No	6	Exit Signs: LED - 2 W Lamp	None	6	8,760	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
Room M101	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M102	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M103	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M104	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M105	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M106	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M107	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M108	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M109	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M110	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M111	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M112	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room M113	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
M-1st Flr Restroom	1	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	114	7,392	Relamp	No	1	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	7,392	0.04	476	0.0	$57.17	$73.03	$20.00	0.93
M-1st Flr Restroom	5	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	Yes	5	LED - Linear Tubes: (2) 4' Lamps	Occupancy Sensor	29	5,174	0.15	1,772	0.0	$212.87	$452.58	$85.00	1.73
M-1st Flr Laundry	1	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	No	1	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.01	149	0.0	$17.87	$18.26	$5.00	0.74
M-1st Flr Laundry	2	Linear Fluorescent - T12: 4' T12 (40W) - 1L	Wall Switch	46	7,392	Relamp & Reballast	No	2	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.05	536	0.0	$64.32	$101.03	$10.00	1.42
M-1st Flr Mechanical Room	6	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	1,000	Relamp	No	6	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	1,000	0.08	121	0.0	$14.50	$109.55	$30.00	5.49
M-1st Flr Mechanical Room	3	Linear Fluorescent - T12: 4' T12 (40W) - 1L	Wall Switch	46	1,000	Relamp & Reballast	No	3	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	1,000	0.07	109	0.0	$13.05	$151.55	$15.00	10.46
N-3rd Flr Common Spaces	10	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	Yes	10	LED - Linear Tubes: (1) 4' Lamp	Occupancy Sensor	15	5,174	0.16	1,857	0.0	$223.08	$452.58	$85.00	1.65
N-3rd Flr Common Space	5	Compact Fluorescent: one lamp CFL fixture	Wall Switch	15	7,392	Relamp	No	5	LED Screw-In Lamps: One lamp screw-in LED fixture	Wall Switch	11	7,392	0.02	191	0.0	$22.97	$86.13	$25.00	2.66
N-3rd Flr Hallways	4	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	No	4	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.05	595	0.0	$71.47	$73.03	$20.00	0.74
N-3rd Flr Hallways	4	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	Yes	4	LED - Linear Tubes: (2) 4' Lamps	High/Low Control	29	5,174	0.12	1,418	0.0	$170.29	$346.06	$40.00	1.80
N-3rd Flr Hallways	6	Exit Signs: LED - 2 W Lamp	None	6	8,760	None	No	6	Exit Signs: LED - 2 W Lamp	None	6	8,760	0.00	0	0.0	$0.00	$0.00	$0.00	0.00

	Existing Conditions					Proposed Conditions							Energy Impact & Financial Analysis						
Location	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
Room N301	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N302	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N303	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N304	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N305	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N306	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N307	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N308	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N309	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N310	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N311	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N312	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N313	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
N-3rd Flr Restroom	1	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	114	7,392	Relamp	No	1	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	7,392	0.04	476	0.0	$57.17	$73.03	$20.00	0.93
N-3rd Flr Restroom	5	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	Yes	5	LED - Linear Tubes: (2) 4' Lamps	Occupancy Sensor	29	5,174	0.15	1,772	0.0	$212.87	$452.58	$85.00	1.73
N-3rd Flr Laundry	1	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	No	1	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.01	149	0.0	$17.87	$18.26	$5.00	0.74
N-3rd Flr Laundry	2	Linear Fluorescent - T12: 4' T12 (40W) - 1L	Wall Switch	46	7,392	Relamp & Reballast	No	2	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.05	536	0.0	$64.32	$101.03	$10.00	1.42
N-3rd Flr Mechanical Room	6	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	1,000	Relamp	No	6	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	1,000	0.08	121	0.0	$14.50	$109.55	$30.00	5.49
N-3rd Flr Mechanical Room	3	Linear Fluorescent - T12: 4' T12 (40W) - 1L	Wall Switch	46	1,000	Relamp & Reballast	No	3	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	1,000	0.07	109	0.0	$13.05	$151.55	$15.00	10.46
N-Stairwell	6	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	No	6	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	7,392	0.15	1,683	0.0	$202.15	$219.09	$60.00	0.79
N-2nd Flr Common Spaces	10	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	Yes	10	LED - Linear Tubes: (1) 4' Lamp	Occupancy Sensor	15	5,174	0.16	1,857	0.0	$223.08	$452.58	$85.00	1.65
N-2nd Flr Common Spaces	5	Compact Fluorescent: one lamp CFL fixture	Wall Switch	15	7,392	Relamp	No	5	LED Screw-In Lamps: One lamp screw-in LED fixture	Wall Switch	11	7,392	0.02	191	0.0	$22.97	$86.13	$25.00	2.66
N-2nd Flr Hallways	4	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	No	4	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.05	595	0.0	$71.47	$73.03	$20.00	0.74
N-2nd Flr Hallways	4	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	Yes	4	LED - Linear Tubes: (2) 4' Lamps	High/Low Control	29	5,174	0.12	1,418	0.0	$170.29	$346.06	$40.00	1.80
N-2nd Flr Hallways	6	Exit Signs: LED - 2 W Lamp	None	6	8,760	None	No	6	Exit Signs: LED - 2 W Lamp	None	6	8,760	0.00	0	0.0	$0.00	$0.00	$0.00	0.00

	Existing Conditions					Proposed Conditions							Energy Impact & Financial Analysis						
Location	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
Room N201	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N202	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N203	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N204	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N205	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N206	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N207	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N208	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N209	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N210	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N211	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N212	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N213	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
N-2nd Flr Restroom	1	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	114	7,392	Relamp	No	1	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	7,392	0.04	476	0.0	$57.17	$73.03	$20.00	0.93
N-2nd Flr Restroom	5	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	Yes	5	LED - Linear Tubes: (2) 4' Lamps	Occupancy Sensor	29	5,174	0.15	1,772	0.0	$212.87	$452.58	$85.00	1.73
N-2nd Flr Laundry	1	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	No	1	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.01	149	0.0	$17.87	$18.26	$5.00	0.74
N-2nd Flr Laundry	2	Linear Fluorescent - T12: 4' T12 (40W) - 1L	Wall Switch	46	7,392	Relamp & Reballast	No	2	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.05	536	0.0	$64.32	$101.03	$10.00	1.42
N-2nd Flr Mechanical Room	6	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	1,000	Relamp	No	6	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	1,000	0.08	121	0.0	$14.50	$109.55	$30.00	5.49
N-2nd Flr Mechanical Room	3	Linear Fluorescent - T12: 4' T12 (40W) - 1L	Wall Switch	46	1,000	Relamp & Reballast	No	3	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	1,000	0.07	109	0.0	$13.05	$151.55	$15.00	10.46
N-1st Flr Common Spaces	10	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	Yes	10	LED - Linear Tubes: (1) 4' Lamp	Occupancy Sensor	15	5,174	0.16	1,857	0.0	$223.08	$452.58	$85.00	1.65
N-1st Flr Common Spaces	5	Compact Fluorescent: one lamp CFL fixture	Wall Switch	15	7,392	Relamp	No	5	LED Screw-In Lamps: One lamp screw-in LED fixture	Wall Switch	11	7,392	0.02	191	0.0	$22.97	$86.13	$25.00	2.66
N-1st Flr Hallways	4	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	No	4	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.05	595	0.0	$71.47	$73.03	$20.00	0.74
N-1st Flr Hallways	4	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	Yes	4	LED - Linear Tubes: (2) 4' Lamps	High/Low Control	29	5,174	0.12	1,418	0.0	$170.29	$346.06	$40.00	1.80
N-1st Flr Hallways	6	Exit Signs: LED - 2 W Lamp	None	6	8,760	None	No	6	Exit Signs: LED - 2 W Lamp	None	6	8,760	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
Room N101	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33

	Existing Conditions					Proposed Conditions							Energy Impact & Financial Analysis						
Location	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
Room N102	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N103	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N104	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N105	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N106	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N107	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N108	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N109	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N110	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N111	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N112	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room N113	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
N-1st Flr Restroom	1	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	114	7,392	Relamp	No	1	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	7,392	0.04	476	0.0	$57.17	$73.03	$20.00	0.93
N-1st Flr Restroom	5	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	Yes	5	LED - Linear Tubes: (2) 4' Lamps	Occupancy Sensor	29	5,174	0.15	1,772	0.0	$212.87	$452.58	$85.00	1.73
N-1st Flr Laundry	1	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	No	1	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.01	149	0.0	$17.87	$18.26	$5.00	0.74
N-1st Flr Laundry	2	Linear Fluorescent - T12: 4' T12 (40W) - 1L	Wall Switch	46	7,392	Relamp & Reballast	No	2	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.05	536	0.0	$64.32	$101.03	$10.00	1.42
N-1st Flr Mechanical Room	6	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	1,000	Relamp	No	6	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	1,000	0.08	121	0.0	$14.50	$109.55	$30.00	5.49
N-1st Flr Mechanical Room	3	Linear Fluorescent - T12: 4' T12 (40W) - 1L	Wall Switch	46	1,000	Relamp & Reballast	No	3	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	1,000	0.07	109	0.0	$13.05	$151.55	$15.00	10.46
O-3rd Flr Common Spaces	10	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	Yes	10	LED - Linear Tubes: (1) 4' Lamp	Occupancy Sensor	15	5,174	0.16	1,857	0.0	$223.08	$452.58	$85.00	1.65
O-3rd Flr Common Space	5	Compact Fluorescent: one lamp CFL fixture	Wall Switch	15	7,392	Relamp	No	5	LED Screw-In Lamps: One lamp screw-in LED fixture	Wall Switch	11	7,392	0.02	191	0.0	$22.97	$86.13	$25.00	2.66
O-3rd Flr Hallways	4	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	No	4	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.05	595	0.0	$71.47	$73.03	$20.00	0.74
O-3rd Flr Hallways	4	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	Yes	4	LED - Linear Tubes: (2) 4' Lamps	High/Low Control	29	5,174	0.12	1,418	0.0	$170.29	$346.06	$40.00	1.80
O-3rd Flr Hallways	6	Exit Signs: LED - 2 W Lamp	None	6	8,760	None	No	6	Exit Signs: LED - 2 W Lamp	None	6	8,760	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
Room O301	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room O302	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33

	Existing Conditions					Proposed Conditions							Energy Impact & Financial Analysis						
Location	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
Room O303	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room O304	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room O305	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room O306	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room O307	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room O308	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room O309	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room O310	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room O311	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room O312	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room O313	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
O-3rd Flr Restroom	1	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	114	7,392	Relamp	No	1	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	7,392	0.04	476	0.0	$57.17	$73.03	$20.00	0.93
O-3rd Flr Restroom	5	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	Yes	5	LED - Linear Tubes: (2) 4' Lamps	Occupancy Sensor	29	5,174	0.15	1,772	0.0	$212.87	$452.58	$85.00	1.73
O-3rd Flr Laundry	1	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	No	1	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.01	149	0.0	$17.87	$18.26	$5.00	0.74
O-3rd Flr Laundry	2	Linear Fluorescent - T12: 4' T12 (40W) - 1L	Wall Switch	46	7,392	Relamp & Reballast	No	2	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.05	536	0.0	$64.32	$101.03	$10.00	1.42
O-3rd Flr Mechanical Room	6	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	1,000	Relamp	No	6	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	1,000	0.08	121	0.0	$14.50	$109.55	$30.00	5.49
O-3rd Flr Mechanical Room	3	Linear Fluorescent - T12: 4' T12 (40W) - 1L	Wall Switch	46	1,000	Relamp & Reballast	No	3	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	1,000	0.07	109	0.0	$13.05	$151.55	$15.00	10.46
O-Stairwell	6	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	No	6	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	7,392	0.15	1,683	0.0	$202.15	$219.09	$60.00	0.79
O-2nd Flr Common Spaces	10	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	Yes	10	LED - Linear Tubes: (1) 4' Lamp	Occupancy Sensor	15	5,174	0.16	1,857	0.0	$223.08	$452.58	$85.00	1.65
O-2nd Flr Common Spaces	5	Compact Fluorescent: one lamp CFL fixture	Wall Switch	15	7,392	Relamp	No	5	LED Screw-In Lamps: One lamp screw-in LED fixture	Wall Switch	11	7,392	0.02	191	0.0	$22.97	$86.13	$25.00	2.66
O-2nd Flr Hallways	4	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	No	4	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.05	595	0.0	$71.47	$73.03	$20.00	0.74
O-2nd Flr Hallways	4	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	Yes	4	LED - Linear Tubes: (2) 4' Lamps	High/Low Control	29	5,174	0.12	1,418	0.0	$170.29	$346.06	$40.00	1.80
O-2nd Flr Hallways	6	Exit Signs: LED - 2 W Lamp	None	6	8,760	None	No	6	Exit Signs: LED - 2 W Lamp	None	6	8,760	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
Room O201	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room O202	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33

	Existing Conditions					Proposed Conditions							Energy Impact & Financial Analysis						
Location	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
Room O203	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room O204	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room O205	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room O206	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room O207	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room O208	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room O209	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room O210	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room O211	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room O212	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room O213	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
O-2nd Flr Restroom	1	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	114	7,392	Relamp	No	1	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	7,392	0.04	476	0.0	$57.17	$73.03	$20.00	0.93
O-2nd Flr Restroom	5	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	Yes	5	LED - Linear Tubes: (2) 4' Lamps	Occupancy Sensor	29	5,174	0.15	1,772	0.0	$212.87	$452.58	$85.00	1.73
O-2nd Flr Laundry	1	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	No	1	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.01	149	0.0	$17.87	$18.26	$5.00	0.74
O-2nd Flr Laundry	2	Linear Fluorescent - T12: 4' T12 (40W) - 1L	Wall Switch	46	7,392	Relamp & Reballast	No	2	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.05	536	0.0	$64.32	$101.03	$10.00	1.42
O-2nd Flr Mechanical Room	6	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	1,000	Relamp	No	6	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	1,000	0.08	121	0.0	$14.50	$109.55	$30.00	5.49
O-2nd Flr Mechanical Room	3	Linear Fluorescent - T12: 4' T12 (40W) - 1L	Wall Switch	46	1,000	Relamp & Reballast	No	3	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	1,000	0.07	109	0.0	$13.05	$151.55	$15.00	10.46
O-1st Flr Common Spaces	10	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	Yes	10	LED - Linear Tubes: (1) 4' Lamp	Occupancy Sensor	15	5,174	0.16	1,857	0.0	$223.08	$452.58	$85.00	1.65
O-1st Flr Common Spaces	5	Compact Fluorescent: one lamp CFL fixture	Wall Switch	15	7,392	Relamp	No	5	LED Screw-In Lamps: One lamp screw-in LED fixture	Wall Switch	11	7,392	0.02	191	0.0	$22.97	$86.13	$25.00	2.66
O-1st Flr Hallways	4	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	No	4	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.05	595	0.0	$71.47	$73.03	$20.00	0.74
O-1st Flr Hallways	4	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	Yes	4	LED - Linear Tubes: (2) 4' Lamps	High/Low Control	29	5,174	0.12	1,418	0.0	$170.29	$346.06	$40.00	1.80
O-1st Flr Hallways	6	Exit Signs: LED - 2 W Lamp	None	6	8,760	None	No	6	Exit Signs: LED - 2 W Lamp	None	6	8,760	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
Room O101	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room O102	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room O103	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33

	Existing Conditions					Proposed Conditions							Energy Impact & Financial Analysis						
Location	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Fixture Recommendation	Add Controls?	Fixture Quantity	Fixture Description	Control System	Watts per Fixture	Annual Operating Hours	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
Room O104	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room O105	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room O106	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room O107	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room O108	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room O109	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room O110	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room O111	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room O112	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
Room O113	2	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	2,500	Relamp	No	2	LED - Linear Tubes: (2) 4' Lamps	Wall Switch	29	2,500	0.05	190	0.0	$22.79	$73.03	$20.00	2.33
O-1st Flr Restroom	1	Linear Fluorescent - T8: 4' T8 (32W) - 4L	Wall Switch	114	7,392	Relamp	No	1	LED - Linear Tubes: (4) 4' Lamps	Wall Switch	58	7,392	0.04	476	0.0	$57.17	$73.03	$20.00	0.93
O-1st Flr Restroom	5	Linear Fluorescent - T8: 4' T8 (32W) - 2L	Wall Switch	62	7,392	Relamp	Yes	5	LED - Linear Tubes: (2) 4' Lamps	Occupancy Sensor	29	5,174	0.15	1,772	0.0	$212.87	$452.58	$85.00	1.73
O-1st Flr Laundry	1	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	7,392	Relamp	No	1	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.01	149	0.0	$17.87	$18.26	$5.00	0.74
O-1st Flr Laundry	2	Linear Fluorescent - T12: 4' T12 (40W) - 1L	Wall Switch	46	7,392	Relamp & Reballast	No	2	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	7,392	0.05	536	0.0	$64.32	$101.03	$10.00	1.42
O-1st Flr Mechanical Room	6	Linear Fluorescent - T8: 4' T8 (32W) - 1L	Wall Switch	32	1,000	Relamp	No	6	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	1,000	0.08	121	0.0	$14.50	$109.55	$30.00	5.49
O-1st Flr Mechanical Room	3	Linear Fluorescent - T12: 4' T12 (40W) - 1L	Wall Switch	46	1,000	Relamp & Reballast	No	3	LED - Linear Tubes: (1) 4' Lamp	Wall Switch	15	1,000	0.07	109	0.0	$13.05	$151.55	$15.00	10.46

Motor Inventory & Recommendations

		Existing Conditions						Proposed Conditions				Energy Impact & Financial Analysis						
Location	Area(s)/System(s) Served	Motor Quantity	Motor Application	HP Per Motor	Full Load Efficiency	VFD Control?	Annual Operating Hours	Install High Efficiency Motors?	Full Load Efficiency	Install VFDs?	Number of VFDs	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
P-wing 3rd Flr Mechanical Room	Domestic Hot Water System	1	Heating Hot Water Pump	0.1	68.5%	No	8,760	No	68.5%	No		0.00	0	0.0	$0.00	$0.00	$0.00	0.00
P-wing 2nd Flr Mechanical Room	Heating Hot Water System	2	Heating Hot Water Pump	0.3	76.2%	No	2,745	No	76.2%	No		0.00	0	0.0	$0.00	$0.00	$0.00	0.00
P-wing Attic	AHU 5	1	Supply Fan	3.0	88.5%	No	6,720	No	88.5%	No		0.00	0	0.0	$0.00	$0.00	$0.00	0.00
P-wing Attic	AHU 1, 2, 3	3	Supply Fan	1.0	85.5%	No	6,720	No	85.5%	No		0.00	0	0.0	$0.00	$0.00	$0.00	0.00
P-wing Attic	AHU 4	1	Supply Fan	0.5	76.2%	No	6,720	No	76.2%	No		0.00	0	0.0	$0.00	$0.00	$0.00	0.00
P-wing Roof	Exhaust	1	Exhaust Fan	0.5	76.2%	No	2,745	No	76.2%	No		0.00	0	0.0	$0.00	$0.00	$0.00	0.00
L-wing 3rd Flr Mechanical Room	Domestic Hot Water System	1	Heating Hot Water Pump	0.1	68.5%	No	8,760	No	68.5%	No		0.00	0	0.0	$0.00	$0.00	$0.00	0.00
L-wing 2nd Flr Mechanical Room	Heating Hot Water System	2	Heating Hot Water Pump	0.3	76.2%	No	2,745	No	76.2%	No		0.00	0	0.0	$0.00	$0.00	$0.00	0.00
L-wing Attic	AHU 5	1	Supply Fan	3.0	88.5%	No	6,720	No	88.5%	No		0.00	0	0.0	$0.00	$0.00	$0.00	0.00
L-wing Attic	AHU 1, 2, 3	3	Supply Fan	1.0	85.5%	No	6,720	No	85.5%	No		0.00	0	0.0	$0.00	$0.00	$0.00	0.00
L-wing Attic	AHU 4	1	Supply Fan	0.5	76.2%	No	6,720	No	76.2%	No		0.00	0	0.0	$0.00	$0.00	$0.00	0.00
L-wing Roof	Exhaust	1	Exhaust Fan	0.5	76.2%	No	2,745	No	76.2%	No		0.00	0	0.0	$0.00	$0.00	$0.00	0.00
M-wing 3rd Flr Mechanical Room	Domestic Hot Water System	1	Heating Hot Water Pump	0.1	68.5%	No	8,760	No	68.5%	No		0.00	0	0.0	$0.00	$0.00	$0.00	0.00
M-wing 2nd Flr Mechanical Room	Heating Hot Water System	2	Heating Hot Water Pump	0.3	76.2%	No	2,745	No	76.2%	No		0.00	0	0.0	$0.00	$0.00	$0.00	0.00
M-wing Attic	AHU 5	1	Supply Fan	3.0	88.5%	No	6,720	No	88.5%	No		0.00	0	0.0	$0.00	$0.00	$0.00	0.00
M-wing Attic	AHU 1, 2, 3	3	Supply Fan	1.0	85.5%	No	6,720	No	85.5%	No		0.00	0	0.0	$0.00	$0.00	$0.00	0.00
M-wing Attic	AHU 4	1	Supply Fan	0.5	76.2%	No	6,720	No	76.2%	No		0.00	0	0.0	$0.00	$0.00	$0.00	0.00
M-wing Roof	Exhaust	1	Exhaust Fan	0.5	76.2%	No	2,745	No	76.2%	No		0.00	0	0.0	$0.00	$0.00	$0.00	0.00
N-wing 3rd Flr Mechanical Room	Domestic Hot Water System	1	Heating Hot Water Pump	0.1	68.5%	No	8,760	No	68.5%	No		0.00	0	0.0	$0.00	$0.00	$0.00	0.00
N-wing 2nd Flr Mechanical Room	Heating Hot Water System	2	Heating Hot Water Pump	0.3	76.2%	No	2,745	No	76.2%	No		0.00	0	0.0	$0.00	$0.00	$0.00	0.00

		Existing Conditions						Proposed Conditions				Energy Impact & Financial Analysis						
Location	Area(s)/System(s) Served	Motor Quantity	Motor Application	HP Per Motor	Full Load Efficiency	VFD Control?	Annual Operating Hours	Install High Efficiency Motors?	Full Load Efficiency	Install VFDs?	Number of VFDs	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
N-wing Attic	AHU 5	1	Supply Fan	3.0	88.5%	No	6,720	No	88.5%	No		0.00	0	0.0	$0.00	$0.00	$0.00	0.00
N-wing Attic	AHU 1, 2, 3	3	Supply Fan	1.0	85.5%	No	6,720	No	85.5%	No		0.00	0	0.0	$0.00	$0.00	$0.00	0.00
N-wing Attic	AHU 4	1	Supply Fan	0.5	76.2%	No	6,720	No	76.2%	No		0.00	0	0.0	$0.00	$0.00	$0.00	0.00
N-wing Roof	Exhaust	1	Exhaust Fan	0.5	76.2%	No	2,745	No	76.2%	No		0.00	0	0.0	$0.00	$0.00	$0.00	0.00
O-wing 3rd Flr Mechanical Room	Domestic Hot Water System	1	Heating Hot Water Pump	0.1	68.5%	No	8,760	No	68.5%	No		0.00	0	0.0	$0.00	$0.00	$0.00	0.00
O-wing 2nd Flr Mechanical Room	Heating Hot Water System	2	Heating Hot Water Pump	0.3	76.2%	No	2,745	No	76.2%	No		0.00	0	0.0	$0.00	$0.00	$0.00	0.00
O-wing Attic	AHU 5	1	Supply Fan	3.0	88.5%	No	6,720	No	88.5%	No		0.00	0	0.0	$0.00	$0.00	$0.00	0.00
O-wing Attic	AHU 1, 2, 3	3	Supply Fan	1.0	85.5%	No	6,720	No	85.5%	No		0.00	0	0.0	$0.00	$0.00	$0.00	0.00
O-wing Attic	AHU 4	1	Supply Fan	0.5	76.2%	No	6,720	No	76.2%	No		0.00	0	0.0	$0.00	$0.00	$0.00	0.00
O-wing Roof	Exhaust	1	Exhaust Fan	0.5	76.2%	No	2,745	No	76.2%	No		0.00	0	0.0	$0.00	$0.00	$0.00	0.00

Electric HVAC Inventory & Recommendations

		Existing Conditions				Proposed Conditions								Energy Impact & Financial Analysis						
Location	Area(s)/System(s) Served	System Quantity	System Type	Cooling Capacity per Unit (Tons)	Heating Capacity per Unit (kBtu/hr)	Install High Efficiency System?	System Quantity	System Type	Cooling Capacity per Unit (Tons)	Heating Capacity per Unit (kBtu/hr)	Cooling Mode Efficiency (SEER/EER)	Heating Mode Efficiency (COP)	Install Dual Enthalpy Economizer?	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
P-wing Roof	Multiple Areas	1	Split-System AC	3.00		No							No	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
P-wing Roof	Multiple Areas	1	Split-System AC	5.00		No							No	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
P-wing Roof	Multiple Areas	1	Split-System AC	7.50		No							No	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
P-wing Roof	Multiple Areas	1	Split-System AC	4.00		No							No	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
P-wing Roof	Multiple Areas	1	Split-System AC	2.50		No							No	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
L-wing Roof	Multiple Areas	1	Split-System AC	3.00		No							No	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
L-wing Roof	Multiple Areas	1	Split-System AC	5.00		No							No	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
L-wing Roof	Multiple Areas	1	Split-System AC	7.50		No							No	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
L-wing Roof	Multiple Areas	1	Split-System AC	4.00		No							No	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
L-wing Roof	Multiple Areas	1	Split-System AC	2.50		No							No	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
M-wing Roof	Multiple Areas	1	Split-System AC	3.00		No							No	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
M-wing Roof	Multiple Areas	1	Split-System AC	5.00		No							No	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
M-wing Roof	Multiple Areas	1	Split-System AC	7.50		No							No	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
M-wing Roof	Multiple Areas	1	Split-System AC	4.00		No							No	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
M-wing Roof	Multiple Areas	1	Split-System AC	2.50		No							No	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
N-wing Roof	Multiple Areas	1	Split-System AC	3.00		No							No	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
N-wing Roof	Multiple Areas	1	Split-System AC	5.00		No							No	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
N-wing Roof	Multiple Areas	1	Split-System AC	7.50		No							No	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
N-wing Roof	Multiple Areas	1	Split-System AC	4.00		No							No	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
N-wing Roof	Multiple Areas	1	Split-System AC	2.50		No							No	0.00	0	0.0	$0.00	$0.00	$0.00	0.00

		Existing Conditions				Proposed Conditions								Energy Impact & Financial Analysis						
Location	Area(s)/System(s) Served	System Quantity	System Type	Cooling Capacity per Unit (Tons)	Heating Capacity per Unit (kBtu/hr)	Install High Efficiency System?	System Quantity	System Type	Cooling Capacity per Unit (Tons)	Heating Capacity per Unit (kBtu/hr)	Cooling Mode Efficiency (SEER/EER)	Heating Mode Efficiency (COP)	Install Dual Enthalpy Economizer?	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
O-wing Roof	Multiple Areas	1	Split-System AC	3.00		No							No	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
O-wing Roof	Multiple Areas	1	Split-System AC	5.00		No							No	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
O-wing Roof	Multiple Areas	1	Split-System AC	7.50		No							No	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
O-wing Roof	Multiple Areas	1	Split-System AC	4.00		No							No	0.00	0	0.0	$0.00	$0.00	$0.00	0.00
O-wing Roof	Multiple Areas	1	Split-System AC	2.50		No							No	0.00	0	0.0	$0.00	$0.00	$0.00	0.00

Fuel Heating Inventory & Recommendations

		Existing Conditions			Proposed Conditions						Energy Impact & Financial Analysis						
Location	Area(s)/System(s) Served	System Quantity	System Type	Output Capacity per Unit (MBh)	Install High Efficiency System?	System Quantity	System Type	Output Capacity per Unit (MBh)	Heating Efficiency	Heating Efficiency Units	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
P-wing Mechanical Room	P-Wing dorms	1	Condensing Hot Water Boiler	111.60	No						0.00	0	0.0	$0.00	$0.00	$0.00	0.00
P-wing Mechanical Room	P-Wing dorms	1	Non-Condensing Hot Water Boiler	140.00	No						0.00	0	0.0	$0.00	$0.00	$0.00	0.00
L-wing Mechanical Room	L-Wing dorms	1	Condensing Hot Water Boiler	111.60	No						0.00	0	0.0	$0.00	$0.00	$0.00	0.00
L-wing Mechanical Room	L-Wing dorms	1	Non-Condensing Hot Water Boiler	140.00	No						0.00	0	0.0	$0.00	$0.00	$0.00	0.00
M-wing Mechanical Room	M-Wing dorms	1	Condensing Hot Water Boiler	111.60	No						0.00	0	0.0	$0.00	$0.00	$0.00	0.00
M-wing Mechanical Room	M-Wing dorms	1	Non-Condensing Hot Water Boiler	140.00	No						0.00	0	0.0	$0.00	$0.00	$0.00	0.00
N-wing Mechanical Room	N-Wing dorms	1	Condensing Hot Water Boiler	111.60	No						0.00	0	0.0	$0.00	$0.00	$0.00	0.00
N-wing Mechanical Room	N-Wing dorms	1	Non-Condensing Hot Water Boiler	140.00	No						0.00	0	0.0	$0.00	$0.00	$0.00	0.00
O-wing Mechanical Room	O-Wing dorms	1	Condensing Hot Water Boiler	111.60	No						0.00	0	0.0	$0.00	$0.00	$0.00	0.00
O-wing Mechanical Room	O-Wing dorms	1	Non-Condensing Hot Water Boiler	140.00	No						0.00	0	0.0	$0.00	$0.00	$0.00	0.00

DHW Inventory & Recommendations

		Existing Conditions		Proposed Conditions						Energy Impact & Financial Analysis						
Location	Area(s)/System(s) Served	System Quantity	System Type	Replace?	System Quantity	System Type	Fuel Type	System Efficiency	Efficiency Units	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
L-wing Laundry Room	Multiple Areas	1	Storage Tank Water Heater (> 50 Gal)	No						0.00	0	0.0	$0.00	$0.00	$0.00	0.00
M-wing Laundry Room	Multiple Areas	1	Storage Tank Water Heater (> 50 Gal)	No						0.00	0	0.0	$0.00	$0.00	$0.00	0.00
N-wing Laundry Room	Multiple Areas	1	Storage Tank Water Heater (> 50 Gal)	No						0.00	0	0.0	$0.00	$0.00	$0.00	0.00
O-wing Laundry Room	Multiple Areas	1	Storage Tank Water Heater (> 50 Gal)	No						0.00	0	0.0	$0.00	$0.00	$0.00	0.00
P-wing Laundry Room	Multiple Areas	1	Storage Tank Water Heater (> 50 Gal)	No						0.00	0	0.0	$0.00	$0.00	$0.00	0.00

Low-Flow Device Recommendations

	Recommedation Inputs				Energy Impact & Financial Analysis						
Location	Device Quantity	Device Type	Existing Flow Rate (gpm)	Proposed Flow Rate (gpm)	Total Peak kW Savings	Total Annual kWh Savings	Total Annual MMBtu Savings	Total Annual Energy Cost Savings	Total Installation Cost	Total Incentives	Simple Payback w/ Incentives in Years
P-wing Restrooms	12	Faucet Aerator (Lavatory)	1.50	1.00	0.00	0	2.9	$29.17	$86.04	$0.00	2.95
P-wing Restrooms	15	Showerhead	2.50	2.00	0.00	0	12.0	$121.54	$1,339.50	$0.00	11.02
L-wing Restrooms	12	Faucet Aerator (Lavatory)	1.50	1.00	0.00	0	2.9	$29.17	$86.04	$0.00	2.95
L-wing Restrooms	15	Showerhead	2.50	2.00	0.00	0	12.0	$121.54	$1,339.50	$0.00	11.02
M-wing Restrooms	12	Faucet Aerator (Lavatory)	1.50	1.00	0.00	0	2.9	$29.17	$86.04	$0.00	2.95
M-wing Restrooms	15	Showerhead	2.50	2.00	0.00	0	12.0	$121.54	$1,339.50	$0.00	11.02
N-wing Restrooms	12	Faucet Aerator (Lavatory)	1.50	1.00	0.00	0	2.9	$29.17	$86.04	$0.00	2.95
N-wing Restrooms	15	Showerhead	2.50	2.00	0.00	0	12.0	$121.54	$1,339.50	$0.00	11.02
O-wing Restrooms	12	Faucet Aerator (Lavatory)	1.50	1.00	0.00	0	2.9	$29.17	$86.04	$0.00	2.95
O-wing Restrooms	15	Showerhead	2.50	2.00	0.00	0	12.0	$121.54	$1,339.50	$0.00	11.02

Plug Load Inventory

	Existing Conditions			
Location	Quantity	Equipment Description	Energy Rate (W)	ENERGY STAR Qualified?
P-wing Common areas	3	TV	120.0	
P-wing Dorm Rooms	39	Minifridge	200.0	
P-wing Laundry Rooms	3	Washer	900.0	Yes
P-wing Laundry Rooms	3	Dryer	1,600.0	Yes
P-wing Dorm Rooms	39	Microwave	1,000.0	
L-wing Common areas	3	TV	120.0	
L-wing Dorm Rooms	39	Minifridge	200.0	
L-wing Laundry Rooms	3	Washer	900.0	Yes
L-wing Laundry Rooms	3	Dryer	1,600.0	Yes
L-wing Dorm Rooms	39	Microwave	1,000.0	
M-wing Common areas	3	TV	120.0	
M-wing Dorm Rooms	39	Minifridge	200.0	
M-wing Laundry Rooms	3	Washer	900.0	Yes
M-wing Laundry Rooms	3	Dryer	1,600.0	Yes
M-wing Dorm Rooms	39	Microwave	1,000.0	
N-wing Common areas	3	TV	120.0	
N-wing Dorm Rooms	39	Minifridge	200.0	
N-wing Laundry Rooms	3	Washer	900.0	Yes
N-wing Laundry Rooms	3	Dryer	1,600.0	Yes
N-wing Dorm Rooms	39	Microwave	1,000.0	
O-wing Common areas	3	TV	120.0	
O-wing Dorm Rooms	39	Minifridge	200.0	
O-wing Laundry Rooms	3	Washer	900.0	Yes
O-wing Laundry Rooms	3	Dryer	1,600.0	Yes
O-wing Dorm Rooms	39	Microwave	1,000.0	

Appendix B: EPA Statement of Energy Performance

ENERGY STAR® Statement of Energy Performance

60

ENERGY STAR® Score[1]

Building 37 - Housing 3 L-P Dorms

Primary Property Type: Residence Hall/Dormitory
Gross Floor Area (ft²): 58,500
Built: 1973

For Year Ending: April 30, 2017
Date Generated: December 03, 2018

1. The ENERGY STAR score is a 1-100 assessment of a building's energy efficiency as compared with similar buildings nationwide, adjusting for climate and business activity.

Property & Contact Information

Property Address	Property Owner	Primary Contact
Building 37 - Housing 3 L-P Dorms 101 Vera King Farris Drive Galloway, New Jersey 08205	Stockton University 101 Vera King Farris Drive Galloway, NJ 08205 (____)____-_____	Dan Cordle 101 Vera King Farris Drive Galloway, NJ 08205 609-652-4221 Dan.Cordle@stockton.edu

Property ID: 6623617

Energy Consumption and Energy Use Intensity (EUI)

Site EUI
92.7 kBtu/ft²

Source EUI
160.1 kBtu/ft²

Annual Energy by Fuel	
Electric - Grid (kBtu)	2,127,826 (39%)
Natural Gas (kBtu)	2,223,203 (41%)
Electric - Solar (kBtu)	1,074,454 (20%)

National Median Comparison	
National Median Site EUI (kBtu/ft²)	103.5
National Median Source EUI (kBtu/ft²)	178.6
% Diff from National Median Source EUI	-10%
Annual Emissions	
Greenhouse Gas Emissions (Metric Tons CO2e/year)	334

Signature & Stamp of Verifying Professional

I _____ (Name) verify that the above information is true and correct to the best of my knowledge.

Signature: _____ Date: _____

Licensed Professional

____ _____
,
(____)____-_____
_____

Professional Engineer Stamp (if applicable)