

BERGEN COUNTY INTERMEDIATE CARE CENTER

**35-B PIERMONT AVE.
ROCKLEIGH, NJ, 07647**

FACILITY ENERGY REPORT

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I. HISTORIC ENERGY CONSUMPTION/COST

The energy usage for the facility has been tabulated and plotted in graph form as depicted within this section. Each energy source has been identified and monthly consumption and cost noted per the information provided by the Owner.

Electric Utility Provider:	Orange and Rockland (O&R)
Electric Utility Rate Structure:	N/A
Third Party Supplier:	None

Natural Gas Utility Provider:	Public Service Electric & Gas (PSEG)
Utility Rate Structure:	General Service Gas (GSG)
Third Party Supplier:	Great Eastern Energy

The electric usage profile represents the actual electrical usage for the facility. The electric utility measures consumption in kilowatt-hours (KWH) and maximum demand in kilowatts (KW). One KWH usage is equivalent to 1,000 watts running for one hour. One KW of electric demand is equivalent to 1,000 watts running at any given time. The basic usage charges are shown as generation service and delivery charges along with several non-utility generation charges. Rates used in this report reflect the historical data received for the facility.

The gas usage profile within each facility report shows the actual natural gas energy usage for the facility. The gas utility measures consumption in cubic feet x 100 (CCF), and converts the quantity into Therms of energy. One Therm is equivalent to 100,000 BTUs of energy.

Table 1
Electricity Billing Data

Electric utility data was not available for this facility.

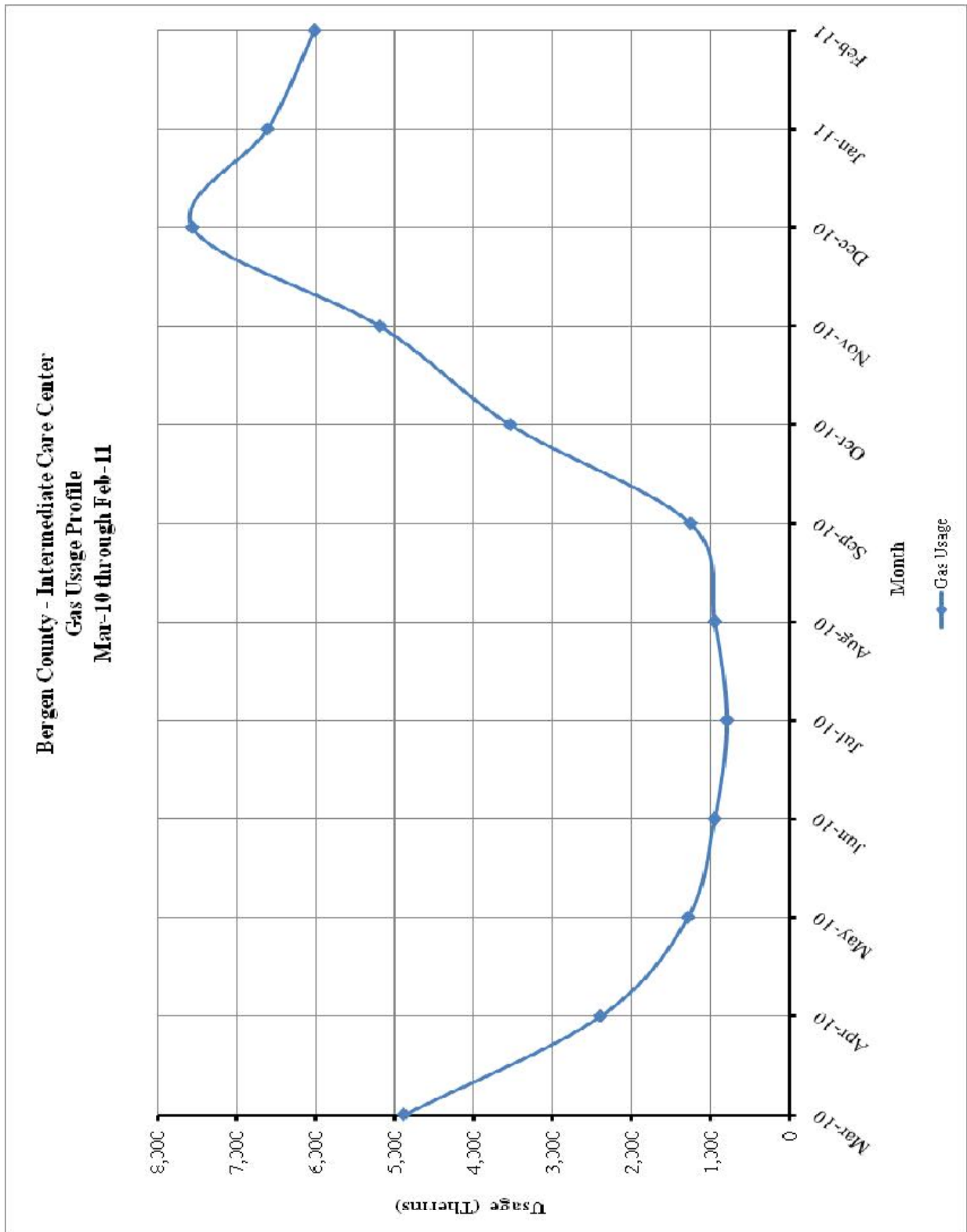
Figure 1
Electricity Usage Profile

Electric usage profile was not available for this facility.

Table 2
Natural Gas Billing Data

NATURAL GAS USAGE SUMMARY		
Utility Provider: PSE&G Rate: GSG (HTG) + N/A Meter No: 2807959, 2807971, 2808320, 2679036 Account #: 65 897 699 07, 65 885 365 18, 65 868 846 08, 65 868 736 06 Third Party Utility Provider: Great Eastern Energy TPS Meter No: N/A		
MONTH OF USE	CONSUMPTION (THERMS)	TOTAL BILL
Mar-10	4,879.18	\$4,636.47
Apr-10	2,392.52	\$2,247.29
May-10	1,283.74	\$1,278.97
Jun-10	944.39	\$1,003.63
Jul-10	786.27	\$926.37
Aug-10	942.91	\$1,044.11
Sep-10	1,250.13	\$1,400.87
Oct-10	3,530.97	\$4,355.71
Nov-10	5,181.66	\$6,115.44
Dec-10	7,551.01	\$8,671.96
Jan-11	6,604.03	\$7,740.64
Feb-11	6,007.00	\$7,415.65
TOTALS	41,353.81	\$46,837.11
AVERAGE RATE:	\$1.13	\$/THERM

Figure 2
Natural Gas Usage Profile



II. FACILITY DESCRIPTION

The 127,508 SF Bergen County Healthcare Center is a Nursing Facility in Rockleigh, NJ, composed of eight (8) interconnected buildings (referred as cottages). The facility is comprised of senior housing areas, recreation areas, kitchen and dining areas, a chapel, storage spaces and mechanical spaces.

The cottages reviewed in this audit are A, B (Administration Building), C (Chapel), K, L, M, N (Maintenance Building), and part of O (Kitchen). The facility operates 24 hours per day year round. The facility operation hours follow senior care schedules. Majority of the HVAC systems run in the occupied mode 24 per day without set-back. Total number of beds in this Nursing Facility is 110. Total number of staff is reported as 170.

The cottages were constructed with similar structural and envelope features where the exterior of the buildings consist of cinder block walls with brick façade along with double pane, ¼” tinted windows with operable aluminum frames. The amount of insulation within the wall is unknown. The windows throughout the facility were installed in approximately 1984 and they appear to be in fair condition. Blinds are utilized through the facility per occupant comfort. The blinds are valuable because they help to reduce heat loss in the winter and reduce solar heat in the summer. The cottages were built with built-up roof with tar and gravel covering. The Chapel roof is built up pitched with asphalt shingle covering. The amount of insulation below the roofing in the buildings is unknown. It was observed that the roof over the hallways connecting the Cottages have minimal insulation and serious water leakage issues. The building was built in 1954 as an orphanage and later converted to a Nursing Facility.

HVAC Systems

Majority of the spaces in the Bergen County Intermediate Care Facility building is conditioned by thirteen (13) constant volume rooftop air conditioning units made by York and Luxaire. Two (2) of the units are equipped with hot water coils for primary air heating while the rest of the units provide only cooling. The unit cooling capacities vary between 5-ton, 7.5 ton and 10. Most of the units were installed in 2007 while all of the units are current models within the 15 year expected service life based on ASHRAE. The rooftop units are in good condition and maintained well.

Air conditioning for the Chapel is provided with two (2) 10-ton split air conditioning units. One of the units is approximately 7 years old, while the remaining unit is nearly 20 years old. The Chapel A/C units are controlled via a programmable thermostat in an administrative office.

Dining room in the “O” building is conditioned with two (2) Sanyo ductless split air conditioning systems. The units were installed in 2005 and appear to be in good condition. The Sanyo units are standard efficiency units with R22 refrigerant. The units are controlled manually with remote thermostats.

The office #109 in the “O” building is heated and cooled simultaneously due to piping issues in the corresponding zone. The radiator in this room is oversized and it cannot be shut off since it is connected in series with the heating zone. Therefore, occupants of this room use a window air

conditioning unit to restore comfort conditions within. It is recommended to address this issue as soon as possible.

Heating for the Bergen County Intermediate Care Facility buildings are provided with hot water baseboard heaters. Each cottage houses a set of boilers and domestic hot water retaining tanks in a boiler room. The boiler room houses the primary heating loop circulators, hot water heater circulators and zone control equipment as well as the boiler controllers.

There are a total of 24 boilers feeding the cottages, administration building, dining service building, maintenance building and the chapel. The boilers are made by AO Smith and installed in 1999. The boilers are within 30 years of ASHRAE service life and appear to be in good condition. The boilers are standard efficiency water tube boilers with 300 to 500 MBH capacities each. 19 of the boilers have 300 MBH input capacity, while the remaining five (5) boilers have 500 MBH heating capacity. Total installed heating capacity of the boiler rooms in this facility is 7,300 BH. Heating hot water is delivered to the spaces via pipe mounted circulators. Each boiler group is set as primary secondary loops with multiple heating zones and multiple $\frac{3}{4}$ HP circulators.

O Building houses a large commercial kitchen and a dining facility. The facility provides three (3) meals per day and operates everyday between the hours of 6:00 AM and 7:00 PM. The kitchen houses four (4) commercial reach-in refrigerators, two (2) walk-in refrigerators and three (3) walk-in freezers.

Exhaust System

Air is exhausted from the hallways through the roof exhausters. The roof exhausters are interlocked with the air conditioning units. Bathrooms are equipped with local fans interlocked with the lights.

The facility houses a commercial kitchen, which includes a large commercial exhaust hood (8'x18') and a make-up air system. The hood is controlled manually via a switch next to the unit. In addition, a separate hood (3'x8') provides exhaust for the commercial dishwasher within the facility. The dishwasher hood operates when the dishwasher is runs.

HVAC System Controls

Majority of the AC systems within the facility are controlled via non programmable thermostats within the corresponding spaces. The Sanyo units feeding the dining room in the "O" building are controlled manually with remote thermostats.

Hot water boilers are controlled with Heat-Timer boiler sequencers. Heat-Timer control units modulate hot water temperature and the total heating input based on outside air temperature without space temperature input. The Heat-Timer boiler controller in the "M" building boiler room is problematic and currently runs on by-pass mode. It is recommended to repair or replace the unit.

Domestic Hot Water

The boilers in each boiler room also provide domestic hot water via a domestic hot water retainer tank. Each retainer tank includes a heat exchanger to produce domestic hot water and a circulator to deliver hot water to the point of use in each building. The circulation pumps are controlled by aqua stats. There are a total of eight (8) domestic hot water retainer tank / heat exchangers in this facility. The tanks are made by Bock and Weil Mclain and appear to be in good condition. The domestic hot water piping insulation appeared to be in good condition.

Lighting

Refer to the Investment Grade lighting Audit Appendix for a detailed list of the lighting throughout the facility and estimated operating hours per space.

III. MAJOR EQUIPMENT LIST

The equipment list contains major energy consuming equipment that through implementation of energy conservation measures could yield substantial energy savings. The list shows the major equipment in the facility and all pertinent information utilized in energy savings calculations. An approximate age was assigned to the equipment in some cases if a manufactures date was not shown on the equipment's nameplate. The ASHRAE service life for the equipment along with the remaining useful life is also shown in the Appendix.

Refer to the **Major Equipment List Appendix** for this facility.

IV. ENERGY CONSERVATION MEASURES

Energy Conservation Measures are developed specifically for this facility. The energy savings and calculations are highly dependent on the information received from the site survey and interviews with operations personnel. The assumptions and calculations should be reviewed by the owner to ensure accurate representation of this facility. The following ECMs were analyzed:

Table 3
ECM Financial Summary

ENERGY CONSERVATION MEASURES (ECM's)					
ECM NO.	DESCRIPTION	NET INSTALLATION COST^A	ANNUAL SAVINGS^B	SIMPLE PAYBACK (Yrs)	SIMPLE LIFETIME ROI
ECM #1	Lighting equipment upgrade	\$19,385	\$12,654	1.5	879.2%
ECM #2	Lighting controls upgrade	\$2,095	\$419	5.0	200.0%
ECM #3	Install Condensing Hot Water Boilers	\$566,625	\$7,231	78.4	-80.9%
ECM #4	Replace Split AC Units	\$46,488	\$1,607	28.9	-48.2%
ECM #5	Kitchen Exhaust Hood Controls	\$32,500	\$5,358	6.1	147.3%
ECM #6	Digital Building Automation System	\$596,000	\$26,283	22.7	-33.9%
ECM #7	Boiler Controls Upgrade (Install Space Temp.	\$14,000	\$4,048	3.5	333.7%
RENEWABLE ENERGY MEASURES (REM's)					
ECM NO.	DESCRIPTION	NET INSTALLATION COST	ANNUAL SAVINGS	SIMPLE PAYBACK (Yrs)	SIMPLE LIFETIME ROI
REM #1	Solar Photovoltaic System	\$2,956,650	\$361,201	8.2	83.2%

Notes: A. Cost takes into consideration applicable NJ Smart StartTM incentives.
B. Savings takes into consideration applicable maintenance savings.

Table 4
ECM Energy Summary

ENERGY CONSERVATION MEASURES (ECM's)				
ECM NO.	DESCRIPTION	ANNUAL UTILITY REDUCTION		
		ELECTRIC DEMAND (KW)	ELECTRIC CONSUMPTION (KWH)	NATURAL GAS (THERMS)
ECM #1	Lighting equipment upgrade	15.8	75,812	0
ECM #2	Lighting controls upgrade	1	2,539	0
ECM #3	Install Condensing Hot Water Boilers	0.0	0	5,514
ECM #4	Replace Split AC Units	11.0	9,737	0
ECM #5	Kitchen Exhaust Hood Controls	0.0	10,772	3,009
ECM #6	Digital Building Automation System	0.0	130,970	4,135
ECM #7	Boiler Controls Upgrade (Install Space Temp.	0.0	0	3,582
RENEWABLE ENERGY MEASURES (REM's)				
ECM NO.	DESCRIPTION	ANNUAL UTILITY REDUCTION		
		ELECTRIC DEMAND (KW)	ELECTRIC CONSUMPTION (KWH)	NATURAL GAS (THERMS)
REM #1	Solar Photovoltaic System	591.3	722,402	0

Table 5
Facility Project Summary

ENERGY SAVINGS IMPROVEMENT PROGRAM - POTENTIAL PROJECT					
ENERGY CONSERVATION MEASURES	ANNUAL ENERGY SAVINGS (\$)	PROJECT COST (\$)	SMART START INCENTIVES	CUSTOMER COST	SIMPLE PAYBACK
Lighting equipment upgrade	\$12,654	\$20,060	\$675	\$19,385	1.5
Lighting controls upgrade	\$419	\$2,450	\$355	\$2,095	5.0
Replace Split AC Units	\$1,607	\$48,500	\$2,012	\$46,488	28.9
Kitchen Exhaust Hood Controls	\$5,358	\$32,500	\$0	\$32,500	6.1
Boiler Controls Upgrade (Install Space Temp.	\$4,048	\$14,000	\$0	\$14,000	3.5
<i>Design / Construction Extras (15%)</i>		<i>\$117,510</i>		<i>\$117,510</i>	
Total Project	\$24,086	\$235,020	\$2,687	\$231,978	9.6

Design / Construction Extras is shown as an additional cost for the facility project summary. This cost is included to estimate the costs associated with construction management fees for a larger combined project.

ECM #1: Lighting Equipment Upgrade

Description:

The lighting throughout the Intermediate Care Center is provided with variety of lighting technologies including outdated fixtures with T12 lamps, newer fixtures with T8 lamps and incandescent lamps.

This ECM includes re-lamping and re-ballasting of the existing T12 fluorescent fixtures and 700 series fluorescent T8 fixtures with 800 series, 28W T8 lamps. The new, energy efficient fixtures with supersaver T8 lamps will provide adequate lighting and will save on electrical costs due to better performance of the lamp and ballasts. This ECM also includes maintenance savings through the reduced number of lamps replaced per year. The expected lamp life of a T8 lamp is approximately 30,000 burn-hours, in comparison to the existing T12 lamps which is approximately 20,000 burn-hours. The facility will need approximately 33% less lamps replaced per year for each one for one fixture replaced.

The ECM also includes replacement of any incandescent lamps with compact fluorescent lamps. Compact fluorescent lamps (CFL's) were designed to be direct replacements for the standard incandescent lamps which are common to table lamps, spot lights, hi-hats, bathroom vanity lighting, etc. The energy usage of an incandescent lamp compared to a compact fluorescent lamp is approximately 3 to 4 times greater. In addition to the energy savings, compact fluorescent fixtures burn-hours are 8 to 15 times longer than incandescent fixtures ranging from 6,000 to 15,000 burn-hours compared to incandescent fixtures ranging from 750 to 1000 burn-hours. However, the maintenance savings due to reduced lamp replacement is offset by the higher cost of the CFL's compared to the incandescent lamps.

This ECM also includes replacement of some of the dimmable incandescent bulbs to LED bulbs. Self contained LED fixtures with dimmable power supplies provide controllable light with four times less energy use. LED bulbs are available in a variety of temperatures to produce different light colors. In addition to the energy savings, dimmable LED bulbs burn-hours are approximately 24 times longer than incandescent fixtures.

Energy Savings Calculations:

The **Investment Grade Lighting Audit Appendix** outlines the hours of operation, proposed retrofits, costs, savings, and payback periods for each set of fixtures in the each building.

Rebates and Incentives:

NJ Smart Start® Program Incentives are calculated using the **Smart Start® Incentive Appendix** as follows:

Pulse Start metal Halide (for fixtures ≥ 150 watts) \$25 per fixture (includes parking lot lighting)

$$\text{Smart Start® Incentive} = (\# \text{ of fixture} \times \$50) = 27 \times \$25 = \$675$$

Replacement and Maintenance Savings are calculated as follows:

Due to replacing incandescent night light lamps with LEDs

$$\text{Savings} = (\text{reduction in lamps replaced per year}) \times (\text{replacement cost per lamp})$$

$$\text{Savings} = 505.04 \times (\$0.50 \text{ per lamp}) = \$145$$

Energy Savings Summary:

ECM #1 - ENERGY SAVINGS SUMMARY	
Installation Cost (\$):	\$20,060
NJ Smart Start Equipment Incentive (\$):	\$675
Net Installation Cost (\$):	\$19,385
Maintenance Savings (\$/Yr):	\$145
Energy Savings (\$/Yr):	\$12,509
Total Yearly Savings (\$/Yr):	\$12,654
Estimated ECM Lifetime (Yr):	15
Simple Payback	1.5
Simple Lifetime ROI	879.2%
Simple Lifetime Maintenance Savings	\$2,176
Simple Lifetime Savings	\$189,810
Internal Rate of Return (IRR)	65%
Net Present Value (NPV)	\$131,677.47

ECM #2: Lighting Controls Upgrade

Description:

Some of the lights in this facility are left on unnecessarily. In many cases the lights are left on because of the inconvenience to manually switch lights off when a room is left or on when a room is first occupied. This is common in rooms that are occupied for only short periods and only a few times per day. In some instances lights are left on due to the misconception that it is better to keep the lights on rather than to continuously switch lights on and off. Although increased switching reduces lamp life, the energy savings outweigh the lamp replacement costs. The payback timeframe for when to turn the lights off is approximately two minutes. If the lights are expected to be off for at least a two minute interval, then it pays to shut them off.

Lighting controls come in many forms. Sometimes an additional switch is adequate to provide reduced lighting levels when full light output is not needed. Occupancy sensors detect motion and will switch the lights on when the room is occupied. Occupancy sensors can either be mounted in place of a current wall switch, or on the ceiling to cover large areas.

The U.S. Department of Energy sponsored a study to analyze energy savings achieved through various types of building system controls. The referenced savings is based on the “Advanced Sensors and Controls for Building Applications: Market Assessment and Potential R&D Pathways,” document posted for public use April 2005. The study has found that commercial buildings have the potential to achieve significant energy savings through the use of building controls. The average energy savings are as follows based on the report:

- Occupancy Sensors for Lighting Control 20% - 28% energy savings.

Savings resulting from the implementation of this ECM for energy management controls are estimated to be 20% of the total light energy controlled by occupancy sensors and daylight sensors (The majority of the savings is expected to be after school hours when rooms are left with lights on)

This ECM includes installation of ceiling or switch mount sensors for individual offices, classrooms, large bathrooms, and libraries. Sensors shall be manufactured by Sensorswitch, Watt Stopper or equivalent. The **Investment Grade Lighting Audit Appendix** of this report includes the summary of lighting controls implemented in this ECM and outlines the proposed controls, costs, savings, and payback periods. The calculations adjust the lighting power usage by the applicable percent savings for each area that includes lighting controls.

Energy Savings Calculations:

$$\text{Energy Savings} = (\% \text{ Savings} \times \text{Controlled Light Energy (kWh/Yr)})$$

$$\text{Savings} = \text{Energy Savings (kWh)} \times \text{Ave Elec Cost} \left(\frac{\$}{\text{kWh}} \right)$$

Cost and Incentives:

Installation cost per dual-technology sensors (Basis: Sensor switch or equivalent) are as follows:

Dual Technology Occupancy Sensor - Switch Mount	\$125 per installation
Dual Technology Occupancy Sensor - Remote Mount	\$450 per installation
Dual Tech. Occupancy Sensor w/2 Pole Relay - Remote Mount	\$500 per installation
Daylight Sensor (Sensor switch PP-20 & CM-PC or equal)	\$400 per installation

Cost includes material and labor.

From the **NJ Smart Start® Program Incentives Appendix**, the installation of a lighting control device warrants the following incentive:

Occupancy Sensor Fixture Mounted (existing facility only) = \$20 per sensor

Occupancy Sensor Remote Mounted (existing facility only) = \$35 per sensor

Smart Start® Incentive = (# of wall mount × \$ 20) + (# of ceiling mount × \$35)

Smart Start® Incentive = (16 wall mount × \$ 20) + (1 ceiling mount × \$35) = \$355

Energy Savings Summary:

ECM #2 - ENERGY SAVINGS SUMMARY	
Installation Cost (\$):	\$2,450
NJ Smart Start Equipment Incentive (\$):	\$355
Net Installation Cost (\$):	\$2,095
Maintenance Savings (\$/Yr):	\$0
Energy Savings (\$/Yr):	\$419
Total Yearly Savings (\$/Yr):	\$419
Estimated ECM Lifetime (Yr):	15
Simple Payback	5.0
Simple Lifetime ROI	200.0%
Simple Lifetime Maintenance Savings	\$0
Simple Lifetime Savings	\$6,285
Internal Rate of Return (IRR)	18%
Net Present Value (NPV)	\$2,907.09

ECM #3: Condensing Boiler Installation

Description:

The Intermediate Healthcare Center is comprised of multiple interconnected cottages. Each cottage houses a boiler room where a set of modular boilers provide heating hot water for the perimeter baseboard hot water heaters.

The modular boilers are standard efficiency non-condensing units made by A.O. Smith. The existing boilers are nearly at half of its life expectancy of a typical water tube boiler and the equipment appears to be maintained in good operating condition. With the increased efficiency of the condensing boilers, the savings can be substantial.

New condensing boilers could improve the operating efficiency of the heating system of the cottages. Condensing boiler's peak efficiency tops out at 99% depending on return water temperature. Due to the operating conditions of the building, the annual average operating efficiency of the proposed condensing boiler is expected to be 90%. The existing boiler's efficiency is approximately 78%, which makes the condensing boilers an 12% increase in efficiency. This ECM is based on variable supply water temperature adjusted based on outdoor temperature.

This ECM includes installation of seven (7) condensing gas fired boilers to replace the existing modular boilers in each cottage. The basis for this ECM is Aerco Benchmark and KC Series condensing boilers. Following is the summary of implementation for this ECM.

IMPLEMENTATION SUMMARY		
LOCATION	EXISTING BOILER CAPACITY	PROPOSED
A Building	2 x 300 MBH 2 x 500 MBH Total 1,600 MBH	Aerco BMK 1.5
B Building	3 x 300 MBH Total 900 MBH	Aerco KC 1000
K Building	3 x 300 MBH Total 900 MBH	Aerco KC 1000
L Building	3 x 300 MBH Total 900 MBH	Aerco KC 1000
M Building	3 x 300 MBH Total 900 MBH	Aerco KC 1000
N Building	3 x 300 MBH Total 900 MBH	Aerco KC 1000
O Building	2 x 300 MBH 3 x 500 MBH Total 2,100 MBH	Aerco BMK 2.0

Energy Savings Calculations:

Existing Natural Gas Usage: 41,354 Therms

$$\text{Bldg Heat Required} = \text{Existing Nat Gas (Therms)} \times \text{Heating Eff. (\%)} \times \text{Fuel Heat Value} \left(\frac{\text{BTU}}{\text{Therm}} \right)$$

$$\text{Proposed Heating Gas Usage} = \frac{\text{Bldg Heat Required (BTU)}}{\text{Heating Eff. (\%)} \times \text{Fuel Heat Value} \left(\frac{\text{BTU}}{\text{Therm}} \right)}$$

$$\text{Energy Cost} = \text{Heating Gas Usage (Therms)} \times \text{Ave Fuel Cost} \left(\frac{\$}{\text{Therm}} \right)$$

CONDENSING BOILER CALCULATIONS			
ECM INPUTS	EXISTING	PROPOSED	SAVINGS
ECM INPUTS	Existing Cast Iron Boilers	New Condensing Boilers	
Existing Nat Gas (Therms)	41,354	0	
Boiler Efficiency (%)	78%	90%	12%
Nat Gas Heat Value (BTU/Therm)	100,000	100,000	
Equivalent Building Heat Usage (MMBTUs)	3,226	3,226	
Gas Cost (\$/Therm)	1.13	1.13	
ENERGY SAVINGS CALCULATIONS			
ECM RESULTS	EXISTING	PROPOSED	SAVINGS
Natural Gas Usage (Therms)	41,354	35,840	5,514
Energy Cost (\$)	\$46,730	\$40,499	\$6,231
COMMENTS:			

Installation cost of the seven new condensing boilers, demolition, flue piping, boiler water piping modifications, gas piping modifications, electric, etc. is estimated to be \$580,000

From the **NJ Smart Start Appendix**, the installation of new condensing boilers warrants the following incentives:

BOILER REBATE SUMMARY				
UNIT DESCRIPTION	UNIT EFFICIENCY	REBATE \$/MBH	PROPOSED CAPACITY MBH	TOTAL REBATE \$
<300 MBH	85% AFUE	\$2.00 per MBH Not less than \$300/ unit	0	\$0
≥ 300 MBH - 1500 MBH	85% AFUE for Hot Water boilers 84% AFUE for Steam boilers	\$1.75 per MBH	6500	\$11,375
>1500 - ≤ 4000 MBH	84% AFUE for Hot Water boilers 83% AFUE for Steam boilers	\$1.00 per MBH	2,000	\$2,000
TOTAL			8500	\$13,375

This ECM is expected to result in maintenance savings due to reduction in the number of boilers.

Estimated Maintenance Savings = \$1,000/Year

Energy Savings Summary:

ECM #3 - ENERGY SAVINGS SUMMARY	
Installation Cost (\$):	\$580,000
NJ Smart Start Equipment Incentive (\$):	\$13,375
Net Installation Cost (\$):	\$566,625
Maintenance Savings (\$/Yr):	\$1,000
Energy Savings (\$/Yr):	\$6,231
Total Yearly Savings (\$/Yr):	\$7,231
Estimated ECM Lifetime (Yr):	15
Simple Payback	78.4
Simple Lifetime ROI	-80.9%
Simple Lifetime Maintenance Savings	\$15,000
Simple Lifetime Savings	\$108,460
Internal Rate of Return (IRR)	-16%
Net Present Value (NPV)	(\$480,306.08)

ECM #4: Air Conditioning Unit Upgrades

Description:

The Chapel and the Dining Room areas are air conditioned by split system AC. The Chapel AC units are in poor condition and in need of replacement. The units currently installed are inefficient compared to modern equipment and can be replaced with new high efficiency units. New air conditioners provide higher full load and part load efficiencies due to advances in inverter motor technologies, heat exchangers and refrigerants. The dining room AC units are standard efficiency ductless split units. These units can be replaced with new high efficiency ductless units with R410A refrigerant and inverter drive compressors.

This ECM includes one-for-one replacement of the older air conditioning units with new higher efficiency systems. It is recommended to fully evaluate the capacity needed for all new systems prior to moving forward with this ECM. A summary of the unit replacements for this ECM can be found in the table below:

IMPLEMENTATION SUMMARY					
ECM INPUTS	SERVICE FOR	NUMBER OF UNITS	COOLING CAPACITY, BTU/HR	TOTAL CAPACITY, TONS	REPLACE UNIT WITH
Ductless Splits	Dining room	2	36,000	6	Mitsubishi Mr. Slim
CU	Chapel	2	120,000	20	Carrier 38AUD
Total		4	156,000	26	

The manufacturers used as the basis for design are Carrier and Mitsubishi. This ECM includes replacement of the outdoor condensing units and associated indoor air handling units or cooling coils where appropriate. The units are one for one style replacements with matching capacity of the new units to the old units.

Energy Savings Calculations:

Cooling Energy Savings:

Seasonal energy consumption of the air conditioners at the cooling mode is calculated with the equation below:

$$\text{Energy Savings, kWh} = \text{Cooling Capacity, } \frac{\text{BTU}}{\text{Hr}} \times \left(\frac{1}{\text{SEER}_{\text{Old}}} - \frac{1}{\text{SEER}_{\text{New}}} \right) \times \frac{\text{Operation Hours}}{1000 \frac{\text{W}}{\text{kWh}}}$$

$$\text{Demand Savings, kW} = \frac{\text{Energy Savings (kWh)}}{\text{Hours of Cooling}}$$

$$\text{Cooling Cost Savings} = \text{Energy Savings, kWh} \times \text{Cost of Electricity} \left(\frac{\$}{\text{kWh}} \right)$$

ENERGY SAVINGS CALCULATIONS							
ECM INPUTS	COOLING CAPACITY, BTU/Hr	ANNUAL COOLING HOURS	EXISTING UNITS (S)EER	SPLIT UNITS (S)EER	# OF UNITS	ENERGY SAVINGS kWh	DEMAND SAVINGS kW
Ductless Splits	36,000	1,200	10 SEER	14 SEER	2	2,880	2.4
CU	120,000	800	8 EER	11.2 EER	2	6,857	8.6
Total					4	9,737	11.0

Project Cost, Incentives and Maintenance Savings

From the NJ Smart Start[®] Program appendix, the replacement of split system AC units and unitary systems with high efficiency AC systems falls under the category “Unitary HVAC Split System” and warrants an incentive based on efficiency (EER/SEER). The program incentives are calculated as follows:

$$\text{SmartStart}^{\text{®}} \text{ Incentive} = (\text{Cooling Tons} \times \$/\text{Ton Incentive})$$

SPLIT SYSTEM AC UNITS REBATE SUMMARY				
UNIT DESCRIPTION	UNIT EFFICIENCY	REBATE \$/TON	PROPOSED CAPACITY TONS	TOTAL REBATE \$
≥20 to 30 tons	10.5 EER	79	0	\$0
≥ 11.25 to < 20 tons	11.5 EER	79	0	\$0
≥ 5.4 to < 11.25 tons	11.5 EER	73	20	\$1,460
5.4 tons or less Unitary AC and Split System	≥14 SEER	\$92	6	\$552
TOTAL			26	\$2,012

Summary of cost, savings and payback for this ECM is below.

ENERGY SAVINGS CALCULATIONS							
ECM INPUTS	COOLING CAPACITY, BTU/Hr	ANNUAL COOLING HOURS	EXISTING UNITS (S)EER	SPLIT UNITS (S)EER	# OF UNITS	ENERGY SAVINGS kWh	DEMAND SAVINGS kW
Ductless Splits	36,000	1,200	10 SEER	14 SEER	2	2,880	2.4
CU	120,000	800	8 EER	11.2 EER	2	6,857	8.6
Total					4	9,737	11.0

There is no significant maintenance savings due to implementation of this ECM.

Energy Savings Summary:

ECM #4 - ENERGY SAVINGS SUMMARY	
Installation Cost (\$):	\$48,500
NJ Smart Start Equipment Incentive (\$):	\$2,012
Net Installation Cost (\$):	\$46,488
Maintenance Savings (\$/Yr):	\$0
Energy Savings (\$/Yr):	\$1,607
Total Yearly Savings (\$/Yr):	\$1,607
Estimated ECM Lifetime (Yr):	15
Simple Payback	28.9
Simple Lifetime ROI	-48.2%
Simple Lifetime Maintenance Savings	\$0
Simple Lifetime Savings	\$24,099
Internal Rate of Return (IRR)	-7%
Net Present Value (NPV)	(\$27,308.17)

ECM #5: Commercial Kitchen Exhaust Hood Controls

Description:

The kitchen in this facility is equipped with a large commercial kitchen exhaust hood providing exhaust for the cooking equipment. The estimated total kitchen exhaust from the hoods is 7,500 CFM powered by an estimated total 5 HP of exhaust and makeup air fans. The kitchen make-up air units provide heated air to replace all the air exhausted through the exhaust hood. This system operates based on manual switches located in the kitchen. Currently the facility provides 1 meal per day. The installation of kitchen exhaust controls would significantly reduce the total kitchen exhaust and make-up air quantity. The conditioned make up air and exhausted air savings are achieved by monitoring the exhaust hoods and exhaust based on the actual use of the kitchen equipment. Temperature sensors and optical lasers monitor the heat and smoke production at each exhaust hood to reduce the exhaust and make-up airflow based on the need of the kitchen equipment.

This ECM includes installation of kitchen exhaust controls for the main kitchen exhaust hood and VFD's for the constant volume exhaust fans. The hoods would be retrofitted with temperature and laser sensors to monitor the activity of each of all equipment installed below the hoods. The work involves installing a Melink Kitchen Hood Variable Air Volume Controller; variable frequency drive on the kitchen hood exhaust fan; and turn off all the kitchen hood exhaust systems when the kitchen is closed. When the cooking appliances are turned on, the hood exhaust fan speed will increase based on the hood exhaust temperature. During heavy cooking, the kitchen hood exhaust fan increases to 100% speed until the smoke/vapor is removed. Energy savings are also realized when the kitchen equipment is operating at less than full load due to minimal cooking operations. During these times the fan speed decreases, removing only the necessary amount of air, saving exhaust fan energy and make up air conditioning energy.

Energy Calculations Summary:

Detailed calculations for the proposed kitchen hood control system can be found in the **Kitchen Exhaust Calculations Appendix**. It is pertinent to note that the calculation assumes the exhaust fans and make-up air unit remain off for approximately 17 hours per day.

Installed cost of the kitchen hood control system is \$32,500. The calculated energy savings equals approximately \$5,358 per year. Currently, there aren't any incentives from the Smart Start program for motors smaller than 5 HP.

A summary of energy savings can be seen in the table below:

KITCHEN EXHAUST CONTROLS CALCULATION			
ECM INPUTS	EXISTING	PROPOSED	SAVINGS
ECM INPUTS	Manually Controlled Kitchen Exhaust	MELINK Kitchen Exhaust Controls	
Fan Energy Usage (kWh)	17,258	6,486	10,772
Heating Energy Usage (Therms)	9,403	6,394	3,009
Cooling Energy Usage (kWh)	0	0	0
Average Gas Cost (\$/Therm)	1.19	1.19	
Electric Cost (\$/KWH)	0.165	0.165	
SAVINGS CALCULATIONS			
ECM RESULTS	EXISTING	PROPOSED	SAVINGS
Total Energy Usage (kWh)	17,258	6,486	10,772
Total Energy Usage (Therms)	9,403	6,394	3,009
Heating Energy Cost (\$)	\$11,190	\$7,609	\$3,581
Cooling Energy Cost (\$)	\$2,848	\$1,070	\$1,777
Total Energy Cost (\$)	\$14,038	\$8,679	\$5,358
COMMENTS:	*ECM is based on calculations using spreadsheets provided by MELINK Intelli-hood controls manufacturer.		

Energy Savings Summary:

ECM #5 - ENERGY SAVINGS SUMMARY	
Installation Cost (\$):	\$32,500
NJ Smart Start Equipment Incentive (\$):	\$0
Net Installation Cost (\$):	\$32,500
Maintenance Savings (\$/Yr):	\$0
Energy Savings (\$/Yr):	\$5,358
Total Yearly Savings (\$/Yr):	\$5,358
Estimated ECM Lifetime (Yr):	15
Simple Payback	6.1
Simple Lifetime ROI	147.3%
Simple Lifetime Maintenance Savings	\$0
Simple Lifetime Savings	\$80,374
Internal Rate of Return (IRR)	14%
Net Present Value (NPV)	\$31,466.81

ECM #6: Digital Building Automation System (DDC BAS)

Description:

The heating and air conditioning systems within the facility are controlled via a verity of programmable and non-programmable thermostats scattered throughout the space. Although a common practice, multiple independent thermostats throughout is usually an inefficient and cumbersome way of controlling multiple heating and air conditioning systems in a facility. Often the settings on these thermostats are altered, set to hold or over-ride position or set to maximum heat or cool positions by the occupants rendering the supervisory controls inapplicable over the energy systems in the facility.

This ECM includes installing a Building Automation system with Direct Digital Controls (DDC) wired through an Ethernet backbone and front end controller within the building. The system will include new temperature sensors and new local thermostats with limited over-ride capability, a front end computer and main controller. The system will also include central controls for lighting. With the communication between the control devices and the front end computer interface, the facility manager will be able to take advantage of scheduling for occupied and unoccupied periods based on the actual occupancy of each space in the facility. Due to the fact that the building may have diverse hours of occupancy, including evening and weekend activities, having supervisory control over all of the equipment makes sense. The DDC system will also aid in the response time to service / maintenance issues when the facility is not under normal maintenance supervision, i.e. after-hours.

The new DDC system has the potential to provide significant savings by controlling the HVAC systems as a whole and provide operating schedules and features such as space averaging, night set-back, temperature override control, etc. The U.S. Department of Energy sponsored a study to analyze energy savings achieved through various types of building system controls. The referenced savings is based on the “Advanced Sensors and Controls for Building Applications: Market Assessment and Potential R&D Pathways,” document posted for public use April 2005. The study has found that commercial buildings have the potential to achieve significant energy savings through the use of building controls. The average energy savings are as follows based on the referenced report:

- Energy Management and Control System Savings: 5%-15%.

Savings resulting from the implementation of this ECM for energy management controls are estimated to be 10% of each utility type utilized in this building.

The basis for this ECM is the Honeywell Light Commercial Energy Management System or similar.

Energy Savings Calculations:

Since some of the key utility consumption and cost information was not available, estimated values are used for the unit cost of natural gas, total electricity usage and unit cost of electricity.

Energy savings for each utility is calculated with the equation below.

$$\text{Energy Savings (Utility)} = \text{Current Energy Consumption} \times \text{Estimated Savings, \%}$$

Following table summarizes energy savings for this facility via implementation of an Energy Management System:

DDC ENERGY MANAGEMENT SYSTEM CALCULATIONS			
ECM INPUTS	EXISTING	PROPOSED	SAVINGS
ECM INPUTS	Existing Controls w/ Local Thermostats	DDC Controls	
Existing Nat Gas Usage (Therms)	41,353	-	
Existing Electricity Usage (kWh)	1,309,698	-	
Energy Savings, Nat. Gas	-	10%	
Energy Savings, Electricity	-	10%	
Gas Cost (\$/Therm)	\$1.13	\$1.13	
Electricity Cost (\$/kWh)	\$0.165	\$0.165	
ENERGY SAVINGS CALCULATIONS			
ECM RESULTS	EXISTING	PROPOSED	SAVINGS
Natural Gas Usage (Therms)	41,353	37,218	4,135
Electricity Usage (kWh)	1,309,698	1,178,728	130,970
Natural Gas Cost (\$)	\$46,729	\$42,056	\$4,673
Electricity Cost (\$)	\$216,100	\$194,490	\$21,610
Energy Cost (\$)	\$262,829	\$236,546	\$26,283
COMMENTS:	<i>Total electricity consumption estimated based on 30 kBTU/SF</i>		

Demand savings due to implementation of this ECM is minimal.

The cost of a full DDC system with new field devices, controllers, computer, software, programming, etc. is approximately \$4.00 per SF in accordance with recent Contractor pricing

for systems of this magnitude. Savings from the implementation of this ECM will be from the reduced energy consumption currently used by the HVAC system by proper control of schedule and temperatures via the DDC system.

Cost of complete DDC System = (\$4.00/SF x 149,000 SF) = \$596,000

Currently, there are no prequalified NJ SmartSmart Incentives for installation of the DDC system.

Energy Savings Summary:

ECM #6 - ENERGY SAVINGS SUMMARY	
Installation Cost (\$):	\$596,000
NJ Smart Start Equipment Incentive (\$):	\$0
Net Installation Cost (\$):	\$596,000
Maintenance Savings (\$/Yr):	\$0
Energy Savings (\$/Yr):	\$26,283
Total Yearly Savings (\$/Yr):	\$26,283
Estimated ECM Lifetime (Yr):	15
Simple Payback	22.7
Simple Lifetime ROI	-33.9%
Simple Lifetime Maintenance Savings	0
Simple Lifetime Savings	\$394,244
Internal Rate of Return (IRR)	-5%
Net Present Value (NPV)	(\$282,236.33)

ECM #7: Boiler Controls Upgrade - Space Sensors

Description:

The space heating for the Intermediate Healthcare Center is provided from the boiler rooms located in each cottage. Each boiler room houses multiple modular hot water boilers. Each set of boilers and the pumps are controlled via a Heat-Timer Gold Series boiler controller/sequencer. The boiler controller is capable of various energy saving features such as night set back and temperature reset based on outside air. Currently the system throughput is controlled based on outside air only. Although a common practice, this strategy often causes over-heating of the spaces due to lack of compensation based on actual space temperatures. Energy consumption of the perimeter baseboard heating can be reduced by installing space temperatures for each boiler controller.

This energy conservation measure will install space temperature sensors to each boiler controller to control the hot baseboard heating system based on indoor temperature as well as the ambient temperature. Based on discussions with the facility personnel, estimated temperature the spaces overheat by is 2°F.

Energy Savings Calculations:

Energy savings calculations are derived from the actual natural gas consumption of the building, number of heating degree days at this location and estimated overheating temperature.

First, total design day heat load of the building is back-calculated using the actual natural gas consumption of the building, HDDs based on 67°F (2°F overheat) and 24hours per day operation.

$$\text{Total Heat Load, } \frac{\text{BTU}}{\text{hr}} = \frac{\text{Heating Energy Used (Therms)} \times \Delta T \times \text{Eff} \times V}{\text{HDD}_{67^{\circ}\text{F}} \times \text{Hours of Operation}}$$

Then the proposed energy consumption of the building is re-calculated using the total heat load of the building and HDDs at 65°F.

$$\text{Heating Energy Used (Therms)} = \frac{\text{Heating Capacity} \times \text{HDD}_{65^{\circ}\text{F}} \times \text{Hours of Operation}}{\Delta T \times \text{Eff} \times V}$$

Where:

HDD = number of Heating Degree Days as Specified Base Temperature

ΔT = Design temperature difference, 70°F

Eff = Efficiency of Energy Utilization (Boiler efficiency)

V = Heating value of fuel, BTU/Therm (100,000 Btu/Hr per Therm)

Estimated total cost of heating = Energy Consumption (Therms) x Cost of Natural Gas (\$/Therms)

Energy savings calculations are summarized in the table below.

PROGRAMMABLE THERMOSTAT for HYDRONIC HEATING			
ECM INPUTS	EXISTING	PROPOSED	SAVINGS
ECM INPUTS	Existing Controls	Space Temperature Sensors	
Overheat by: (°F)	2	0	
Annual Natural Gas Cons. (Therms)	41,353	-	-
Heating Degree Days (67°F)	5,264	-	-
Heating Degree Days (65°F)	-	4,808	-
Design Day Temperature Diff. (°F)	70	70	-
Heating Efficiency (Natural Gas Boiler)	80%	80%	-
Design Day Heating Capacity, BTU/Hr	1,833,023	1,833,023	-
Elec Cost (\$/kWh)	\$0.165	\$0.165	-
Natural Gas Cost (\$/Therm)	\$1.130	\$1.130	-
ENERGY SAVINGS CALCULATIONS			
ECM RESULTS	EXISTING	PROPOSED	SAVINGS
Natural Gas Cons.	41,353	37,771	3,582
Electric Energy Cost (\$)	\$46,729	\$42,681	\$4,048
COMMENTS:	HDDs estimated based on Newark,NJ.		

Cost

Total estimated installed cost for seven sets of space temperatures to be connected to each boiler controllers is \$14,000.

Energy Savings Summary:

ECM #7 - ENERGY SAVINGS SUMMARY	
Installation Cost (\$):	\$14,000
NJ Smart Start Equipment Incentive (\$):	\$0
Net Installation Cost (\$):	\$14,000
Maintenance Savings (\$/Yr):	\$0
Energy Savings (\$/Yr):	\$4,048
Total Yearly Savings (\$/Yr):	\$4,048
Estimated ECM Lifetime (Yr):	15
Simple Payback	3.5
Simple Lifetime ROI	333.7%
Simple Lifetime Maintenance Savings	\$0
Simple Lifetime Savings	\$60,719
Internal Rate of Return (IRR)	28%
Net Present Value (NPV)	\$34,324.09

REM #1: 722 kW Ground Mounted Solar Array

Description:

The Intermediate Care Center has approximately 42,000 square-foot of available ground space that can accommodate a substantial solar array with a 722 kW electricity generation capacity.

The array will produce approximately 722,402 kilowatt-hours annually that will dramatically reduce the overall electric usage of the facility (Actual total electricity consumption of this facility was not available during this audit).

Energy Savings Calculations:

See **Renewable / Distributed Energy Measures Calculations Appendix** for detailed financial summary and proposed solar layout areas.

Energy Savings Summary:

REM #1 - ENERGY SAVINGS SUMMARY	
Installation Cost (\$):	\$2,956,650
NJ Smart Start Equipment Incentive (\$):	\$0
Net Installation Cost (\$):	\$2,956,650
Maintenance Savings (\$/Yr):	\$252,841
Energy Savings (\$/Yr):	\$108,360
Total Yearly Savings (\$/Yr):	\$361,201
Estimated ECM Lifetime (Yr):	15
Simple Payback	8.2
Simple Lifetime ROI	83.2%
Simple Lifetime Maintenance Savings	\$3,792,611
Simple Lifetime Savings	\$5,418,015
Internal Rate of Return (IRR)	9%
Net Present Value (NPV)	\$1,355,344.09

V. ADDITIONAL RECOMMENDATIONS

The following recommendations include no cost/low cost measures, Operation & Maintenance (O&M) items, and water conservation measures with attractive paybacks. These measures are not eligible for the Smart Start Buildings incentives from the office of Clean Energy but save energy none the less.

- A. Chemically clean the condenser and evaporator coils periodically to optimize efficiency. Poorly maintained heat transfer surfaces can reduce efficiency 5-10%.
- B. Maintain all weather stripping on windows and doors.
- C. Clean all light fixtures to maximize light output.
- D. Provide more frequent air filter changes to decrease overall system power usage and maintain better IAQ.
- E. Turn off computers when not in use. Ensure computers are not running in screen saver mode which saves the monitor screen not energy.
- F. Ensure outside air dampers are functioning properly and only open during occupied mode.

ECM COST & SAVINGS BREAKDOWN

CONCORD ENGINEERING GROUP

Bergen County Intermediate Care Center

ECM ENERGY AND FINANCIAL COSTS AND SAVINGS SUMMARY															
ECM NO.	DESCRIPTION	INSTALLATION COST				YEARLY SAVINGS			ECM LIFETIME	LIFETIME ENERGY SAVINGS	LIFETIME MAINTENANCE SAVINGS	LIFETIME ROI	SIMPLE PAYBACK	INTERNAL RATE OF RETURN	NET PRESENT VALUE (NPV)
		MATERIAL	LABOR	REBATES, INCENTIVES	NET INSTALLATION COST	ENERGY	MAINT. / SREC	TOTAL		(Yearly Saving * ECM Lifetime)	(Yearly Maint Saving * ECM Lifetime)	(Lifetime Savings - Net Cost) / (Net Cost)	(Net cost / Yearly Savings)	$\sum_{n=0}^N \frac{C_n}{(1 + IRR)^n}$	$\sum_{n=0}^N \frac{C_n}{(1 + DR)^n}$
		(\$)	(\$)	(\$)	(\$)	(\$/Yr)	(\$/Yr)	(\$/Yr)		(\$)	(\$)	(%)	(Yr)	(\$)	(\$)
ECM #1	Lighting equipment upgrade	\$8,024	\$12,036	\$675	\$19,385	\$12,509	\$145	\$12,654	15	\$189,810	\$2,176	879.2%	1.5	65.24%	\$131,677.47
ECM #2	Lighting controls upgrade	\$980	\$1,470	\$355	\$2,095	\$419	\$0	\$419	15	\$6,285	\$0	200.0%	5.0	18.42%	\$2,907.09
ECM #3	Install Condensing Hot Water Boilers	\$220,000	\$360,000	\$13,375	\$566,625	\$6,231	\$1,000	\$7,231	15	\$108,460	\$15,000	-80.9%	78.4	-15.92%	(\$480,306.08)
ECM #4	Replace Split AC Units	\$25,500	\$23,000	\$2,012	\$46,488	\$1,607	\$0	\$1,607	15	\$24,099	\$0	-48.2%	28.9	-7.28%	(\$27,308.17)
ECM #5	Kitchen Exhaust Hood Controls	\$10,773	\$21,727	\$0	\$32,500	\$5,358	\$0	\$5,358	15	\$80,374	\$0	147.3%	6.1	14.25%	\$31,466.81
ECM #6	Digital Building Automation System	\$596,000	\$0	\$0	\$596,000	\$26,283	\$0	\$26,283	15	\$394,244	\$0	-33.9%	22.7	-4.77%	(\$282,236.33)
ECM #7	Boiler Controls Upgrade (Install Space Temperature Sensors)	\$14,000	\$0	\$0	\$14,000	\$4,048	\$0	\$4,048	15	\$60,719	\$0	333.7%	3.5	28.22%	\$34,324.09
REM RENEWABLE ENERGY AND FINANCIAL COSTS AND SAVINGS SUMMARY															
REM #1	Solar Photovoltaic System	\$2,956,650	\$0	\$0	\$2,956,650	\$108,360	\$252,841	\$361,201	15	\$5,418,015	\$3,792,611	83.2%	8.2	8.74%	\$1,355,344.09

Notes: 1) The variable Cn in the formulas for Internal Rate of Return and Net Present Value stands for the cash flow during each period.
2) The variable DR in the NPV equation stands for Discount Rate
3) For NPV and IRR calculations: From n=0 to N periods where N is the *lifetime of ECM* and Cn is the *cash flow during each period*.



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SmartStart Building Incentives

The NJ SmartStart Buildings Program offers financial incentives on a wide variety of building system equipment. The incentives were developed to help offset the initial cost of energy-efficient equipment. The following tables show the current available incentives as of February 15, 2011:

Electric Chillers

Water-Cooled Chillers	\$12 - \$170 per ton
Air-Cooled Chillers	\$8 - \$52 per ton

Energy Efficiency must comply with ASHRAE 90.1-2007

Gas Cooling

Gas Absorption Chillers	\$185 - \$400 per ton
Gas Engine-Driven Chillers	Calculated through custom measure path)

Desiccant Systems

\$1.00 per cfm – gas or electric

Electric Unitary HVAC

Unitary AC and Split Systems	\$73 - \$92 per ton
Air-to-Air Heat Pumps	\$73 - \$92 per ton
Water-Source Heat Pumps	\$81 per ton
Packaged Terminal AC & HP	\$65 per ton
Central DX AC Systems	\$40- \$72 per ton
Dual Enthalpy Economizer Controls	\$250
Occupancy Controlled Thermostat (Hospitality & Institutional Facility)	\$75 per thermostat

Energy Efficiency must comply with ASHRAE 90.1-2007

Gas Heating

Gas Fired Boilers < 300 MBH	\$300 per unit
Gas Fired Boilers ≥ 300 - 1500 MBH	\$1.75 per MBH
Gas Fired Boilers ≥1500 - ≤ 4000 MBH	\$1.00 per MBH
Gas Fired Boilers > 4000 MBH	(Calculated through Custom Measure Path)
Gas Furnaces	\$300 - \$400 per unit, AFUE ≥ 92%

Ground Source Heat Pumps

Closed Loop	\$450 per ton, EER \geq 16 \$600 per ton, EER \geq 18 \$750 per ton, EER \geq 20
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Energy Efficiency must comply with ASHRAE 90.1-2007

Variable Frequency Drives

Variable Air Volume	\$65 - \$155 per hp
Chilled-Water Pumps	\$60 per VFD rated hp
Compressors	\$5,250 to \$12,500 per drive
Cooling Towers \geq 10 hp	\$60 per VFD rated hp

Natural Gas Water Heating

Gas Water Heaters \leq 50 gallons, 0.67 energy factor or better	\$50 per unit
Gas-Fired Water Heaters $>$ 50 gallons	\$1.00 - \$2.00 per MBH
Gas-Fired Booster Water Heaters	\$17 - \$35 per MBH
Gas Fired Tankless Water Heaters	\$300 per unit

Prescriptive Lighting

Retro fit of T12 to T-5 or T-8 Lamps w/Electronic Ballast in Existing Facilities	\$10 per fixture (1-4 lamps)
Replacement of T12 with new T-5 or T-8 Lamps w/Electronic Ballast in Existing Facilities	\$25 per fixture (1-4 lamps)
Replacement of incandescent with screw-in PAR 38 or PAR 30 (CFL) bulb	\$7 per bulb
T-8 reduced Wattage (28w/25w 4', 1-4 lamps) Lamp & ballast replacement	\$10 per fixture
Hard-Wired Compact Fluorescent	\$25 - \$30 per fixture
Metal Halide w/Pulse Start Including Parking Lot	\$25 per fixture
T-5 and T-8 High Bay Fixtures	\$16 - \$200 per fixture
HID \geq 100w Retrofit with induction lamp, power coupler and generator (must be 30% less watts/fixture than HID system)	\$50 per fixture
HID \geq 100w Replacement with new HID \geq 100w	\$70 per fixture

Prescriptive Lighting - LED

LED New Exit Sign Fixture Existing Facility < 75 kw Existing Facility > 75 kw	\$20 per fixture \$10 per fixture
LED Display Case Lighting	\$30 per display case
LED Shelf-Mtd. Display & Task Lights	\$15 per linear foot
LED Portable Desk Lamp	\$20 per fixture
LED Wall-wash Lights	\$30 per fixture
LED Recessed Down Lights	\$35 per fixture
LED Outdoor Pole/Arm-Mounted Area and Roadway Luminaries	\$175 per fixture
LED Outdoor Pole/Arm-Mounted Decorative Luminaries	\$175 per fixture
LED Outdoor Wall-Mounted Area Luminaries	\$100 per fixture
LED Parking Garage Luminaries	\$100 per fixture
LED Track or Mono-Point Directional Lighting Fixtures	\$50 per fixture
LED High-Bay and Low-Bay Fixtures for Commercial & Industrial Bldgs.	\$150 per fixture
LED High-Bay-Aisle Lighting	\$150 per fixture
LED Bollard Fixtures	\$50 per fixture
LED Linear Panels (2x2 Troffers only)	\$100 per fixture
LED Fuel Pump Canopy	\$100 per fixture
LED Refrigerator/Freezer case lighting replacement of fluorescent in medium and low temperature display case	\$42 per 5 foot \$65 per 6 foot

Lighting Controls – Occupancy Sensors

Wall Mounted	\$20 per control
Remote Mounted	\$35 per control
Daylight Dimmers	\$25 per fixture
Occupancy Controlled hi-low Fluorescent Controls	\$25 per fixture controlled

Lighting Controls – HID or Fluorescent Hi-Bay Controls

Occupancy hi-low	\$75 per fixture controlled
Daylight Dimming	\$75 per fixture controlled
Daylight Dimming - office	\$50 per fixture controlled

Premium Motors

Three-Phase Motors	\$45 - \$700 per motor
Fractional HP Motors Electronic Communicated Motors (replacing shaded pole motors in refrigerator/freezer cases)	\$40 per electronic communicated motor

Other Equipment Incentives

Performance Lighting	\$1.00 per watt per SF below program incentive threshold, currently 5% more energy efficient than ASHRAE 90.1- 2007 for New Construction and Complete Renovation
Custom Electric and Gas Equipment Incentives	not prescriptive
Custom Measures	\$0.16 KWh and \$1.60/Therm of 1st year savings, or a buy down to a 1 year payback on estimated savings. Minimum required savings of 75,000 KWh or 1,500 Therms and a IRR of at least 10%.
Multi Measures Bonus	15%

STATEMENT OF ENERGY PERFORMANCE

Intermediate Care Center

Not able to generate report due to incomplete utility data.

MAJOR EQUIPMENT LIST

Concord Engineering Group

Bergen County - Intermediate Care Center

Boilers

Tag	N Bldg Boilers	O Bldg Boilers	O Bldg Boilers
Unit Type	Water tube	Water tube	Water tube
Qty	3	3	2
Location	Boiler room	Boiler room	Boiler room
Area Served	N building	O building	O building
Manufacturer	AO Smith	AO Smith	AO Smith
Model #	GB 300 200	GB 300 200	GB 500 200
Serial #	200 J 99 53093 200 J 99 52886 200 J 99 52890	200 J 99 53099 - -	200 K 99 53179 - -
Input Capacity (MBH)	300	300	500
Rated Output Capacity (MBH)	251	251	418
Approx. Efficiency %	84%	84%	84%
Fuel	Natural Gas	Natural Gas	Natural Gas
Approx Age	12	12	12
ASHRAE Service Life	30	30	30
Remaining Life	18	18	18
Comments			

MAJOR EQUIPMENT LIST

Concord Engineering Group

Bergen County - Intermediate Care Center

Boilers

Tag	M Building Boilers	L Building Boilers	K Building Boilers
Unit Type	Water tube	Water tube	Water tube
Qty	3	3	3
Location	Boiler room	Boiler room	Boiler room
Area Served	M Building	L Building	K Building
Manufacturer	AO Smith	AO Smith	AO Smith
Model #	GB 300 200	GB 300 200	GB 300 200
Serial #	200 J 99 53121 200 J 99 53091 -	200 J 99 52884 - -	200 J 99 53120 - -
Input Capacity (MBH)	300	300	300
Rated Output Capacity (MBH)	251	251	251.1
Approx. Efficiency %	84%	84%	84%
Fuel	Natural Gas	Natural Gas	Natural Gas
Approx Age	12	12	12
ASHRAE Service Life	30	30	30
Remaining Life	18	18	18
Comments			

MAJOR EQUIPMENT LIST

Concord Engineering Group

Bergen County - Intermediate Care Center

Boilers

Tag	A Building	A Building	B Building
Unit Type	Water tube	Water tube	Water tube
Qty	2	3	3
Location	Boiler room	Boiler room	Boiler room
Area Served	A Building	A Building	B (Admin) Bldg
Manufacturer	AO Smith	AO Smith	AO Smith
Model #	GB 300 200	GB 500 200	GB 300 200
Serial #	- -	- - -	200 J 99 53096 - -
Input Capacity (MBH)	300	500	100
Rated Output Capacity (MBH)	251	418	251.1
Approx. Efficiency %	84%	84%	251%
Fuel	Natural Gas	Natural Gas	Natural Gas
Approx Age	12	12	12
ASHRAE Service Life	30	30	30
Remaining Life	18	18	18
Comments			

MAJOR EQUIPMENT LIST

Concord Engineering Group

Bergen County - Intermediate Care Center

Domestic Water Heaters

Tag	N Building	O Building	M Building
Unit Type	Hot water tank heat exchanger	Hot water tank heat exchanger	Hot water tank heat exchanger
Qty	1	2	1
Location	Boiler room	Boiler room	Boiler room
Area Served	N Building	O Building	M Building
Manufacturer	-	Bock	Weil McLain
Model #	-	Sidekick 80SK	Plus 100
Serial #	-	07105124T	-
Size (Gallons)	60 (Est)	80	76
Input Capacity (MBH/KW)	-	-	-
Recovery (Gal/Hr)	-	-	-
Efficiency %	-	-	-
Fuel	Hot water	Hot water	Hot water
Approx Age	5	5	10
ASHRAE Service Life	12	12	12
Remaining Life	7	7	2
Comments			

MAJOR EQUIPMENT LIST

Concord Engineering Group

Bergen County - Intermediate Care Center

Domestic Water Heaters

Tag	L Building	K Building	A Building
Unit Type	Hot water tank heat exchanger	Hot water tank heat exchanger	Hot water tank heat exchanger
Qty	1	1	1
Location	Boiler room	Boiler room	Boiler room
Area Served	M Building	K Building	A Building
Manufacturer	Weil McLain	Bock	Bock
Model #	Plus 100	Sidekick 80SK	Sidekick 80SK
Serial #	-	07105151T	-
Size (Gallons)	76	80	80
Input Capacity (MBH/KW)	-	-	-
Recovery (Gal/Hr)	-	-	-
Efficiency %	-	-	-
Fuel	Hot water	Hot water	Hot water
Approx Age	10	5	5
ASHRAE Service Life	12	12	12
Remaining Life	2	7	7
Comments			

MAJOR EQUIPMENT LIST

Concord Engineering Group

Bergen County - Intermediate Care Center

Domestic Water Heaters

Tag	B Building		
Unit Type	Hot water tank heat exchanger		
Qty	1		
Location	Boiler room		
Area Served	B (Admin) Building		
Manufacturer	Bock		
Model #	Sidekick 80SK		
Serial #	-		
Size (Gallons)	80		
Input Capacity (MBH/KW)	-		
Recovery (Gal/Hr)	-		
Efficiency %	-		
Fuel	Hot water		
Approx Age	5		
ASHRAE Service Life	12		
Remaining Life	7		
Comments			

MAJOR EQUIPMENT LIST

Concord Engineering Group

Bergen County - Intermediate Care Center

Pumps

Tag	N Bldg Pumps	N Bldg Pumps	N Bldg Pumps
Unit Type	Pipe mounted	Pipe mounted	Pipe mounted
Qty	3	2	2
Location	Boiler room	Boiler room	Boiler room
Area Served	Primary boiler loop	Heating water main (Secondary) loop	Domestic Hot Water Loop
Manufacturer	BG	BG	BG
Model #	-	-	-
Serial #	-	-	-
Horse Power	Fractional	3/4	Fractional
Flow	-	-	-
Motor Info	-	-	-
Electrical Power	-	-	-
RPM	-	-	-
Motor Efficiency %	-	-	-
Approx Age	5	5	5
ASHRAE Service Life	10	10	10
Remaining Life	5	5	5
Comments			

MAJOR EQUIPMENT LIST

Concord Engineering Group

Bergen County - Intermediate Care Center

Pumps

Tag	O Bldg Pumps	O Bldg Pumps	O Bldg Pumps
Unit Type	Pipe mounted	Pipe mounted	Pipe mounted
Qty	5	3	2
Location	Boiler room	Boiler room	Boiler room
Area Served	Primary boiler loop	Heating Loop and DHW Loop	Domestic Hot Water Loop
Manufacturer	BG	BG	BG
Model #	-	-	-
Serial #	-	-	-
Horse Power	Fractional	3/4 (Est)	Fractional
Flow	-	-	-
Motor Info	-	-	-
Electrical Power	-	-	-
RPM	-	-	-
Motor Efficiency %	-	-	-
Approx Age	5	5	5
ASHRAE Service Life	10	10	10
Remaining Life	5	5	5
Comments			

MAJOR EQUIPMENT LIST

Concord Engineering Group

Bergen County - Intermediate Care Center

Pumps

Tag	M Bldg Pumps	M Bldg Pumps	M Bldg Pumps
Unit Type	Pipe mounted	Pipe mounted	Pipe mounted
Qty	3	2	2
Location	Boiler room	Boiler room	Boiler room
Area Served	Primary boiler loop	Heating water main (Secondary) loop	Domestic Hot Water Loop
Manufacturer	BG	BG	BG
Model #	-	-	-
Serial #	-	-	-
Horse Power	Fractional	3/4 (Est)	Fractional
Flow	-	-	-
Motor Info	-	-	-
Electrical Power	-	-	-
RPM	-	-	-
Motor Efficiency %	-	-	-
Approx Age	5	5	5
ASHRAE Service Life	10	10	10
Remaining Life	5	5	5
Comments			

MAJOR EQUIPMENT LIST

Concord Engineering Group

Bergen County - Intermediate Care Center

Pumps

Tag	L Bldg Pumps	L Bldg Pumps	L Bldg Pumps
Unit Type	Pipe mounted	Pipe mounted	Pipe mounted
Qty	3	2	2
Location	Boiler room	Boiler room	Boiler room
Area Served	Primary boiler loop	Heating water main (Secondary) loop	Domestic Hot Water Loop
Manufacturer	BG	BG	BG
Model #	-	-	-
Serial #	-	-	-
Horse Power	Fractional	3/4 (Est)	Fractional
Flow	-	-	-
Motor Info	-	-	-
Electrical Power	-	-	-
RPM	-	-	-
Motor Efficiency %	-	-	-
Approx Age	5	5	5
ASHRAE Service Life	10	10	10
Remaining Life	5	5	5
Comments			

MAJOR EQUIPMENT LIST

Concord Engineering Group

Bergen County - Intermediate Care Center

Pumps

Tag	K Bldg Pumps	K Bldg Pumps	K Bldg Pumps
Unit Type	Pipe mounted	Pipe mounted	Pipe mounted
Qty	3	2	2
Location	Boiler room	Boiler room	Boiler room
Area Served	Primary boiler loop	Heating water main (Secondary) loop	Domestic Hot Water Loop
Manufacturer	BG	BG	BG
Model #	-	-	-
Serial #	-	-	-
Horse Power	Fractional	3/4 (Est)	Fractional
Flow	-	-	-
Motor Info	-	-	-
Electrical Power	-	-	-
RPM	-	-	-
Motor Efficiency %	-	-	-
Approx Age	5	5	5
ASHRAE Service Life	10	10	10
Remaining Life	5	5	5
Comments			

MAJOR EQUIPMENT LIST

Concord Engineering Group

Bergen County - Intermediate Care Center

Pumps

Tag	A Bldg Pumps	A Bldg Pumps	A Bldg Pumps
Unit Type	Pipe mounted	Pipe mounted	Pipe mounted
Qty	5	2	2
Location	Boiler room	Boiler room	Boiler room
Area Served	Primary boiler loop	Heating water main (Secondary) loop	Domestic Hot Water Loop
Manufacturer	BG	BG	BG
Model #	-	-	-
Serial #	-	-	-
Horse Power	Fractional	3/4 (Est)	Fractional
Flow	-	-	-
Motor Info	-	-	-
Electrical Power	-	-	-
RPM	-	-	-
Motor Efficiency %	-	-	-
Approx Age	5	5	5
ASHRAE Service Life	10	10	10
Remaining Life	5	5	5
Comments			

MAJOR EQUIPMENT LIST

Concord Engineering Group

Bergen County - Intermediate Care Center

Pumps

Tag	B Building	B Building	B Building
Unit Type	Pipe mounted	Pipe mounted	Pipe mounted
Qty	3	2	2
Location	Boiler room	Boiler room	Boiler room
Area Served	Primary boiler loop	Heating water main (Secondary) loop	Domestic Hot Water Loop
Manufacturer	BG	BG	BG
Model #	-	-	-
Serial #	-	-	-
Horse Power	Fractional	3/4 (Est)	Fractional
Flow	-	-	-
Motor Info	-	-	-
Electrical Power	-	-	-
RPM	-	-	-
Motor Efficiency %	-	-	-
Approx Age	5	5	5
ASHRAE Service Life	10	10	10
Remaining Life	5	5	5
Comments			

MAJOR EQUIPMENT LIST

Concord Engineering Group

Bergen County - Intermediate Care Center

Rooftop / AC Units

Tag	RTU-1	RTU-2	
Unit Type	Packaged rooftop unit	Packaged rooftop unit	
Qty	1	1	
Location	Roof	Roof	
Area Served	Admin Area	Admin Area	
Manufacturer	York	York	
Model #	DM0600C00P2JZZ200	DM120C00P2JZZ3000 1C	
Serial #	N0L7370081	N0L7379066	
Cooling Type	Direct expansion	Direct expansion	
Cooling Capacity (Tons)	5	10	
Cooling Efficiency (SEER/EER)	9.0 EER 9.5 IPLV	9.0 EER 9.1 IPLV	
Refrigerant	R22	R22	
Heating Type	None	None	
Heating Input (MBH)	-	-	
Power	208 / 3 Ph	208 / 3 Ph	
Approx Age	10	10	
ASHRAE Service Life	15	15	
Remaining Life	5	5	
Comments	Air side economizer with power exhaust	Air side economizer with power exhaust	

MAJOR EQUIPMENT LIST

Concord Engineering Group

Bergen County - Intermediate Care Center

Rooftop / AC Units

Tag	RTU-3	RTU-4	
Unit Type	Packaged rooftop unit	Packaged rooftop unit	
Qty	1	1	
Location	Roof	Roof	
Area Served	A Building (Blue Ridge)	A Building (Blue Ridge)	
Manufacturer	Luxaire	Luxaire	
Model #	DL-07C00NTAAA4	DL-10C00NTAAA3C	
Serial #	N0E5152284	NHNM103214	
Cooling Type	Direct expansion	Direct expansion	
Cooling Capacity (Tons)	8	10	
Cooling Efficiency (SEER/EER)	9.0 EER 9.2 IPLV	9.0 EER 9.1 IPLV	
Refrigerant	R22	R22	
Heating Type	Hot water coils	None	
Heating Input (MBH)	-	-	
Power	208 / 3 Ph	208 / 3 Ph	
Approx Age	15	7	
ASHRAE Service Life	15	15	
Remaining Life	0	8	
Comments	Air side economizer with power exhaust	Air side economizer with power exhaust	

MAJOR EQUIPMENT LIST

Concord Engineering Group

Bergen County - Intermediate Care Center

Rooftop / AC Units

Tag	RTU-5	RTU-6	RTU-7
Unit Type	Packaged rooftop unit	Packaged rooftop unit	Packaged rooftop unit
Qty	1	1	1
Location	Roof	Roof	Roof
Area Served	Rosewood (K Building)	Rosewood (K Building)	Rosewood (K Building)
Manufacturer	Luxaire	York	York
Model #	DL-05C00PTJAA2A	DM090C00P2JZZ4000 1A	DM120C00P2JZZ3000 1C
Serial #	LN0F7913316	N0L7379072	N0L7379067
Cooling Type	Direct expansion	Direct expansion	Direct expansion
Cooling Capacity (Tons)	5	8	10.0
Cooling Efficiency (SEER/EER)	9.0 EER 9.2 IPLV	9.0 EER 9.2 IPLV	9.0 EER 9.1 IPLV
Refrigerant	R22	R22	R22
Heating Type	None	None	Hot water coils
Heating Input (MBH)	-	-	-
Power	208 / 3 Ph	208 / 3 Ph	208 / 3 Ph
Approx Age	14	10	10
ASHRAE Service Life	15	15	15
Remaining Life	1	5	5
Comments	Air side economizer with power exhaust	Air side economizer with power exhaust	Air side economizer with power exhaust

MAJOR EQUIPMENT LIST

Concord Engineering Group

Bergen County - Intermediate Care Center

Rooftop / AC Units

Tag	RTU-8	RTU-9	RTU-10
Unit Type	Packaged rooftop unit	Packaged rooftop unit	Packaged rooftop unit
Qty	1	1	1
Location	Roof	Roof	Roof
Area Served	Meadow Green (L Building)	Meadow Green (L Building)	Meadow Green (L Building)
Manufacturer	Luxaire	York	York
Model #	-	-	-
Serial #	-	-	-
Cooling Type	Direct expansion	Direct expansion	Direct expansion
Cooling Capacity (Tons)	5	8	10.0
Cooling Efficiency (SEER/EER)	9.0 EER 9.2 IPLV	9.0 EER 9.2 IPLV	9.0 EER 9.1 IPLV
Refrigerant	R22	R22	R22
Heating Type	None	None	None
Heating Input (MBH)	-	-	-
Power	208 / 3 Ph	208 / 3 Ph	208 / 3 Ph
Approx Age	14	10	10
ASHRAE Service Life	15	15	15
Remaining Life	1	5	5
Comments	Air side economizer with power exhaust	Air side economizer with power exhaust	Air side economizer with power exhaust

MAJOR EQUIPMENT LIST

Concord Engineering Group

Bergen County - Intermediate Care Center

Rooftop / AC Units

Tag	RTU-11	RTU-12	RTU-12
Unit Type	Packaged rooftop unit	Packaged rooftop unit	Packaged rooftop unit
Qty	1	1	1
Location	Roof	Roof	Roof
Area Served	Berry Field (M Building)	Berry Field (M Building)	Berry Field (M Building)
Manufacturer	Luxaire	York	York
Model #	-	-	-
Serial #	-	-	-
Cooling Type	Direct expansion	Direct expansion	Direct expansion
Cooling Capacity (Tons)	5	8	10.0
Cooling Efficiency (SEER/EER)	9.0 EER 9.2 IPLV	9.0 EER 9.2 IPLV	9.0 EER 9.1 IPLV
Refrigerant	R22	R22	R22
Heating Type	None	None	None
Heating Input (MBH)	-	-	-
Power	208 / 3 Ph	208 / 3 Ph	208 / 3 Ph
Approx Age	14	10	10
ASHRAE Service Life	15	15	15
Remaining Life	1	5	5
Comments	Air side economizer with power exhaust	Air side economizer with power exhaust	Air side economizer with power exhaust

MAJOR EQUIPMENT LIST

Concord Engineering Group
Bergen County - Intermediate Care Center

Split AC Units

Tag	CU	CU	
Unit Type	Ductless Split Units	Split AC Unit	
Qty	2	2	
Location	Kitchen / Dining room	Chapel	
Area Served	Kitchen / Dining room	Chapel	
Manufacturer	Sanyo	Goodman	
Condensing Unit Model / Serial #	-	CTS120-3 / 910969154, 910969156	
Air Handler Model / Serial #	KS3622 / 0015071, 0023491	-	
Cooling Capacity (Tons)	3	10	
Cooling Efficiency (SEER/EER)	10 SEER	8 SEER	
Heating Type	None	None	
Heating Input (MBH)	-	-	
Efficiency	-	-	
Approx Age	7	20	
ASHRAE Service Life	15	15	
Remaining Life	8	(5)	
Comments			

MAJOR EQUIPMENT LIST

Concord Engineering Group
Bergen County - Intermediate Care Center

Heating and Ventilation (H&V) Units

Tag	HV		
Unit Type	Makeup Air Unit		
Qty	1		
Location	Kitchen ceiling hung		
Area Served	Kitchen area		
Manufacturer	Rheem		
Model #	-		
Serial #	-		
Cooling Type	None		
Cooling Capacity (Tons)	-		
Cooling Efficiency (SEER/EER)	-		
Heating Type	Hot water coil		
Heating Input (MBH)	-		
Efficiency	-		
Fuel	-		
Approx Age	15		
ASHRAE Service Life	15		
Remaining Life	10		
Comments			

Investment Grade Lighting Audit

CEG Job #: 9C10088

Project: Intermediate Care Center

35 Piedmont Rd.

Rockleigh, NJ

Bldg. Sq. Ft. 127,508

Intermediate Care Center

KWH COST: **\$0.165**
(Estimated)

ECM #1: Lighting Upgrade - General

EXISTING LIGHTING					PROPOSED LIGHTING																SAVINGS			
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Lamps	Retro-Unit Description	Watts Used	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback		
211.14	Boiler Room	2600	6	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.20	514.8	\$84.94	6	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.15	390	\$64.35	\$7.00	\$42.00	0.05	124.8	\$20.59	2.04		
560	Lobby	8760	4	1	Recessed Down Light, 13w CFL Lamp	13	0.05	455.5	\$75.16	4	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
211.21		8760	8	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic	33	0.26	2,312.6	\$381.59	8	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.20	1752	\$289.08	\$7.00	\$56.00	0.06	560.64	\$92.51	0.61		
222.21	Reception	8760	2	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.12	1,086.2	\$179.23	2	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	876	\$144.54	\$14.00	\$28.00	0.02	210.24	\$34.69	0.81		
222.21	Social Work	2600	2	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.12	322.4	\$53.20	2	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	260	\$42.90	\$14.00	\$28.00	0.02	62.4	\$10.30	2.72		
222.21	Office	2600	2	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.12	322.4	\$53.20	2	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	260	\$42.90	\$14.00	\$28.00	0.02	62.4	\$10.30	2.72		
222.21	Director of Nursing	2600	2	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.12	322.4	\$53.20	2	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	260	\$42.90	\$14.00	\$28.00	0.02	62.4	\$10.30	2.72		
222.21	Restroom	2600	1	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.06	161.2	\$26.60	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	130	\$21.45	\$14.00	\$14.00	0.01	31.2	\$5.15	2.72		
221.21	Custodial Closet	4400	1	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.06	272.8	\$45.01	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	220	\$36.30	\$14.00	\$14.00	0.01	52.8	\$8.71	1.61		
221.21	Records	2600	3	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.19	483.6	\$79.79	3	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.15	390	\$64.35	\$14.00	\$42.00	0.04	93.6	\$15.44	2.72		
221.21	Storage Room	1200	1	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.06	74.4	\$12.28	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	60	\$9.90	\$14.00	\$14.00	0.01	14.4	\$2.38	5.89		
232.21	Corridor - Admin	8760	7	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	86	0.60	5,273.5	\$870.13	7	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.50	4415.04	\$728.48	\$21.00	\$147.00	0.10	858.48	\$141.65	1.04		
222.21	BA Office	2600	4	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.25	644.8	\$106.39	4	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.20	520	\$85.80	\$14.00	\$56.00	0.05	124.8	\$20.59	2.72		
211.41	BA Restroom	1200	1	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Wall Mnt., Prismatic Lens	33	0.03	39.6	\$6.53	1	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.03	30	\$4.95	\$7.00	\$7.00	0.01	9.6	\$1.58	4.42		
222.21	BA Office	2600	2	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.12	322.4	\$53.20	2	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	260	\$42.90	\$14.00	\$28.00	0.02	62.4	\$10.30	2.72		

Investment Grade Lighting Audit

APPENDIX E
2 of 44

ECM #1: Lighting Upgrade - General

EXISTING LIGHTING										PROPOSED LIGHTING										SAVINGS				
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Lamps	Retro-Unit Description	Watts Used	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback		
222.21	Conference Room	2600	4	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.25	644.8	\$106.39	4	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.20	520	\$85.80	\$14.00	\$56.00	0.05	124.8	\$20.59	2.72		
222.21	Admin Office	2600	2	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.12	322.4	\$53.20	2	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	260	\$42.90	\$14.00	\$28.00	0.02	62.4	\$10.30	2.72		
222.21	Nursing Office A	2600	1	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.06	161.2	\$26.60	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	130	\$21.45	\$14.00	\$14.00	0.01	31.2	\$5.15	2.72		
222.21	Nursing Office B	2600	1	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.06	161.2	\$26.60	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	130	\$21.45	\$14.00	\$14.00	0.01	31.2	\$5.15	2.72		
222.21	Nursing Lobby	8760	2	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.12	1,086.2	\$179.23	2	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	876	\$144.54	\$14.00	\$28.00	0.02	210.24	\$34.69	0.81		
231.41	Restroom	2600	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	223.6	\$36.89	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	187.2	\$30.89	\$21.00	\$21.00	0.01	36.4	\$6.01	3.50		
222.21	Admin Restrooms	2600	2	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.12	322.4	\$53.20	2	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	260	\$42.90	\$14.00	\$28.00	0.02	62.4	\$10.30	2.72		
211.11	Custodial Closet	4400	1	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.03	145.2	\$23.96	1	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.03	110	\$18.15	\$7.00	\$7.00	0.01	35.2	\$5.81	1.21		
221.11	Activity Office	4400	2	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	62	0.12	545.6	\$90.02	2	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	440	\$72.60	\$14.00	\$28.00	0.02	105.6	\$17.42	1.61		
211.11	Small Chapel	1200	12	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.40	475.2	\$78.41	12	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.30	360	\$59.40	\$7.00	\$84.00	0.10	115.2	\$19.01	4.42		
222.21	Barber Shop	2600	6	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.37	967.2	\$159.59	6	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.30	780	\$128.70	\$14.00	\$84.00	0.07	187.2	\$30.89	2.72		
766	Chapel	4400	8	1	400w MH, Prismatic Lens	465	3.72	16,368.0	\$2,700.72	8	4	2x4 54w T5HO 4 Lamp w/Prismatic Lens	236	1.89	8307.2	\$1,370.69	\$240.00	\$1,920.00	1.83	8060.8	\$1,330.03	1.44		
Blue Ridge Cottage																								
222.21	Exam Room	3600	2	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.12	446.4	\$73.66	2	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	360	\$59.40	\$14.00	\$28.00	0.02	86.4	\$14.26	1.96		
231.41	Restroom	2600	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	223.6	\$36.89	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	187.2	\$30.89	\$21.00	\$21.00	0.01	36.4	\$6.01	3.50		
551		2600	1	1	Recessed Down Light, 100w A Lamp	100	0.10	260.0	\$42.90	1	1	26w CFL Lamp	26	0.03	67.6	\$11.15	\$20.00	\$20.00	0.07	192.4	\$31.75	0.63		
221.21	Custodial Closet	4400	1	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.06	272.8	\$45.01	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	220	\$36.30	\$14.00	\$14.00	0.01	52.8	\$8.71	1.61		
227.21	Soiled Linen	3600	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.07	234.0	\$38.61	1	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.05	176.4	\$29.11	\$24.00	\$24.00	0.02	57.6	\$9.50	2.53		
231.41		3600	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	619.2	\$102.17	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	518.4	\$85.54	\$21.00	\$42.00	0.03	100.8	\$16.63	2.53		
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.01	105.1	\$17.34	1	2	1.5w C7 LED Lamp 50k Hrs.	3	0.00	26.28	\$4.34	\$8.00	\$8.00	0.01	78.84	\$13.01	0.61		

Investment Grade Lighting Audit

APPENDIX E
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ECM #1: Lighting Upgrade - General

EXISTING LIGHTING										PROPOSED LIGHTING										SAVINGS					
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Lamps	Retro-Unit Description	Watts Used	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback			
227.21	Resident Room 10	3600	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	468.0	\$77.22	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	352.8	\$58.21	\$24.00	\$48.00	0.03	115.2	\$19.01	2.53			
201		3600	1	1	1x2, 1 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	17	0.02	61.2	\$10.10	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
231.41	Resident Room 11	3600	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	619.2	\$102.17	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	518.4	\$85.54	\$21.00	\$42.00	0.03	100.8	\$16.63	2.53			
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.01	105.1	\$17.34	1	2	1.5w C7 LED Lamp 50k Hrs.	3	0.00	26.28	\$4.34	\$8.00	\$8.00	0.01	78.84	\$13.01	0.61			
227.21		3600	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	468.0	\$77.22	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	352.8	\$58.21	\$24.00	\$48.00	0.03	115.2	\$19.01	2.53			
201		3600	1	1	1x2, 1 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	17	0.02	61.2	\$10.10	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
231.41		Resident Rooms 8 & 9	3600	4	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.34	1,238.4	\$204.34	4	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.29	1036.8	\$171.07	\$21.00	\$84.00	0.06	201.6	\$33.26	2.53		
609	8760		2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61			
227.21	3600		4	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	936.0	\$154.44	4	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.20	705.6	\$116.42	\$24.00	\$96.00	0.06	230.4	\$38.02	2.53			
201	3600		1	1	1x2, 1 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	17	0.02	61.2	\$10.10	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
231.41	Resident Rooms 6 & 7	3600	4	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.34	1,238.4	\$204.34	4	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.29	1036.8	\$171.07	\$21.00	\$84.00	0.06	201.6	\$33.26	2.53			
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61			
227.21		3600	4	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	936.0	\$154.44	4	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.20	705.6	\$116.42	\$24.00	\$96.00	0.06	230.4	\$38.02	2.53			
201		3600	1	1	1x2, 1 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	17	0.02	61.2	\$10.10	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
231.41	Resident Rooms 1 & 2	3600	4	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.34	1,238.4	\$204.34	4	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.29	1036.8	\$171.07	\$21.00	\$84.00	0.06	201.6	\$33.26	2.53			
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61			
227.21		3600	4	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	936.0	\$154.44	4	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.20	705.6	\$116.42	\$24.00	\$96.00	0.06	230.4	\$38.02	2.53			
201		3600	1	1	1x2, 1 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	17	0.02	61.2	\$10.10	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
231.41	Resident Room 4	3600	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	619.2	\$102.17	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	518.4	\$85.54	\$21.00	\$42.00	0.03	100.8	\$16.63	2.53			
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.01	105.1	\$17.34	1	2	1.5w C7 LED Lamp 50k Hrs.	3	0.00	26.28	\$4.34	\$8.00	\$8.00	0.01	78.84	\$13.01	0.61			
227.21		3600	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	468.0	\$77.22	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	352.8	\$58.21	\$24.00	\$48.00	0.03	115.2	\$19.01	2.53			
231.41	Resident Room 3	3600	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	309.6	\$51.08	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	259.2	\$42.77	\$21.00	\$21.00	0.01	50.4	\$8.32	2.53			
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.01	105.1	\$17.34	1	2	1.5w C7 LED Lamp 50k Hrs.	3	0.00	26.28	\$4.34	\$8.00	\$8.00	0.01	78.84	\$13.01	0.61			

Investment Grade Lighting Audit

APPENDIX E
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ECM #1: Lighting Upgrade - General

EXISTING LIGHTING										PROPOSED LIGHTING										SAVINGS			
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Lamps	Retro-Unit Description	Watts Used	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback	
227.21		3600	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.07	234.0	\$38.61	1	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.05	176.4	\$29.11	\$24.00	\$24.00	0.02	57.6	\$9.50	2.53	
231.41	Resident Room 5	3600	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	309.6	\$51.08	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	259.2	\$42.77	\$21.00	\$21.00	0.01	50.4	\$8.32	2.53	
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.01	105.1	\$17.34	1	2	1.5w C7 LED Lamp 50k Hrs.	3	0.00	26.28	\$4.34	\$8.00	\$8.00	0.01	78.84	\$13.01	0.61	
227.21		3600	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.07	234.0	\$38.61	1	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.05	176.4	\$29.11	\$24.00	\$24.00	0.02	57.6	\$9.50	2.53	
227.21	Corridor	8760	12	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.78	6,832.8	\$1,127.41	12	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.59	5150.88	\$849.90	\$24.00	\$288.00	0.19	1681.92	\$277.52	1.04	
227.21	TV Room	3600	6	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.39	1,404.0	\$231.66	6	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.29	1058.4	\$174.64	\$24.00	\$144.00	0.10	345.6	\$57.02	2.53	
222.21	Laundry	3600	1	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.06	223.2	\$36.83	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	180	\$29.70	\$14.00	\$14.00	0.01	43.2	\$7.13	1.96	
227.21		3600	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.07	234.0	\$38.61	1	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.05	176.4	\$29.11	\$24.00	\$24.00	0.02	57.6	\$9.50	2.53	
560	Nurse's Station	8760	3	1	Recessed Down Light, 13w CFL Lamp	13	0.04	341.6	\$56.37	3	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
613	Custodial Closet	2600	1	1	100w A19 Lamp	100	0.10	260.0	\$42.90	1	1	(1) 26w CFL Lamp	26	0.03	67.6	\$11.15	\$20.00	\$20.00	0.07	192.4	\$31.75	0.63	
227.21	Break Room	8760	4	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	2,277.6	\$375.80	4	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.20	1716.96	\$283.30	\$24.00	\$96.00	0.06	560.64	\$92.51	1.04	
231.41	Restroom	2600	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	223.6	\$36.89	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	187.2	\$30.89	\$21.00	\$21.00	0.01	36.4	\$6.01	3.50	
227.21	Office	2600	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	338.0	\$55.77	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	254.8	\$42.04	\$24.00	\$48.00	0.03	83.2	\$13.73	3.50	
231.41	Restroom	2600	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	223.6	\$36.89	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	187.2	\$30.89	\$21.00	\$21.00	0.01	36.4	\$6.01	3.50	
551	Shower Room	3600	1	1	Recessed Down Light, 100w A Lamp	100	0.10	360.0	\$59.40	1	1	26w CFL Lamp	26	0.03	93.6	\$15.44	\$20.00	\$20.00	0.07	266.4	\$43.96	0.46	
231.41		3600	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	309.6	\$51.08	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	259.2	\$42.77	\$21.00	\$21.00	0.01	50.4	\$8.32	2.53	
222.21	Clean Work Room	3600	2	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.12	446.4	\$73.66	2	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	360	\$59.40	\$14.00	\$28.00	0.02	86.4	\$14.26	1.96	
227.21		3600	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.07	234.0	\$38.61	1	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.05	176.4	\$29.11	\$24.00	\$24.00	0.02	57.6	\$9.50	2.53	
221.21	Dining Room	4400	8	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.50	2,182.4	\$360.10	8	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.40	1760	\$290.40	\$14.00	\$112.00	0.10	422.4	\$69.70	1.61	
231.41	Dining Room Restroom	3600	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	309.6	\$51.08	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	259.2	\$42.77	\$21.00	\$21.00	0.01	50.4	\$8.32	2.53	
227.21	Corridor	8760	7	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.46	3,985.8	\$657.66	7	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.34	3004.68	\$495.77	\$24.00	\$168.00	0.11	981.12	\$161.88	1.04	

Investment Grade Lighting Audit

APPENDIX E
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ECM #1: Lighting Upgrade - General

EXISTING LIGHTING										PROPOSED LIGHTING										SAVINGS					
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Lamps	Retro-Unit Description	Watts Used	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback			
222.21	Kitchen	2600	2	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.12	322.4	\$53.20	2	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	260	\$42.90	\$14.00	\$28.00	0.02	62.4	\$10.30	2.72			
211.14	BR Boiler Room	2600	6	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.20	514.8	\$84.94	6	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.15	390	\$64.35	\$7.00	\$42.00	0.05	124.8	\$20.59	2.04			
222.21	Soiled Work Room	3600	2	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.12	446.4	\$73.66	2	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	360	\$59.40	\$14.00	\$28.00	0.02	86.4	\$14.26	1.96			
222.21	Wheelchair Room	2600	2	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.12	322.4	\$53.20	2	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	260	\$42.90	\$14.00	\$28.00	0.02	62.4	\$10.30	2.72			
Rosewood Cottage																									
211.14	Boiler Room	2000	6	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.20	396.0	\$65.34	6	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.15	300	\$49.50	\$7.00	\$42.00	0.05	96	\$15.84	2.65			
227.21	Clean Work Room	4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07			
222.21	Soiled Work Room	4400	1	2	2x4, 2 Lamp, 32w 700 Series	62	0.06	272.8	\$45.01	1	2	Relamp - Sylvania Lamp	50	0.05	220	\$36.30	\$14.00	\$14.00	0.01	52.8	\$8.71	1.61			
232.21	Shower Room	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	86	0.09	378.4	\$62.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	316.8	\$52.27	\$21.00	\$21.00	0.01	61.6	\$10.16	2.07			
551		4400	1	1	Recessed Down Light, 100w A Lamp	100	0.10	440.0	\$72.60	1	1	26w CFL Lamp	26	0.03	114.4	\$18.88	\$20.00	\$20.00	0.07	325.6	\$53.72	0.37			
231.41	Resident Rooms 1 & 2	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07			
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61			
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07			
231.41	Resident Rooms 3 & 4	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07			
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61			
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07			
231.41	Resident Rooms 5 & 6	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07			
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61			
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07			
231.41		4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07			

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ECM #1: Lighting Upgrade - General

EXISTING LIGHTING										PROPOSED LIGHTING										SAVINGS					
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Lamps	Retro-Unit Description	Watts Used	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback			
202	Resident Rooms 7 & 8	4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61			
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07			
231.41	Resident Rooms 9 & 10	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07			
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61			
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07			
231.41		4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07			
202	Resident Rooms 11 & 12	4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61			
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07			
231.41	Resident Rooms 13 & 14	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07			
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61			
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07			
231.41	Resident Rooms 15 & 16	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07			
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61			
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07			
231.41		4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07			
202	Resident Rooms 17 & 18	4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61			
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07			

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ECM #1: Lighting Upgrade - General

EXISTING LIGHTING										PROPOSED LIGHTING										SAVINGS					
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Lamps	Retro-Unit Description	Watts Used	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback			
231.41	Resident Rooms 19 & 20	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07			
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61			
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07			
231.41	Resident Rooms 21 & 22	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07			
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61			
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07			
231.41	Resident Room 23	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	378.4	\$62.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	316.8	\$52.27	\$21.00	\$21.00	0.01	61.6	\$10.16	2.07			
221.41		4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.06	255.2	\$42.11	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	220	\$36.30	\$14.00	\$14.00	0.01	35.2	\$5.81	2.41			
227.21		4400	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.07	286.0	\$47.19	1	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.05	215.6	\$35.57	\$24.00	\$24.00	0.02	70.4	\$11.62	2.07			
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.01	105.1	\$17.34	1	2	1.5w C7 LED Lamp 50k Hrs.	3	0.00	26.28	\$4.34	\$8.00	\$8.00	0.01	78.84	\$13.01	0.61			
231.41	Resident Room 24	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	378.4	\$62.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	316.8	\$52.27	\$21.00	\$21.00	0.01	61.6	\$10.16	2.07			
221.41		4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.06	255.2	\$42.11	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	220	\$36.30	\$14.00	\$14.00	0.01	35.2	\$5.81	2.41			
227.21		4400	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.07	286.0	\$47.19	1	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.05	215.6	\$35.57	\$24.00	\$24.00	0.02	70.4	\$11.62	2.07			
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.01	105.1	\$17.34	1	2	1.5w C7 LED Lamp 50k Hrs.	3	0.00	26.28	\$4.34	\$8.00	\$8.00	0.01	78.84	\$13.01	0.61			
231.41	Resident Room 26	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	378.4	\$62.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	316.8	\$52.27	\$21.00	\$21.00	0.01	61.6	\$10.16	2.07			
221.41		4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.06	255.2	\$42.11	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	220	\$36.30	\$14.00	\$14.00	0.01	35.2	\$5.81	2.41			
227.21		4400	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.07	286.0	\$47.19	1	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.05	215.6	\$35.57	\$24.00	\$24.00	0.02	70.4	\$11.62	2.07			
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.01	105.1	\$17.34	1	2	1.5w C7 LED Lamp 50k Hrs.	3	0.00	26.28	\$4.34	\$8.00	\$8.00	0.01	78.84	\$13.01	0.61			
201		4400	1	1	1x2, 1 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	17	0.02	74.8	\$12.34	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
231.41		4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	378.4	\$62.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	316.8	\$52.27	\$21.00	\$21.00	0.01	61.6	\$10.16	2.07			
221.41		4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.06	255.2	\$42.11	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	220	\$36.30	\$14.00	\$14.00	0.01	35.2	\$5.81	2.41			

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ECM #1: Lighting Upgrade - General

EXISTING LIGHTING										PROPOSED LIGHTING										SAVINGS					
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Lamps	Retro-Unit Description	Watts Used	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback			
227.21	Resident Room 27	4400	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.07	286.0	\$47.19	1	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.05	215.6	\$35.57	\$24.00	\$24.00	0.02	70.4	\$11.62	2.07			
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.01	105.1	\$17.34	1	2	1.5w C7 LED Lamp 50k Hrs.	3	0.00	26.28	\$4.34	\$8.00	\$8.00	0.01	78.84	\$13.01	0.61			
201		4400	1	1	1x2, 1 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	17	0.02	74.8	\$12.34	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
231.41	Resident Room 28	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	378.4	\$62.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	316.8	\$52.27	\$21.00	\$21.00	0.01	61.6	\$10.16	2.07			
221.41		4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.06	255.2	\$42.11	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	220	\$36.30	\$14.00	\$14.00	0.01	35.2	\$5.81	2.41			
227.21		4400	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.07	286.0	\$47.19	1	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.05	215.6	\$35.57	\$24.00	\$24.00	0.02	70.4	\$11.62	2.07			
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.01	105.1	\$17.34	1	2	1.5w C7 LED Lamp 50k Hrs.	3	0.00	26.28	\$4.34	\$8.00	\$8.00	0.01	78.84	\$13.01	0.61			
227.21	Corridor A	8760	6	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.39	3,416.4	\$563.71	6	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.29	2575.44	\$424.95	\$24.00	\$144.00	0.10	840.96	\$138.76	1.04			
231.41	Restroom	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	378.4	\$62.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	316.8	\$52.27	\$21.00	\$21.00	0.01	61.6	\$10.16	2.07			
231.41	Restroom	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	378.4	\$62.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	316.8	\$52.27	\$21.00	\$21.00	0.01	61.6	\$10.16	2.07			
231.41	Main Hall	8760	8	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.69	6,026.9	\$994.44	8	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.58	5045.76	\$832.55	\$21.00	\$168.00	0.11	981.12	\$161.88	1.04			
211.12		8760	21	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.69	6,070.7	\$1,001.66	21	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.53	4599	\$758.84	\$7.00	\$147.00	0.17	1471.68	\$242.83	0.61			
560	TV Room	4400	6	1	Recessed Down Light, 13w CFL Lamp	13	0.08	343.2	\$56.63	6	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
227.21	Corridor B	8760	4	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	2,277.6	\$375.80	4	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.20	1716.96	\$283.30	\$24.00	\$96.00	0.06	560.64	\$92.51	1.04			
231.41	Restroom	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	378.4	\$62.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	316.8	\$52.27	\$21.00	\$21.00	0.01	61.6	\$10.16	2.07			
231.41	Shower Room	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	378.4	\$62.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	316.8	\$52.27	\$21.00	\$21.00	0.01	61.6	\$10.16	2.07			
551		4400	1	1	Recessed Down Light, 100w A Lamp	100	0.10	440.0	\$72.60	1	1	26w CFL Lamp	26	0.03	114.4	\$18.88	\$20.00	\$20.00	0.07	325.6	\$53.72	0.37			
227.21	Nurse's Station	8760	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	1,138.8	\$187.90	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	858.48	\$141.65	\$24.00	\$48.00	0.03	280.32	\$46.25	1.04			
231.41	Restroom	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	378.4	\$62.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	316.8	\$52.27	\$21.00	\$21.00	0.01	61.6	\$10.16	2.07			
227.21	Staff Lounge	4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07			
221.21	Dining Room	4400	6	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.37	1,636.8	\$270.07	6	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.30	1320	\$217.80	\$14.00	\$84.00	0.07	316.8	\$52.27	1.61			
211.14	Custodial Closet	1200	1	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.03	39.6	\$6.53	1	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.03	30	\$4.95	\$7.00	\$7.00	0.01	9.6	\$1.58	4.42			

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ECM #1: Lighting Upgrade - General

EXISTING LIGHTING												PROPOSED LIGHTING										SAVINGS					
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Lamps	Retro-Unit Description	Watts Used	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback					
211.14	Equipment Storage	1200	1	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.03	39.6	\$6.53	1	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.03	30	\$4.95	\$7.00	\$7.00	0.01	9.6	\$1.58	4.42					
227.21	Laundry	4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07					
227.21	Kitchen	2600	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	338.0	\$55.77	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	254.8	\$42.04	\$24.00	\$48.00	0.03	83.2	\$13.73	3.50					
221.21	Dining Room	2600	4	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.25	644.8	\$106.39	4	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.20	520	\$85.80	\$14.00	\$56.00	0.05	124.8	\$20.59	2.72					
227.21	Residents Kitchen	2600	4	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	676.0	\$111.54	4	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.20	509.6	\$84.08	\$24.00	\$96.00	0.06	166.4	\$27.46	3.50					
211.14	Clean Linen A	4400	1	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.03	145.2	\$23.96	1	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.03	110	\$18.15	\$7.00	\$7.00	0.01	35.2	\$5.81	1.21					
211.14	Clean Linen B	4400	1	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.03	145.2	\$23.96	1	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.03	110	\$18.15	\$7.00	\$7.00	0.01	35.2	\$5.81	1.21					
555	TV Room	4400	6	1	Recessed Down Light, 65w BR30 Lamp	65	0.39	1,716.0	\$283.14	6	1	Energy Star Rated, Dimmable 26w CFL Lamp	26	0.16	686.4	\$113.26	\$20.00	\$120.00	0.23	1029.6	\$169.88	0.71					
227.21	Corridor C	8760	4	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	2,277.6	\$375.80	4	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.20	1716.96	\$283.30	\$24.00	\$96.00	0.06	560.64	\$92.51	1.04					
227.21	Tub Room	4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07					
221.41	Restroom	4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.06	255.2	\$42.11	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	220	\$36.30	\$14.00	\$14.00	0.01	35.2	\$5.81	2.41					
Meadow Green Cottage																											
211.14	Boiler Room	2000	6	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.20	396.0	\$65.34	6	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.15	300	\$49.50	\$7.00	\$42.00	0.05	96	\$15.84	2.65					
227.21	Clean Work Room	4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07					
222.21	Soiled Work Room	4400	1	2	2x4, 2 Lamp, 32w 700 Series	62	0.06	272.8	\$45.01	1	2	Relamp - Sylvania Lamp	50	0.05	220	\$36.30	\$14.00	\$14.00	0.01	52.8	\$8.71	1.61					
232.21	Shower Room	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	86	0.09	378.4	\$62.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	316.8	\$52.27	\$21.00	\$21.00	0.01	61.6	\$10.16	2.07					
551		4400	1	1	Recessed Down Light, 100w A Lamp	100	0.10	440.0	\$72.60	1	1	26w CFL Lamp	26	0.03	114.4	\$18.88	\$20.00	\$20.00	0.07	325.6	\$53.72	0.37					
231.41	Resident Rooms 1 & 2	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07					
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00					
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61					
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07					
231.41	Resident Rooms 3 & 4	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07					
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00					

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ECM #1: Lighting Upgrade - General

EXISTING LIGHTING										PROPOSED LIGHTING										SAVINGS					
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Lamps	Retro-Unit Description	Watts Used	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback			
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61			
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07			
231.41	Resident Rooms 5 & 6	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07			
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61			
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07			
231.41	Resident Rooms 7 & 8	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07			
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61			
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07			
231.41	Resident Rooms 9 & 10	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07			
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61			
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07			
231.41	Resident Rooms 11 & 12	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07			
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61			
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07			
231.41	Resident Rooms 13 & 14	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07			
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61			
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07			
231.41		4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07			

Investment Grade Lighting Audit

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ECM #1: Lighting Upgrade - General

EXISTING LIGHTING										PROPOSED LIGHTING										SAVINGS					
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Lamps	Retro-Unit Description	Watts Used	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback			
202	Resident Rooms 15 & 16	4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61			
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07			
231.41	Resident Rooms 17 & 18	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07			
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61			
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07			
231.41	Resident Rooms 19 & 20	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07			
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61			
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07			
231.41	Resident Rooms 21 & 22	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07			
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61			
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07			
231.41	Resident Room 23	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	378.4	\$62.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	316.8	\$52.27	\$21.00	\$21.00	0.01	61.6	\$10.16	2.07			
221.41		4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.06	255.2	\$42.11	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	220	\$36.30	\$14.00	\$14.00	0.01	35.2	\$5.81	2.41			
227.21		4400	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.07	286.0	\$47.19	1	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.05	215.6	\$35.57	\$24.00	\$24.00	0.02	70.4	\$11.62	2.07			
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.01	105.1	\$17.34	1	2	1.5w C7 LED Lamp 50k Hrs.	3	0.00	26.28	\$4.34	\$8.00	\$8.00	0.01	78.84	\$13.01	0.61			
231.41	Resident Room 24	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	378.4	\$62.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	316.8	\$52.27	\$21.00	\$21.00	0.01	61.6	\$10.16	2.07			
221.41		4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.06	255.2	\$42.11	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	220	\$36.30	\$14.00	\$14.00	0.01	35.2	\$5.81	2.41			
227.21		4400	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.07	286.0	\$47.19	1	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.05	215.6	\$35.57	\$24.00	\$24.00	0.02	70.4	\$11.62	2.07			
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.01	105.1	\$17.34	1	2	1.5w C7 LED Lamp 50k Hrs.	3	0.00	26.28	\$4.34	\$8.00	\$8.00	0.01	78.84	\$13.01	0.61			

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ECM #1: Lighting Upgrade - General

EXISTING LIGHTING										PROPOSED LIGHTING										SAVINGS					
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Lamps	Retro-Unit Description	Watts Used	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback			
231.41	Resident Room 26	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	378.4	\$62.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	316.8	\$52.27	\$21.00	\$21.00	0.01	61.6	\$10.16	2.07			
221.41		4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.06	255.2	\$42.11	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	220	\$36.30	\$14.00	\$14.00	0.01	35.2	\$5.81	2.41			
227.21		4400	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.07	286.0	\$47.19	1	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.05	215.6	\$35.57	\$24.00	\$24.00	0.02	70.4	\$11.62	2.07			
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.01	105.1	\$17.34	1	2	1.5w C7 LED Lamp 50k Hrs.	3	0.00	26.28	\$4.34	\$8.00	\$8.00	0.01	78.84	\$13.01	0.61			
201		4400	1	1	1x2, 1 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	17	0.02	74.8	\$12.34	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
231.41	Resident Room 27	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	378.4	\$62.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	316.8	\$52.27	\$21.00	\$21.00	0.01	61.6	\$10.16	2.07			
221.41		4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.06	255.2	\$42.11	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	220	\$36.30	\$14.00	\$14.00	0.01	35.2	\$5.81	2.41			
227.21		4400	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.07	286.0	\$47.19	1	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.05	215.6	\$35.57	\$24.00	\$24.00	0.02	70.4	\$11.62	2.07			
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.01	105.1	\$17.34	1	2	1.5w C7 LED Lamp 50k Hrs.	3	0.00	26.28	\$4.34	\$8.00	\$8.00	0.01	78.84	\$13.01	0.61			
201		4400	1	1	1x2, 1 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	17	0.02	74.8	\$12.34	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
231.41	Resident Room 28	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	378.4	\$62.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	316.8	\$52.27	\$21.00	\$21.00	0.01	61.6	\$10.16	2.07			
221.41		4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.06	255.2	\$42.11	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	220	\$36.30	\$14.00	\$14.00	0.01	35.2	\$5.81	2.41			
227.21		4400	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.07	286.0	\$47.19	1	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.05	215.6	\$35.57	\$24.00	\$24.00	0.02	70.4	\$11.62	2.07			
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.01	105.1	\$17.34	1	2	1.5w C7 LED Lamp 50k Hrs.	3	0.00	26.28	\$4.34	\$8.00	\$8.00	0.01	78.84	\$13.01	0.61			
227.21	Corridor A	8760	6	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.39	3,416.4	\$563.71	6	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.29	2575.44	\$424.95	\$24.00	\$144.00	0.10	840.96	\$138.76	1.04			
231.41	Restroom	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	378.4	\$62.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	316.8	\$52.27	\$21.00	\$21.00	0.01	61.6	\$10.16	2.07			
231.41	Restroom	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	378.4	\$62.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	316.8	\$52.27	\$21.00	\$21.00	0.01	61.6	\$10.16	2.07			
231.41	Main Hall	8760	8	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.69	6,026.9	\$994.44	8	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.58	5045.76	\$832.55	\$21.00	\$168.00	0.11	981.12	\$161.88	1.04			
211.12		8760	21	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.69	6,070.7	\$1,001.66	21	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.53	4599	\$758.84	\$7.00	\$147.00	0.17	1471.68	\$242.83	0.61			
560	TV Room	4400	6	1	Recessed Down Light, 13w CFL Lamp	13	0.08	343.2	\$56.63	6	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
227.21	Corridor B	8760	4	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	2,277.6	\$375.80	4	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.20	1716.96	\$283.30	\$24.00	\$96.00	0.06	560.64	\$92.51	1.04			
231.41	Restroom	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	378.4	\$62.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	316.8	\$52.27	\$21.00	\$21.00	0.01	61.6	\$10.16	2.07			

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ECM #1: Lighting Upgrade - General

EXISTING LIGHTING						PROPOSED LIGHTING								SAVINGS								
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Lamps	Retro-Unit Description	Watts Used	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback
231.41	Shower Room	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	378.4	\$62.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	316.8	\$52.27	\$21.00	\$21.00	0.01	61.6	\$10.16	2.07
551		4400	1	1	Recessed Down Light, 100w A Lamp	100	0.10	440.0	\$72.60	1	1	26w CFL Lamp	26	0.03	114.4	\$18.88	\$20.00	\$20.00	0.07	325.6	\$53.72	0.37
227.21	Nurse's Station	8760	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	1,138.8	\$187.90	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	858.48	\$141.65	\$24.00	\$48.00	0.03	280.32	\$46.25	1.04
231.41	Restroom	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	378.4	\$62.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	316.8	\$52.27	\$21.00	\$21.00	0.01	61.6	\$10.16	2.07
227.21	Staff Lounge	4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07
221.21	Dining Room	4400	6	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.37	1,636.8	\$270.07	6	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.30	1320	\$217.80	\$14.00	\$84.00	0.07	316.8	\$52.27	1.61
211.14	Custodial Closet	1200	1	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.03	39.6	\$6.53	1	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.03	30	\$4.95	\$7.00	\$7.00	0.01	9.6	\$1.58	4.42
211.14	Equipment Storage	1200	1	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.03	39.6	\$6.53	1	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.03	30	\$4.95	\$7.00	\$7.00	0.01	9.6	\$1.58	4.42
227.21	Laundry	4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07
227.21	Kitchen	2600	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	338.0	\$55.77	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	254.8	\$42.04	\$24.00	\$48.00	0.03	83.2	\$13.73	3.50
221.21	Dining Room	2600	4	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.25	644.8	\$106.39	4	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.20	520	\$85.80	\$14.00	\$56.00	0.05	124.8	\$20.59	2.72
227.21	Residents Kitchen	2600	4	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	676.0	\$111.54	4	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.20	509.6	\$84.08	\$24.00	\$96.00	0.06	166.4	\$27.46	3.50
211.14	Clean Linen A	4400	1	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.03	145.2	\$23.96	1	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.03	110	\$18.15	\$7.00	\$7.00	0.01	35.2	\$5.81	1.21
211.14	Clean Linen B	4400	1	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.03	145.2	\$23.96	1	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.03	110	\$18.15	\$7.00	\$7.00	0.01	35.2	\$5.81	1.21
555	TV Room	4400	6	1	Recessed Down Light, 65w BR30 Lamp	65	0.39	1,716.0	\$283.14	6	1	Energy Star Rated, Dimmable 26w CFL Lamp	26	0.16	686.4	\$113.26	\$20.00	\$120.00	0.23	1029.6	\$169.88	0.71
227.21	Corridor C	8760	4	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	2,277.6	\$375.80	4	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.20	1716.96	\$283.30	\$24.00	\$96.00	0.06	560.64	\$92.51	1.04
227.21	Tub Room	4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07
221.41	Restroom	4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.06	255.2	\$42.11	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	220	\$36.30	\$14.00	\$14.00	0.01	35.2	\$5.81	2.41
Berry Field Cottage																						
211.14	Boiler Room	2000	6	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.20	396.0	\$65.34	6	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.15	300	\$49.50	\$7.00	\$42.00	0.05	96	\$15.84	2.65
227.21	Clean Work Room	4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07
222.21	Soiled Work Room	4400	1	2	2x4, 2 Lamp, 32w 700 Series	62	0.06	272.8	\$45.01	1	2	Relamp - Sylvania Lamp	50	0.05	220	\$36.30	\$14.00	\$14.00	0.01	52.8	\$8.71	1.61

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ECM #1: Lighting Upgrade - General

EXISTING LIGHTING										PROPOSED LIGHTING										SAVINGS					
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Lamps	Retro-Unit Description	Watts Used	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback			
232.21	Shower Room	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	86	0.09	378.4	\$62.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	316.8	\$52.27	\$21.00	\$21.00	0.01	61.6	\$10.16	2.07			
551		4400	1	1	Recessed Down Light, 100w A Lamp	100	0.10	440.0	\$72.60	1	1	26w CFL Lamp	26	0.03	114.4	\$18.88	\$20.00	\$20.00	0.07	325.6	\$53.72	0.37			
231.41	Resident Rooms 1 & 2	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07			
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61			
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07			
231.41	Resident Rooms 3 & 4	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07			
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61			
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07			
231.41	Resident Rooms 5 & 6	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07			
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61			
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07			
231.41	Resident Rooms 7 & 8	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07			
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61			
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07			
231.41	Resident Rooms 9 & 10	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07			
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61			
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07			
231.41		4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07			

Investment Grade Lighting Audit

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ECM #1: Lighting Upgrade - General

EXISTING LIGHTING										PROPOSED LIGHTING										SAVINGS			
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Lamps	Retro-Unit Description	Watts Used	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback	
202	Resident Rooms 11 & 12	4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61	
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07	
231.41	Resident Rooms 13 & 14	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07	
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61	
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07	
231.41		4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07	
202	Resident Rooms 15 & 16	4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61	
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07	
231.41	Resident Rooms 17 & 18	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07	
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61	
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07	
231.41		4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07	
202	Resident Rooms 19 & 20	4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	0.02	157.68	\$26.02	0.61	
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07	
231.41		4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07	
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
609	Resident Rooms 21 & 22	8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	\$16.00	0.02	157.68	\$26.02	0.61
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07	
231.41		4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.17	756.8	\$124.87	2	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.14	633.6	\$104.54	\$21.00	\$42.00	0.03	123.2	\$20.33	2.07	
202	Resident Rooms 21 & 22	4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.03	149.6	\$24.68	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.02	210.2	\$34.69	2	2	1.5w C7 LED Lamp 50k Hrs.	3	0.01	52.56	\$8.67	\$8.00	\$16.00	\$16.00	0.02	157.68	\$26.02	0.61
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07	

Investment Grade Lighting Audit

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ECM #1: Lighting Upgrade - General

EXISTING LIGHTING										PROPOSED LIGHTING										SAVINGS					
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Lamps	Retro-Unit Description	Watts Used	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback			
231.41	Resident Room 23	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	378.4	\$62.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	316.8	\$52.27	\$21.00	\$21.00	0.01	61.6	\$10.16	2.07			
221.41		4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.06	255.2	\$42.11	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	220	\$36.30	\$14.00	\$14.00	0.01	35.2	\$5.81	2.41			
227.21		4400	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.07	286.0	\$47.19	1	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.05	215.6	\$35.57	\$24.00	\$24.00	0.02	70.4	\$11.62	2.07			
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.01	105.1	\$17.34	1	2	1.5w C7 LED Lamp 50k Hrs.	3	0.00	26.28	\$4.34	\$8.00	\$8.00	0.01	78.84	\$13.01	0.61			
231.41	Resident Room 24	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	378.4	\$62.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	316.8	\$52.27	\$21.00	\$21.00	0.01	61.6	\$10.16	2.07			
221.41		4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.06	255.2	\$42.11	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	220	\$36.30	\$14.00	\$14.00	0.01	35.2	\$5.81	2.41			
227.21		4400	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.07	286.0	\$47.19	1	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.05	215.6	\$35.57	\$24.00	\$24.00	0.02	70.4	\$11.62	2.07			
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.01	105.1	\$17.34	1	2	1.5w C7 LED Lamp 50k Hrs.	3	0.00	26.28	\$4.34	\$8.00	\$8.00	0.01	78.84	\$13.01	0.61			
231.41	Resident Room 26	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	378.4	\$62.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	316.8	\$52.27	\$21.00	\$21.00	0.01	61.6	\$10.16	2.07			
221.41		4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.06	255.2	\$42.11	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	220	\$36.30	\$14.00	\$14.00	0.01	35.2	\$5.81	2.41			
227.21		4400	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.07	286.0	\$47.19	1	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.05	215.6	\$35.57	\$24.00	\$24.00	0.02	70.4	\$11.62	2.07			
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.01	105.1	\$17.34	1	2	1.5w C7 LED Lamp 50k Hrs.	3	0.00	26.28	\$4.34	\$8.00	\$8.00	0.01	78.84	\$13.01	0.61			
201		4400	1	1	1x2, 1 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	17	0.02	74.8	\$12.34	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
231.41	Resident Room 27	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	378.4	\$62.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	316.8	\$52.27	\$21.00	\$21.00	0.01	61.6	\$10.16	2.07			
221.41		4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.06	255.2	\$42.11	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	220	\$36.30	\$14.00	\$14.00	0.01	35.2	\$5.81	2.41			
227.21		4400	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.07	286.0	\$47.19	1	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.05	215.6	\$35.57	\$24.00	\$24.00	0.02	70.4	\$11.62	2.07			
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.01	105.1	\$17.34	1	2	1.5w C7 LED Lamp 50k Hrs.	3	0.00	26.28	\$4.34	\$8.00	\$8.00	0.01	78.84	\$13.01	0.61			
201		4400	1	1	1x2, 1 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	17	0.02	74.8	\$12.34	1	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
231.41	Resident Room 28	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	378.4	\$62.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	316.8	\$52.27	\$21.00	\$21.00	0.01	61.6	\$10.16	2.07			
221.41		4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.06	255.2	\$42.11	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	220	\$36.30	\$14.00	\$14.00	0.01	35.2	\$5.81	2.41			
227.21		4400	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.07	286.0	\$47.19	1	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.05	215.6	\$35.57	\$24.00	\$24.00	0.02	70.4	\$11.62	2.07			
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.01	105.1	\$17.34	1	2	1.5w C7 LED Lamp 50k Hrs.	3	0.00	26.28	\$4.34	\$8.00	\$8.00	0.01	78.84	\$13.01	0.61			
227.21	Corridor A	8760	6	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.39	3,416.4	\$563.71	6	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.29	2575.44	\$424.95	\$24.00	\$144.00	0.10	840.96	\$138.76	1.04			

Investment Grade Lighting Audit

APPENDIX E
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ECM #1: Lighting Upgrade - General

EXISTING LIGHTING												PROPOSED LIGHTING								SAVINGS			
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Lamps	Retro-Unit Description	Watts Used	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback	
231.41	Restroom	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	378.4	\$62.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	316.8	\$52.27	\$21.00	\$21.00	0.01	61.6	\$10.16	2.07	
231.41	Restroom	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	378.4	\$62.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	316.8	\$52.27	\$21.00	\$21.00	0.01	61.6	\$10.16	2.07	
231.41	Main Hall	8760	8	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.69	6,026.9	\$994.44	8	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.58	5045.76	\$832.55	\$21.00	\$168.00	0.11	981.12	\$161.88	1.04	
211.12		8760	21	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.69	6,070.7	\$1,001.66	21	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.53	4599	\$758.84	\$7.00	\$147.00	0.17	1471.68	\$242.83	0.61	
560	TV Room	4400	6	1	Recessed Down Light, 13w CFL Lamp	13	0.08	343.2	\$56.63	6	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
227.21	Corridor B	8760	4	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	2,277.6	\$375.80	4	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.20	1716.96	\$283.30	\$24.00	\$96.00	0.06	560.64	\$92.51	1.04	
231.41	Restroom	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	378.4	\$62.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	316.8	\$52.27	\$21.00	\$21.00	0.01	61.6	\$10.16	2.07	
231.41	Shower Room	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	378.4	\$62.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	316.8	\$52.27	\$21.00	\$21.00	0.01	61.6	\$10.16	2.07	
551		4400	1	1	Recessed Down Light, 100w A Lamp	100	0.10	440.0	\$72.60	1	1	26w CFL Lamp	26	0.03	114.4	\$18.88	\$20.00	\$20.00	0.07	325.6	\$53.72	0.37	
227.21	Nurse's Station	8760	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	1,138.8	\$187.90	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	858.48	\$141.65	\$24.00	\$48.00	0.03	280.32	\$46.25	1.04	
231.41	Restroom	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.09	378.4	\$62.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	72	0.07	316.8	\$52.27	\$21.00	\$21.00	0.01	61.6	\$10.16	2.07	
227.21	Staff Lounge	4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07	
221.21	Dining Room	4400	6	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.37	1,636.8	\$270.07	6	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.30	1320	\$217.80	\$14.00	\$84.00	0.07	316.8	\$52.27	1.61	
211.14	Custodial Closet	1200	1	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.03	39.6	\$6.53	1	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.03	30	\$4.95	\$7.00	\$7.00	0.01	9.6	\$1.58	4.42	
211.14	Equipment Storage	1200	1	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.03	39.6	\$6.53	1	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.03	30	\$4.95	\$7.00	\$7.00	0.01	9.6	\$1.58	4.42	
227.21	Laundry	4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07	
227.21	Kitchen	2600	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	338.0	\$55.77	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	254.8	\$42.04	\$24.00	\$48.00	0.03	83.2	\$13.73	3.50	
221.21	Dining Room	2600	4	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.25	644.8	\$106.39	4	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.20	520	\$85.80	\$14.00	\$56.00	0.05	124.8	\$20.59	2.72	
227.21	Residents Kitchen	2600	4	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	676.0	\$111.54	4	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.20	509.6	\$84.08	\$24.00	\$96.00	0.06	166.4	\$27.46	3.50	
211.14	Clean Linen A	4400	1	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.03	145.2	\$23.96	1	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.03	110	\$18.15	\$7.00	\$7.00	0.01	35.2	\$5.81	1.21	
211.14	Clean Linen B	4400	1	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.03	145.2	\$23.96	1	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.03	110	\$18.15	\$7.00	\$7.00	0.01	35.2	\$5.81	1.21	

Investment Grade Lighting Audit

APPENDIX E
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ECM #1: Lighting Upgrade - General

EXISTING LIGHTING										PROPOSED LIGHTING										SAVINGS					
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Lamps	Retro-Unit Description	Watts Used	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback			
555	TV Room	4400	6	1	Recessed Down Light, 65w BR30 Lamp	65	0.39	1,716.0	\$283.14	6	1	Energy Star Rated, Dimmable 26w CFL Lamp	26	0.16	686.4	\$113.26	\$20.00	\$120.00	0.23	1029.6	\$169.88	0.71			
227.21	Corridor C	8760	4	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	2,277.6	\$375.80	4	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.20	1716.96	\$283.30	\$24.00	\$96.00	0.06	560.64	\$92.51	1.04			
227.21	Tub Room	4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6/SS/ECO	49	0.10	431.2	\$71.15	\$24.00	\$48.00	0.03	140.8	\$23.23	2.07			
221.41	Restroom	4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.06	255.2	\$42.11	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	220	\$36.30	\$14.00	\$14.00	0.01	35.2	\$5.81	2.41			
Kitchen Area																									
221.15	Food Directors Office	2600	6	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Surface Mnt., White Lens	58	0.35	904.8	\$149.29	6	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.30	780	\$128.70	\$14.00	\$84.00	0.05	124.8	\$20.59	4.08			
211.11	Kitchen Corridor	2600	12	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.40	1,029.6	\$169.88	12	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.30	780	\$128.70	\$7.00	\$84.00	0.10	249.6	\$41.18	2.04			
211.11	Storage Room	2600	2	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.07	171.6	\$28.31	2	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.05	130	\$21.45	\$7.00	\$14.00	0.02	41.6	\$6.86	2.04			
211.31	Kitchen	2600	50	1	1x4, 1 Lamp, 32w T8, Elect. Ballast, Pendant Mnt., Prismatic	30	1.50	3,900.0	\$643.50	50	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	1.25	3250	\$536.25	\$7.00	\$350.00	0.25	650	\$107.25	3.26			
221.11	Ref 3	1200	1	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	62	0.06	74.4	\$12.28	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	60	\$9.90	\$14.00	\$14.00	0.01	14.4	\$2.38	5.89			
221.11	Ref 1	2600	1	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	62	0.06	161.2	\$26.60	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	130	\$21.45	\$14.00	\$14.00	0.01	31.2	\$5.15	2.72			
221.11	Dish Room	2600	4	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	62	0.25	644.8	\$106.39	4	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.20	520	\$85.80	\$14.00	\$56.00	0.05	124.8	\$20.59	2.72			
211.11	Supply Room	2600	4	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.13	343.2	\$56.63	4	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.10	260	\$42.90	\$7.00	\$28.00	0.03	83.2	\$13.73	2.04			
242.21	Hall	2600	7	4	2x4, 4 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	107	0.75	1,947.4	\$321.32	7	4	Relamp - Sylvania Lamp FO28/841/SS/ECO	98	0.69	1783.6	\$294.29	\$28.00	\$196.00	0.06	163.8	\$27.03	7.25			
222.21	Office	2600	2	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.12	322.4	\$53.20	2	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	260	\$42.90	\$14.00	\$28.00	0.02	62.4	\$10.30	2.72			
221.11	Mens Rest Room	2600	2	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	62	0.12	322.4	\$53.20	2	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	260	\$42.90	\$14.00	\$28.00	0.02	62.4	\$10.30	2.72			
221.11	Womens Rest Room	2600	2	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	62	0.12	322.4	\$53.20	2	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	260	\$42.90	\$14.00	\$28.00	0.02	62.4	\$10.30	2.72			
617	Kitchen Hood	2600	10	1	Hood Light w/Globe & Cage, 100w A Lamp	100	1.00	2,600.0	\$429.00	10	1	26w CFL Lamp	26	0.26	676	\$111.54	\$20.00	\$200.00	0.74	1924	\$317.46	0.63			
211.11	Office	2600	1	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.03	85.8	\$14.16	1	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.03	65	\$10.73	\$7.00	\$7.00	0.01	20.8	\$3.43	2.04			
221.11	Dairy Ref	2600	1	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	62	0.06	161.2	\$26.60	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	130	\$21.45	\$14.00	\$14.00	0.01	31.2	\$5.15	2.72			
222.21	Lunch Room	2600	30	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	1.86	4,836.0	\$797.94	30	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	1.50	3900	\$643.50	\$14.00	\$420.00	0.36	936	\$154.44	2.72			
750	Exterior	4400	8	1	175w Mercury Vapor Area Light	205	1.64	7,216.0	\$1,190.64	8	1	100w Pulse Start Metal Halide, Ballast and Lamp, retrofit	110	0.88	3872	\$638.88	\$220.00	\$1,760.00	0.76	3344	\$551.76	3.19			

Investment Grade Lighting Audit

ECM #1: Lighting Upgrade - General

EXISTING LIGHTING					PROPOSED LIGHTING										SAVINGS							
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Lamps	Retro-Unit Description	Watts Used	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback
751	Exterior	4400	11	1	250w Mercury Vapor Area Light	295	3.25	14,278.0	\$2,355.87	11	1	175w Pulse Start Metal Halide, Ballast and Lamp, retrofit	185	2.04	8954	\$1,477.41	\$220.00	\$2,420.00	1.21	5324	\$878.46	2.75
Totals			969	807				280,345	\$46,257	969	728			41.9	197,015	\$32,508		\$20,060	15.8	75,812	\$12,509	1.60

CEG Job #: 9C10088
Project: Intermediate Care Center
Address: 35 Piemont Rd.
Rockleigh, NJ
Building SF: 127,508

Intermediate Care Center

KWH COST: **\$0.165**
(Estimated)

ECM #2: Lighting Controls

EXISTING LIGHTING					PROPOSED LIGHTING CONTROLS										SAVINGS											
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Cont.	Controls Description	Watts Used	Total kW	Reduction (%)	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback			
211.14	Boiler Room	2600	6	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.198	514.8	\$84.94	6	0	No Change	33	0.20	0%	514.8	\$84.94	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
560	Lobby	8760	4	1	Recessed Down Light, 13w CFL Lamp	13	0.052	455.52	\$75.16	4	0	No Change	13	0.05	0%	455.52	\$75.16	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
211.21		8760	8	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic	33	0.264	2312.64	\$381.59	8	0	No Change	33	0.26	0%	2312.64	\$381.59	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
222.21	Reception	8760	2	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.124	1086.24	\$179.23	2	0	No Change	62	0.12	0%	1086.24	\$179.23	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
222.21	Social Work	2600	2	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.124	322.4	\$53.20	2	1	Dual Technology Occupancy Sensor - Switch Mnt.	62	0.10	20%	257.92	\$42.56	\$125.00	\$125.00	0.02	64.48	\$10.64	11.75			
222.21	Office	2600	2	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.124	322.4	\$53.20	2	1	Dual Technology Occupancy Sensor - Switch Mnt.	62	0.10	20%	257.92	\$42.56	\$125.00	\$125.00	0.02	64.48	\$10.64	11.75			
222.21	Director of Nursing	2600	2	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.124	322.4	\$53.20	2	1	Dual Technology Occupancy Sensor - Switch Mnt.	62	0.10	20%	257.92	\$42.56	\$125.00	\$125.00	0.02	64.48	\$10.64	11.75			
222.21	Restroom	2600	1	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.062	161.2	\$26.60	1	0	No Change	62	0.06	0%	161.2	\$26.60	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
221.21	Custodial Closet	4400	1	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.062	272.8	\$45.01	1	1	Dual Technology Occupancy Sensor - Switch Mnt.	62	0.05	20%	218.24	\$36.01	\$125.00	\$125.00	0.01	54.56	\$9.00	13.89			
221.21	Records	2600	3	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.186	483.6	\$79.79	3	1	Dual Technology Occupancy Sensor - Switch Mnt.	62	0.15	20%	386.88	\$63.84	\$125.00	\$125.00	0.04	96.72	\$15.96	7.83			
221.21	Storage Room	1200	1	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.062	74.4	\$12.28	1	0	No Change	62	0.06	0%	74.4	\$12.28	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
232.21	Corridor - Admin	8760	7	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	86	0.602	5273.52	\$870.13	7	0	No Change	86	0.60	0%	5273.52	\$870.13	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
222.21	BA Office	2600	4	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.248	644.8	\$106.39	4	1	Dual Technology Occupancy Sensor - Switch Mnt.	62	0.20	20%	515.84	\$85.11	\$125.00	\$125.00	0.05	128.96	\$21.28	5.87			
211.41	BA Restroom	1200	1	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Wall Mnt., Prismatic Lens	33	0.033	39.6	\$6.53	1	0	No Change	33	0.03	0%	39.6	\$6.53	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
222.21	BA Office	2600	2	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.124	322.4	\$53.20	2	1	Dual Technology Occupancy Sensor - Switch Mnt.	62	0.10	20%	257.92	\$42.56	\$125.00	\$125.00	0.02	64.48	\$10.64	11.75			

ECM #2: Lighting Controls

EXISTING LIGHTING					PROPOSED LIGHTING CONTROLS										SAVINGS																											
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Cont.	Controls Description	Watts Used	Total kW	Reduction (%)	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback																			
222.21	Conference Room	2600	4	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.248	644.8	\$106.39	4	1	Dual Technology Occupancy Sensor - Switch Mnt.	62	0.20	20%	515.84	\$85.11	\$125.00	\$125.00	0.05	128.96	\$21.28	5.87																			
222.21	Admin Office	2600	2	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.124	322.4	\$53.20	2	1	Dual Technology Occupancy Sensor - Switch Mnt.	62	0.10	20%	257.92	\$42.56	\$125.00	\$125.00	0.02	64.48	\$10.64	11.75																			
222.21	Nursing Office A	2600	1	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.062	161.2	\$26.60	1	0	No Change	62	0.06	0%	161.2	\$26.60	\$0.00	\$0.00	0.00	0	\$0.00	0.00																			
222.21	Nursing Office B	2600	1	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.062	161.2	\$26.60	1	0	No Change	62	0.06	0%	161.2	\$26.60	\$0.00	\$0.00	0.00	0	\$0.00	0.00																			
222.21	Nursing Lobby	8760	2	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.124	1086.24	\$179.23	2	0	No Change	62	0.12	0%	1086.24	\$179.23	\$0.00	\$0.00	0.00	0	\$0.00	0.00																			
231.41	Restroom	2600	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	223.6	\$36.89	1	0	No Change	86	0.09	0%	223.6	\$36.89	\$0.00	\$0.00	0.00	0	\$0.00	0.00																			
222.21	Admin Restrooms	2600	2	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.124	322.4	\$53.20	2	0	No Change	62	0.12	0%	322.4	\$53.20	\$0.00	\$0.00	0.00	0	\$0.00	0.00																			
211.11	Custodial Closet	4400	1	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.033	145.2	\$23.96	1	0	No Change	33	0.03	0%	145.2	\$23.96	\$0.00	\$0.00	0.00	0	\$0.00	0.00																			
221.11	Activity Office	4400	2	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	62	0.124	545.6	\$90.02	2	1	Dual Technology Occupancy Sensor - Switch Mnt.	62	0.10	20%	436.48	\$72.02	\$125.00	\$125.00	0.02	109.12	\$18.00	6.94																			
211.11	Small Chapel	1200	12	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.396	475.2	\$78.41	12	1	Dual Technology Occupancy Sensor - Switch Mnt.	33	0.32	20%	380.16	\$62.73	\$125.00	\$125.00	0.08	95.04	\$15.68	7.97																			
222.21	Barber Shop	2600	6	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.372	967.2	\$159.59	6	1	Dual Technology Occupancy Sensor - Switch Mnt.	62	0.30	20%	773.76	\$127.67	\$125.00	\$125.00	0.07	193.44	\$31.92	3.92																			
766	Chapel	4400	8	1	400w MH, Prismatic Lens	465	3.72	16368	\$2,700.72	8	0	No Change	465	3.72	0%	16368	\$2,700.72	\$0.00	\$0.00	0.00	0	\$0.00	0.00																			
Blue Ridge Cottage																																										
222.21	Exam Room	3600	2	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.124	446.4	\$73.66	2	0	No Change	62	0.12	0%	446.4	\$73.66	\$0.00	\$0.00	0.00	0	\$0.00	0.00																			
231.41	Restroom	2600	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	223.6	\$36.89	1	0	No Change	86	0.09	0%	223.6	\$36.89	\$0.00	\$0.00	0.00	0	\$0.00	0.00																			
551		2600	1	1	Recessed Down Light, 100w A Lamp	100	0.1	260	\$42.90	1	0	No Change	100	0.10	0%	260	\$42.90	\$0.00	\$0.00	0.00	0	\$0.00	0.00																			
221.21	Custodial Closet	4400	1	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.062	272.8	\$45.01	1	0	No Change	62	0.06	0%	272.8	\$45.01	\$0.00	\$0.00	0.00	0	\$0.00	0.00																			

ECM #2: Lighting Controls

EXISTING LIGHTING										PROPOSED LIGHTING CONTROLS								SAVINGS					
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Cont.	Controls Description	Watts Used	Total kW	Reduction (%)	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback
227.21	Soiled Linen	3600	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.065	234	\$38.61	1	0	No Change	65	0.07	0%	234	\$38.61	\$0.00	\$0.00	0.00	0	\$0.00	0.00
231.41	Resident Room 10	3600	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	619.2	\$102.17	2	0	No Change	86	0.17	0%	619.2	\$102.17	\$0.00	\$0.00	0.00	0	\$0.00	0.00
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.012	105.12	\$17.34	1	0	No Change	12	0.01	0%	105.12	\$17.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21		3600	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	468	\$77.22	2	0	No Change	65	0.13	0%	468	\$77.22	\$0.00	\$0.00	0.00	0	\$0.00	0.00
201		3600	1	1	1x2, 1 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	17	0.017	61.2	\$10.10	1	0	No Change	17	0.02	0%	61.2	\$10.10	\$0.00	\$0.00	0.00	0	\$0.00	0.00
231.41	Resident Room 11	3600	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	619.2	\$102.17	2	0	No Change	86	0.17	0%	619.2	\$102.17	\$0.00	\$0.00	0.00	0	\$0.00	0.00
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.012	105.12	\$17.34	1	0	No Change	12	0.01	0%	105.12	\$17.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21		3600	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	468	\$77.22	2	0	No Change	65	0.13	0%	468	\$77.22	\$0.00	\$0.00	0.00	0	\$0.00	0.00
201		3600	1	1	1x2, 1 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	17	0.017	61.2	\$10.10	1	0	No Change	17	0.02	0%	61.2	\$10.10	\$0.00	\$0.00	0.00	0	\$0.00	0.00
231.41	Resident Rooms 8 & 9	3600	4	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.344	1238.4	\$204.34	4	0	No Change	86	0.34	0%	1238.4	\$204.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21		3600	4	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	936	\$154.44	4	0	No Change	65	0.26	0%	936	\$154.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00
201		3600	1	1	1x2, 1 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	17	0.017	61.2	\$10.10	1	0	No Change	17	0.02	0%	61.2	\$10.10	\$0.00	\$0.00	0.00	0	\$0.00	0.00
231.41	Resident Rooms 6 & 7	3600	4	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.344	1238.4	\$204.34	4	0	No Change	86	0.34	0%	1238.4	\$204.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21		3600	4	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	936	\$154.44	4	0	No Change	65	0.26	0%	936	\$154.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00

ECM #2: Lighting Controls

EXISTING LIGHTING					PROPOSED LIGHTING CONTROLS										SAVINGS											
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Cont.	Controls Description	Watts Used	Total kW	Reduction (%)	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback			
201	Resident Rooms 1 & 2	3600	1	1	1x2, 1 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	17	0.017	61.2	\$10.10	1	0	No Change	17	0.02	0%	61.2	\$10.10	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
231.41		3600	4	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.344	1238.4	\$204.34	4	0	No Change	86	0.34	0%	1238.4	\$204.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
227.21		3600	4	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	936	\$154.44	4	0	No Change	65	0.26	0%	936	\$154.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
201		3600	1	1	1x2, 1 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	17	0.017	61.2	\$10.10	1	0	No Change	17	0.02	0%	61.2	\$10.10	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
231.41	Resident Room 4	3600	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	619.2	\$102.17	2	0	No Change	86	0.17	0%	619.2	\$102.17	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.012	105.12	\$17.34	1	0	No Change	12	0.01	0%	105.12	\$17.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
227.21		3600	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	468	\$77.22	2	0	No Change	65	0.13	0%	468	\$77.22	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
231.41	Resident Room 3	3600	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	309.6	\$51.08	1	0	No Change	86	0.09	0%	309.6	\$51.08	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.012	105.12	\$17.34	1	0	No Change	12	0.01	0%	105.12	\$17.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
227.21		3600	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.065	234	\$38.61	1	0	No Change	65	0.07	0%	234	\$38.61	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
231.41	Resident Room 5	3600	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	309.6	\$51.08	1	0	No Change	86	0.09	0%	309.6	\$51.08	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.012	105.12	\$17.34	1	0	No Change	12	0.01	0%	105.12	\$17.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
227.21		3600	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.065	234	\$38.61	1	0	No Change	65	0.07	0%	234	\$38.61	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
227.21	Corridor	8760	12	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.78	6832.8	\$1,127.41	12	0	No Change	65	0.78	0%	6832.8	\$1,127.41	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
227.21	TV Room	3600	6	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.39	1404	\$231.66	6	0	No Change	65	0.39	0%	1404	\$231.66	\$0.00	\$0.00	0.00	0	\$0.00	0.00			

ECM #2: Lighting Controls

EXISTING LIGHTING					PROPOSED LIGHTING CONTROLS													SAVINGS					
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Cont.	Controls Description	Watts Used	Total kW	Reduction (%)	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback
222.21	Laundry	3600	1	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.062	223.2	\$36.83	1	0	No Change	62	0.06	0%	223.2	\$36.83	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21		3600	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.065	234	\$38.61	1	0	No Change	65	0.07	0%	234	\$38.61	\$0.00	\$0.00	0.00	0	\$0.00	0.00
560	Nurse's Station	8760	3	1	Recessed Down Light, 13w CFL Lamp	13	0.039	341.64	\$56.37	3	0	No Change	13	0.04	0%	341.64	\$56.37	\$0.00	\$0.00	0.00	0	\$0.00	0.00
613	Custodial Closet	2600	1	1	100w A19 Lamp	100	0.1	260	\$42.90	1	0	No Change	100	0.10	0%	260	\$42.90	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Break Room	8760	4	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	2277.6	\$375.80	4	0	No Change	65	0.26	0%	2277.6	\$375.80	\$0.00	\$0.00	0.00	0	\$0.00	0.00
231.41	Restroom	2600	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	223.6	\$36.89	1	0	No Change	86	0.09	0%	223.6	\$36.89	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Office	2600	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	338	\$55.77	2	0	No Change	65	0.13	0%	338	\$55.77	\$0.00	\$0.00	0.00	0	\$0.00	0.00
231.41	Restroom	2600	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	223.6	\$36.89	1	0	No Change	86	0.09	0%	223.6	\$36.89	\$0.00	\$0.00	0.00	0	\$0.00	0.00
551	Shower Room	3600	1	1	Recessed Down Light, 100w A Lamp	100	0.1	360	\$59.40	1	0	No Change	100	0.10	0%	360	\$59.40	\$0.00	\$0.00	0.00	0	\$0.00	0.00
231.41		3600	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	309.6	\$51.08	1	0	No Change	86	0.09	0%	309.6	\$51.08	\$0.00	\$0.00	0.00	0	\$0.00	0.00
222.21	Clean Work Room	3600	2	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.124	446.4	\$73.66	2	0	No Change	62	0.12	0%	446.4	\$73.66	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21		3600	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.065	234	\$38.61	1	0	No Change	65	0.07	0%	234	\$38.61	\$0.00	\$0.00	0.00	0	\$0.00	0.00
221.21	Dining Room	4400	8	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.496	2182.4	\$360.10	8	0	No Change	62	0.50	0%	2182.4	\$360.10	\$0.00	\$0.00	0.00	0	\$0.00	0.00
231.41	Dining Room Restroom	3600	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	309.6	\$51.08	1	0	No Change	86	0.09	0%	309.6	\$51.08	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Corridor	8760	7	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.455	3985.8	\$657.66	7	0	No Change	65	0.46	0%	3985.8	\$657.66	\$0.00	\$0.00	0.00	0	\$0.00	0.00
222.21	Kitchen	2600	2	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.124	322.4	\$53.20	2	0	No Change	62	0.12	0%	322.4	\$53.20	\$0.00	\$0.00	0.00	0	\$0.00	0.00

ECM #2: Lighting Controls

EXISTING LIGHTING					PROPOSED LIGHTING CONTROLS								SAVINGS								SAVINGS		
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Cont.	Controls Description	Watts Used	Total kW	Reduction (%)	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback
211.14	BR Boiler Room	2600	6	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.198	514.8	\$84.94	6	0	No Change	33	0.20	0%	514.8	\$84.94	\$0.00	\$0.00	0.00	0	\$0.00	0.00
222.21	Soiled Work Room	3600	2	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.124	446.4	\$73.66	2	0	No Change	62	0.12	0%	446.4	\$73.66	\$0.00	\$0.00	0.00	0	\$0.00	0.00
222.21	Wheelchair Room	2600	2	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.124	322.4	\$53.20	2	0	No Change	62	0.12	0%	322.4	\$53.20	\$0.00	\$0.00	0.00	0	\$0.00	0.00
Rosewood Cottage																							
211.14	Boiler Room	2000	6	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.198	396	\$65.34	6	0	No Change	33	0.20	0%	396	\$65.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Clean Work Room	4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00
222.21	Soiled Work Room	4400	1	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.062	272.8	\$45.01	1	0	No Change	62	0.06	0%	272.8	\$45.01	\$0.00	\$0.00	0.00	0	\$0.00	0.00
232.21	Shower Room	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	86	0.086	378.4	\$62.44	1	0	No Change	86	0.09	0%	378.4	\$62.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00
551		4400	1	1	Recessed Down Light, 100w A Lamp	100	0.1	440	\$72.60	1	0	No Change	100	0.10	0%	440	\$72.60	\$0.00	\$0.00	0.00	0	\$0.00	0.00
231.41	Resident Rooms 1 & 2	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	756.8	\$124.87	2	0	No Change	86	0.17	0%	756.8	\$124.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.034	149.6	\$24.68	1	0	No Change	34	0.03	0%	149.6	\$24.68	\$0.00	\$0.00	0.00	0	\$0.00	0.00
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00
231.41	Resident Rooms 3 & 4	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	756.8	\$124.87	2	0	No Change	86	0.17	0%	756.8	\$124.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.034	149.6	\$24.68	1	0	No Change	34	0.03	0%	149.6	\$24.68	\$0.00	\$0.00	0.00	0	\$0.00	0.00
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00

ECM #2: Lighting Controls

EXISTING LIGHTING					PROPOSED LIGHTING CONTROLS												SAVINGS							
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Cont.	Controls Description	Watts Used	Total kW	Reduction (%)	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback	
231.41	Resident Rooms 5 & 6	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	756.8	\$124.87	2	0	No Change	86	0.17	0%	756.8	\$124.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.034	149.6	\$24.68	1	0	No Change	34	0.03	0%	149.6	\$24.68	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
231.41	Resident Rooms 7 & 8	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	756.8	\$124.87	2	0	No Change	86	0.17	0%	756.8	\$124.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.034	149.6	\$24.68	1	0	No Change	34	0.03	0%	149.6	\$24.68	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
231.41	Resident Rooms 9 & 10	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	756.8	\$124.87	2	0	No Change	86	0.17	0%	756.8	\$124.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.034	149.6	\$24.68	1	0	No Change	34	0.03	0%	149.6	\$24.68	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
231.41	Resident Rooms 11 & 12	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	756.8	\$124.87	2	0	No Change	86	0.17	0%	756.8	\$124.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.034	149.6	\$24.68	1	0	No Change	34	0.03	0%	149.6	\$24.68	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00	

ECM #2: Lighting Controls

EXISTING LIGHTING		PROPOSED LIGHTING CONTROLS										SAVINGS											
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Cont.	Controls Description	Watts Used	Total kW	Reduction (%)	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback
231.41	Resident Rooms 13 & 14	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	756.8	\$124.87	2	0	No Change	86	0.17	0%	756.8	\$124.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.034	149.6	\$24.68	1	0	No Change	34	0.03	0%	149.6	\$24.68	\$0.00	\$0.00	0.00	0	\$0.00	0.00
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00
231.41	Resident Rooms 15 & 16	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	756.8	\$124.87	2	0	No Change	86	0.17	0%	756.8	\$124.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.034	149.6	\$24.68	1	0	No Change	34	0.03	0%	149.6	\$24.68	\$0.00	\$0.00	0.00	0	\$0.00	0.00
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00
231.41	Resident Rooms 17 & 18	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	756.8	\$124.87	2	0	No Change	86	0.17	0%	756.8	\$124.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.034	149.6	\$24.68	1	0	No Change	34	0.03	0%	149.6	\$24.68	\$0.00	\$0.00	0.00	0	\$0.00	0.00
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00
231.41	Resident Rooms 19 & 20	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	756.8	\$124.87	2	0	No Change	86	0.17	0%	756.8	\$124.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.034	149.6	\$24.68	1	0	No Change	34	0.03	0%	149.6	\$24.68	\$0.00	\$0.00	0.00	0	\$0.00	0.00
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00

ECM #2: Lighting Controls

EXISTING LIGHTING		PROPOSED LIGHTING CONTROLS										SAVINGS											
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Cont.	Controls Description	Watts Used	Total kW	Reduction (%)	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback
231.41	Resident Rooms 21 & 22	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	756.8	\$124.87	2	0	No Change	86	0.17	0%	756.8	\$124.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.034	149.6	\$24.68	1	0	No Change	34	0.03	0%	149.6	\$24.68	\$0.00	\$0.00	0.00	0	\$0.00	0.00
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00
231.41	Resident Room 23	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	378.4	\$62.44	1	0	No Change	86	0.09	0%	378.4	\$62.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00
221.41		4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.058	255.2	\$42.11	1	0	No Change	58	0.06	0%	255.2	\$42.11	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21		4400	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.065	286	\$47.19	1	0	No Change	65	0.07	0%	286	\$47.19	\$0.00	\$0.00	0.00	0	\$0.00	0.00
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.012	105.12	\$17.34	1	0	No Change	12	0.01	0%	105.12	\$17.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00
231.41	Resident Room 24	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	378.4	\$62.44	1	0	No Change	86	0.09	0%	378.4	\$62.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00
221.41		4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.058	255.2	\$42.11	1	0	No Change	58	0.06	0%	255.2	\$42.11	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21		4400	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.065	286	\$47.19	1	0	No Change	65	0.07	0%	286	\$47.19	\$0.00	\$0.00	0.00	0	\$0.00	0.00
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.012	105.12	\$17.34	1	0	No Change	12	0.01	0%	105.12	\$17.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00
231.41	Resident Room 26	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	378.4	\$62.44	1	0	No Change	86	0.09	0%	378.4	\$62.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00
221.41		4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.058	255.2	\$42.11	1	0	No Change	58	0.06	0%	255.2	\$42.11	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21		4400	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.065	286	\$47.19	1	0	No Change	65	0.07	0%	286	\$47.19	\$0.00	\$0.00	0.00	0	\$0.00	0.00
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.012	105.12	\$17.34	1	0	No Change	12	0.01	0%	105.12	\$17.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00

ECM #2: Lighting Controls

EXISTING LIGHTING					PROPOSED LIGHTING CONTROLS										SAVINGS								
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Cont.	Controls Description	Watts Used	Total kW	Reduction (%)	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback
201	Resident Room 27	4400	1	1	1x2, 1 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	17	0.017	74.8	\$12.34	1	0	No Change	17	0.02	0%	74.8	\$12.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00
231.41		4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	378.4	\$62.44	1	0	No Change	86	0.09	0%	378.4	\$62.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00
221.41		4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.058	255.2	\$42.11	1	0	No Change	58	0.06	0%	255.2	\$42.11	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21		4400	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.065	286	\$47.19	1	0	No Change	65	0.07	0%	286	\$47.19	\$0.00	\$0.00	0.00	0	\$0.00	0.00
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.012	105.12	\$17.34	1	0	No Change	12	0.01	0%	105.12	\$17.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00
201		4400	1	1	1x2, 1 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	17	0.017	74.8	\$12.34	1	0	No Change	17	0.02	0%	74.8	\$12.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00
231.41	Resident Room 28	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	378.4	\$62.44	1	0	No Change	86	0.09	0%	378.4	\$62.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00
221.41		4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.058	255.2	\$42.11	1	0	No Change	58	0.06	0%	255.2	\$42.11	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21		4400	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.065	286	\$47.19	1	0	No Change	65	0.07	0%	286	\$47.19	\$0.00	\$0.00	0.00	0	\$0.00	0.00
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.012	105.12	\$17.34	1	0	No Change	12	0.01	0%	105.12	\$17.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Corridor A	8760	6	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.39	3416.4	\$563.71	6	0	No Change	65	0.39	0%	3416.4	\$563.71	\$0.00	\$0.00	0.00	0	\$0.00	0.00
231.41	Restroom	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	378.4	\$62.44	1	0	No Change	86	0.09	0%	378.4	\$62.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00
231.41	Restroom	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	378.4	\$62.44	1	0	No Change	86	0.09	0%	378.4	\$62.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00
231.41	Main Hall	8760	8	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.688	6026.88	\$994.44	8	0	No Change	86	0.69	0%	6026.88	\$994.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00
211.12		8760	21	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.693	6070.68	\$1,001.66	21	0	No Change	33	0.69	0%	6070.68	\$1,001.66	\$0.00	\$0.00	0.00	0	\$0.00	0.00
560	TV Room	4400	6	1	Recessed Down Light, 13w CFL Lamp	13	0.078	343.2	\$56.63	6	0	No Change	13	0.08	0%	343.2	\$56.63	\$0.00	\$0.00	0.00	0	\$0.00	0.00

ECM #2: Lighting Controls

EXISTING LIGHTING					PROPOSED LIGHTING CONTROLS										SAVINGS											
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Cont.	Controls Description	Watts Used	Total kW	Reduction (%)	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback			
227.21	Corridor B	8760	4	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	2277.6	\$375.80	4	0	No Change	65	0.26	0%	2277.6	\$375.80	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
231.41	Restroom	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	378.4	\$62.44	1	0	No Change	86	0.09	0%	378.4	\$62.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
231.41	Shower Room	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	378.4	\$62.44	1	0	No Change	86	0.09	0%	378.4	\$62.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
551		4400	1	1	Recessed Down Light, 100w A Lamp	100	0.1	440	\$72.60	1	0	No Change	100	0.10	0%	440	\$72.60	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
227.21	Nurse's Station	8760	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	1138.8	\$187.90	2	0	No Change	65	0.13	0%	1138.8	\$187.90	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
231.41	Restroom	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	378.4	\$62.44	1	0	No Change	86	0.09	0%	378.4	\$62.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
227.21	Staff Lounge	4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
221.21	Dining Room	4400	6	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.372	1636.8	\$270.07	6	0	No Change	62	0.37	0%	1636.8	\$270.07	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
211.14	Custodial Closet	1200	1	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.033	39.6	\$6.53	1	0	No Change	33	0.03	0%	39.6	\$6.53	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
211.14	Equipment Storage	1200	1	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.033	39.6	\$6.53	1	0	No Change	33	0.03	0%	39.6	\$6.53	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
227.21	Laundry	4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
227.21	Kitchen	2600	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	338	\$55.77	2	0	No Change	65	0.13	0%	338	\$55.77	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
221.21	Dining Room	2600	4	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.248	644.8	\$106.39	4	0	No Change	62	0.25	0%	644.8	\$106.39	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
227.21	Residents Kitchen	2600	4	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	676	\$111.54	4	0	No Change	65	0.26	0%	676	\$111.54	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
211.14	Clean Linen A	4400	1	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.033	145.2	\$23.96	1	0	No Change	33	0.03	0%	145.2	\$23.96	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
211.14	Clean Linen B	4400	1	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.033	145.2	\$23.96	1	0	No Change	33	0.03	0%	145.2	\$23.96	\$0.00	\$0.00	0.00	0	\$0.00	0.00			

ECM #2: Lighting Controls

EXISTING LIGHTING					PROPOSED LIGHTING CONTROLS								SAVINGS								SAVINGS		
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Cont.	Controls Description	Watts Used	Total kW	Reduction (%)	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback
555	TV Room	4400	6	1	Recessed Down Light, 65w BR30 Lamp	65	0.39	1716	\$283.14	6	0	No Change	65	0.39	0%	1716	\$283.14	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Corridor C	8760	4	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	2277.6	\$375.80	4	0	No Change	65	0.26	0%	2277.6	\$375.80	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Tub Room	4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00
221.41	Restroom	4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.058	255.2	\$42.11	1	0	No Change	58	0.06	0%	255.2	\$42.11	\$0.00	\$0.00	0.00	0	\$0.00	0.00
Meadow Green Cottage																							
211.14	Boiler Room	2000	6	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.198	396	\$65.34	6	0	No Change	33	0.20	0%	396	\$65.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Clean Work Room	4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00
222.21	Soiled Work Room	4400	1	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.062	272.8	\$45.01	1	0	No Change	62	0.06	0%	272.8	\$45.01	\$0.00	\$0.00	0.00	0	\$0.00	0.00
232.21	Shower Room	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	86	0.086	378.4	\$62.44	1	0	No Change	86	0.09	0%	378.4	\$62.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00
551		4400	1	1	Recessed Down Light, 100w A Lamp	100	0.1	440	\$72.60	1	0	No Change	100	0.10	0%	440	\$72.60	\$0.00	\$0.00	0.00	0	\$0.00	0.00
231.41	Resident Rooms 1 & 2	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	756.8	\$124.87	2	0	No Change	86	0.17	0%	756.8	\$124.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.034	149.6	\$24.68	1	0	No Change	34	0.03	0%	149.6	\$24.68	\$0.00	\$0.00	0.00	0	\$0.00	0.00
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00
231.41	Resident Rooms 3 & 4	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	756.8	\$124.87	2	0	No Change	86	0.17	0%	756.8	\$124.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.034	149.6	\$24.68	1	0	No Change	34	0.03	0%	149.6	\$24.68	\$0.00	\$0.00	0.00	0	\$0.00	0.00
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00

ECM #2: Lighting Controls

EXISTING LIGHTING										PROPOSED LIGHTING CONTROLS										SAVINGS					
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Cont.	Controls Description	Watts Used	Total kW	Reduction (%)	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback		
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
231.41	Resident Rooms 5 & 6	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	756.8	\$124.87	2	0	No Change	86	0.17	0%	756.8	\$124.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.034	149.6	\$24.68	1	0	No Change	34	0.03	0%	149.6	\$24.68	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
231.41	Resident Rooms 7 & 8	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	756.8	\$124.87	2	0	No Change	86	0.17	0%	756.8	\$124.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.034	149.6	\$24.68	1	0	No Change	34	0.03	0%	149.6	\$24.68	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
231.41	Resident Rooms 9 & 10	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	756.8	\$124.87	2	0	No Change	86	0.17	0%	756.8	\$124.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.034	149.6	\$24.68	1	0	No Change	34	0.03	0%	149.6	\$24.68	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
231.41	Resident Rooms 11 & 12	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	756.8	\$124.87	2	0	No Change	86	0.17	0%	756.8	\$124.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.034	149.6	\$24.68	1	0	No Change	34	0.03	0%	149.6	\$24.68	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00		

ECM #2: Lighting Controls

EXISTING LIGHTING										PROPOSED LIGHTING CONTROLS										SAVINGS					
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Cont.	Controls Description	Watts Used	Total kW	Reduction (%)	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback		
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
231.41	Resident Rooms 13 & 14	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	756.8	\$124.87	2	0	No Change	86	0.17	0%	756.8	\$124.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.034	149.6	\$24.68	1	0	No Change	34	0.03	0%	149.6	\$24.68	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
231.41	Resident Rooms 15 & 16	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	756.8	\$124.87	2	0	No Change	86	0.17	0%	756.8	\$124.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.034	149.6	\$24.68	1	0	No Change	34	0.03	0%	149.6	\$24.68	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
231.41	Resident Rooms 17 & 18	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	756.8	\$124.87	2	0	No Change	86	0.17	0%	756.8	\$124.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.034	149.6	\$24.68	1	0	No Change	34	0.03	0%	149.6	\$24.68	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
231.41	Resident Rooms 19 & 20	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	756.8	\$124.87	2	0	No Change	86	0.17	0%	756.8	\$124.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.034	149.6	\$24.68	1	0	No Change	34	0.03	0%	149.6	\$24.68	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00		

ECM #2: Lighting Controls

EXISTING LIGHTING										PROPOSED LIGHTING CONTROLS										SAVINGS					
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Cont.	Controls Description	Watts Used	Total kW	Reduction (%)	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback		
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
231.41	Resident Rooms 21 & 22	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	756.8	\$124.87	2	0	No Change	86	0.17	0%	756.8	\$124.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.034	149.6	\$24.68	1	0	No Change	34	0.03	0%	149.6	\$24.68	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
231.41	Resident Room 23	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	378.4	\$62.44	1	0	No Change	86	0.09	0%	378.4	\$62.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
221.41		4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.058	255.2	\$42.11	1	0	No Change	58	0.06	0%	255.2	\$42.11	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
227.21		4400	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.065	286	\$47.19	1	0	No Change	65	0.07	0%	286	\$47.19	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.012	105.12	\$17.34	1	0	No Change	12	0.01	0%	105.12	\$17.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
231.41	Resident Room 24	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	378.4	\$62.44	1	0	No Change	86	0.09	0%	378.4	\$62.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
221.41		4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.058	255.2	\$42.11	1	0	No Change	58	0.06	0%	255.2	\$42.11	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
227.21		4400	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.065	286	\$47.19	1	0	No Change	65	0.07	0%	286	\$47.19	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.012	105.12	\$17.34	1	0	No Change	12	0.01	0%	105.12	\$17.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
231.41	Resident Room 26	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	378.4	\$62.44	1	0	No Change	86	0.09	0%	378.4	\$62.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
221.41		4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.058	255.2	\$42.11	1	0	No Change	58	0.06	0%	255.2	\$42.11	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
227.21		4400	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.065	286	\$47.19	1	0	No Change	65	0.07	0%	286	\$47.19	\$0.00	\$0.00	0.00	0	\$0.00	0.00		

ECM #2: Lighting Controls

EXISTING LIGHTING										PROPOSED LIGHTING CONTROLS								SAVINGS					
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Cont.	Controls Description	Watts Used	Total kW	Reduction (%)	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.012	105.12	\$17.34	1	0	No Change	12	0.01	0%	105.12	\$17.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00
201		4400	1	1	1x2, 1 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	17	0.017	74.8	\$12.34	1	0	No Change	17	0.02	0%	74.8	\$12.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00
231.41	Resident Room 27	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	378.4	\$62.44	1	0	No Change	86	0.09	0%	378.4	\$62.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00
221.41		4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.058	255.2	\$42.11	1	0	No Change	58	0.06	0%	255.2	\$42.11	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21		4400	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.065	286	\$47.19	1	0	No Change	65	0.07	0%	286	\$47.19	\$0.00	\$0.00	0.00	0	\$0.00	0.00
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.012	105.12	\$17.34	1	0	No Change	12	0.01	0%	105.12	\$17.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00
201		4400	1	1	1x2, 1 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	17	0.017	74.8	\$12.34	1	0	No Change	17	0.02	0%	74.8	\$12.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00
231.41	Resident Room 28	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	378.4	\$62.44	1	0	No Change	86	0.09	0%	378.4	\$62.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00
221.41		4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.058	255.2	\$42.11	1	0	No Change	58	0.06	0%	255.2	\$42.11	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21		4400	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.065	286	\$47.19	1	0	No Change	65	0.07	0%	286	\$47.19	\$0.00	\$0.00	0.00	0	\$0.00	0.00
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.012	105.12	\$17.34	1	0	No Change	12	0.01	0%	105.12	\$17.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Corridor A	8760	6	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.39	3416.4	\$563.71	6	0	No Change	65	0.39	0%	3416.4	\$563.71	\$0.00	\$0.00	0.00	0	\$0.00	0.00
231.41	Restroom	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	378.4	\$62.44	1	0	No Change	86	0.09	0%	378.4	\$62.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00
231.41	Restroom	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	378.4	\$62.44	1	0	No Change	86	0.09	0%	378.4	\$62.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00
231.41	Main Hall	8760	8	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.688	6026.88	\$994.44	8	0	No Change	86	0.69	0%	6026.88	\$994.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00
211.12		8760	21	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.693	6070.68	\$1,001.66	21	0	No Change	33	0.69	0%	6070.68	\$1,001.66	\$0.00	\$0.00	0.00	0	\$0.00	0.00

ECM #2: Lighting Controls

EXISTING LIGHTING										PROPOSED LIGHTING CONTROLS										SAVINGS					
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Cont.	Controls Description	Watts Used	Total kW	Reduction (%)	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback		
560	TV Room	4400	6	1	Recessed Down Light, 13w CFL Lamp	13	0.078	343.2	\$56.63	6	0	No Change	13	0.08	0%	343.2	\$56.63	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
227.21	Corridor B	8760	4	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	2277.6	\$375.80	4	0	No Change	65	0.26	0%	2277.6	\$375.80	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
231.41	Restroom	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	378.4	\$62.44	1	0	No Change	86	0.09	0%	378.4	\$62.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
231.41	Shower Room	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	378.4	\$62.44	1	0	No Change	86	0.09	0%	378.4	\$62.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
551		4400	1	1	Recessed Down Light, 100w A Lamp	100	0.1	440	\$72.60	1	0	No Change	100	0.10	0%	440	\$72.60	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
227.21	Nurse's Station	8760	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	1138.8	\$187.90	2	0	No Change	65	0.13	0%	1138.8	\$187.90	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
231.41	Restroom	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	378.4	\$62.44	1	0	No Change	86	0.09	0%	378.4	\$62.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
227.21	Staff Lounge	4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
221.21	Dining Room	4400	6	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.372	1636.8	\$270.07	6	0	No Change	62	0.37	0%	1636.8	\$270.07	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
211.14	Custodial Closet	1200	1	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.033	39.6	\$6.53	1	0	No Change	33	0.03	0%	39.6	\$6.53	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
211.14	Equipment Storage	1200	1	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.033	39.6	\$6.53	1	0	No Change	33	0.03	0%	39.6	\$6.53	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
227.21	Laundry	4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
227.21	Kitchen	2600	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	338	\$55.77	2	0	No Change	65	0.13	0%	338	\$55.77	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
221.21	Dining Room	2600	4	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.248	644.8	\$106.39	4	0	No Change	62	0.25	0%	644.8	\$106.39	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
227.21	Residents Kitchen	2600	4	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	676	\$111.54	4	0	No Change	65	0.26	0%	676	\$111.54	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
211.14	Clean Linen A	4400	1	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.033	145.2	\$23.96	1	0	No Change	33	0.03	0%	145.2	\$23.96	\$0.00	\$0.00	0.00	0	\$0.00	0.00		

ECM #2: Lighting Controls

EXISTING LIGHTING										PROPOSED LIGHTING CONTROLS										SAVINGS					
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Cont.	Controls Description	Watts Used	Total kW	Reduction (%)	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback		
211.14	Clean Linen B	4400	1	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.033	145.2	\$23.96	1	0	No Change	33	0.03	0%	145.2	\$23.96	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
555	TV Room	4400	6	1	Recessed Down Light, 65w BR30 Lamp	65	0.39	1716	\$283.14	6	0	No Change	65	0.39	0%	1716	\$283.14	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
227.21	Corridor C	8760	4	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	2277.6	\$375.80	4	0	No Change	65	0.26	0%	2277.6	\$375.80	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
227.21	Tub Room	4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
221.41	Restroom	4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.058	255.2	\$42.11	1	0	No Change	58	0.06	0%	255.2	\$42.11	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
Berry Field Cottage																									
211.14	Boiler Room	2000	6	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.198	396	\$65.34	6	0	No Change	33	0.20	0%	396	\$65.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
227.21	Clean Work Room	4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
222.21	Soiled Work Room	4400	1	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.062	272.8	\$45.01	1	0	No Change	62	0.06	0%	272.8	\$45.01	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
232.21	Shower Room	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	86	0.086	378.4	\$62.44	1	0	No Change	86	0.09	0%	378.4	\$62.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
551		4400	1	1	Recessed Down Light, 100w A Lamp	100	0.1	440	\$72.60	1	0	No Change	100	0.10	0%	440	\$72.60	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
231.41	Resident Rooms 1 & 2	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	756.8	\$124.87	2	0	No Change	86	0.17	0%	756.8	\$124.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.034	149.6	\$24.68	1	0	No Change	34	0.03	0%	149.6	\$24.68	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
231.41	Resident Rooms 3 &	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	756.8	\$124.87	2	0	No Change	86	0.17	0%	756.8	\$124.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00		
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.034	149.6	\$24.68	1	0	No Change	34	0.03	0%	149.6	\$24.68	\$0.00	\$0.00	0.00	0	\$0.00	0.00		

ECM #2: Lighting Controls

EXISTING LIGHTING										PROPOSED LIGHTING CONTROLS											SAVINGS			
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Cont.	Controls Description	Watts Used	Total kW	Reduction (%)	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback	
609	4	8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
231.41	Resident Rooms 5 & 6	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	756.8	\$124.87	2	0	No Change	86	0.17	0%	756.8	\$124.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.034	149.6	\$24.68	1	0	No Change	34	0.03	0%	149.6	\$24.68	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
231.41	Resident Rooms 7 & 8	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	756.8	\$124.87	2	0	No Change	86	0.17	0%	756.8	\$124.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.034	149.6	\$24.68	1	0	No Change	34	0.03	0%	149.6	\$24.68	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
231.41	Resident Rooms 9 & 10	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	756.8	\$124.87	2	0	No Change	86	0.17	0%	756.8	\$124.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.034	149.6	\$24.68	1	0	No Change	34	0.03	0%	149.6	\$24.68	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
231.41	Resident Rooms 11	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	756.8	\$124.87	2	0	No Change	86	0.17	0%	756.8	\$124.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.034	149.6	\$24.68	1	0	No Change	34	0.03	0%	149.6	\$24.68	\$0.00	\$0.00	0.00	0	\$0.00	0.00	

ECM #2: Lighting Controls

EXISTING LIGHTING										PROPOSED LIGHTING CONTROLS											SAVINGS					
CEG Type	Fixture Location & 12	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Cont.	Controls Description	Watts Used	Total kW	Reduction (%)	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback			
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
231.41	Resident Rooms 13 & 14	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	756.8	\$124.87	2	0	No Change	86	0.17	0%	756.8	\$124.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.034	149.6	\$24.68	1	0	No Change	34	0.03	0%	149.6	\$24.68	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
231.41	Resident Rooms 15 & 16	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	756.8	\$124.87	2	0	No Change	86	0.17	0%	756.8	\$124.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.034	149.6	\$24.68	1	0	No Change	34	0.03	0%	149.6	\$24.68	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
231.41	Resident Rooms 17 & 18	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	756.8	\$124.87	2	0	No Change	86	0.17	0%	756.8	\$124.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.034	149.6	\$24.68	1	0	No Change	34	0.03	0%	149.6	\$24.68	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
231.41	Resident Rooms 19	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	756.8	\$124.87	2	0	No Change	86	0.17	0%	756.8	\$124.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.034	149.6	\$24.68	1	0	No Change	34	0.03	0%	149.6	\$24.68	\$0.00	\$0.00	0.00	0	\$0.00	0.00			

ECM #2: Lighting Controls

EXISTING LIGHTING										PROPOSED LIGHTING CONTROLS											SAVINGS			
CEG Type	Fixture Location & 20	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Cont.	Controls Description	Watts Used	Total kW	Reduction (%)	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback	
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
231.41	Resident Rooms 21 & 22	4400	2	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.172	756.8	\$124.87	2	0	No Change	86	0.17	0%	756.8	\$124.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
202		4400	1	2	1x2, 2 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	34	0.034	149.6	\$24.68	1	0	No Change	34	0.03	0%	149.6	\$24.68	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
609		8760	2	2	Night Light, (2) 6w Incandescent Lamps	12	0.024	210.24	\$34.69	2	0	No Change	12	0.02	0%	210.24	\$34.69	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
227.21		4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
231.41	Resident Room 23	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	378.4	\$62.44	1	0	No Change	86	0.09	0%	378.4	\$62.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
221.41		4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.058	255.2	\$42.11	1	0	No Change	58	0.06	0%	255.2	\$42.11	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
227.21		4400	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.065	286	\$47.19	1	0	No Change	65	0.07	0%	286	\$47.19	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.012	105.12	\$17.34	1	0	No Change	12	0.01	0%	105.12	\$17.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
231.41	Resident Room 24	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	378.4	\$62.44	1	0	No Change	86	0.09	0%	378.4	\$62.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
221.41		4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.058	255.2	\$42.11	1	0	No Change	58	0.06	0%	255.2	\$42.11	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
227.21		4400	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.065	286	\$47.19	1	0	No Change	65	0.07	0%	286	\$47.19	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.012	105.12	\$17.34	1	0	No Change	12	0.01	0%	105.12	\$17.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
231.41		4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	378.4	\$62.44	1	0	No Change	86	0.09	0%	378.4	\$62.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
221.41		4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.058	255.2	\$42.11	1	0	No Change	58	0.06	0%	255.2	\$42.11	\$0.00	\$0.00	0.00	0	\$0.00	0.00	

ECM #2: Lighting Controls

EXISTING LIGHTING					PROPOSED LIGHTING CONTROLS								SAVINGS										
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Cont.	Controls Description	Watts Used	Total kW	Reduction (%)	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback
227.21	Resident Room 26	4400	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.065	286	\$47.19	1	0	No Change	65	0.07	0%	286	\$47.19	\$0.00	\$0.00	0.00	0	\$0.00	0.00
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.012	105.12	\$17.34	1	0	No Change	12	0.01	0%	105.12	\$17.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00
201		4400	1	1	1x2, 1 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	17	0.017	74.8	\$12.34	1	0	No Change	17	0.02	0%	74.8	\$12.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00
231.41	Resident Room 27	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	378.4	\$62.44	1	0	No Change	86	0.09	0%	378.4	\$62.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00
221.41		4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.058	255.2	\$42.11	1	0	No Change	58	0.06	0%	255.2	\$42.11	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21		4400	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.065	286	\$47.19	1	0	No Change	65	0.07	0%	286	\$47.19	\$0.00	\$0.00	0.00	0	\$0.00	0.00
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.012	105.12	\$17.34	1	0	No Change	12	0.01	0%	105.12	\$17.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00
201		4400	1	1	1x2, 1 Lamp, 17w T8, Elect. Ballast, Surface Mnt., Prismatic Lens	17	0.017	74.8	\$12.34	1	0	No Change	17	0.02	0%	74.8	\$12.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00
231.41	Resident Room 28	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	378.4	\$62.44	1	0	No Change	86	0.09	0%	378.4	\$62.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00
221.41		4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.058	255.2	\$42.11	1	0	No Change	58	0.06	0%	255.2	\$42.11	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21		4400	1	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.065	286	\$47.19	1	0	No Change	65	0.07	0%	286	\$47.19	\$0.00	\$0.00	0.00	0	\$0.00	0.00
609		8760	1	2	Night Light, (2) 6w Incandescent Lamps	12	0.012	105.12	\$17.34	1	0	No Change	12	0.01	0%	105.12	\$17.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Corridor A	8760	6	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.39	3416.4	\$563.71	6	0	No Change	65	0.39	0%	3416.4	\$563.71	\$0.00	\$0.00	0.00	0	\$0.00	0.00
231.41	Restroom	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	378.4	\$62.44	1	0	No Change	86	0.09	0%	378.4	\$62.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00
231.41	Restroom	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	378.4	\$62.44	1	0	No Change	86	0.09	0%	378.4	\$62.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00
231.41	Main Hall	8760	8	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.688	6026.88	\$994.44	8	0	No Change	86	0.69	0%	6026.88	\$994.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00

ECM #2: Lighting Controls

EXISTING LIGHTING					PROPOSED LIGHTING CONTROLS										SAVINGS											
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Cont.	Controls Description	Watts Used	Total kW	Reduction (%)	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback			
211.12		8760	21	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.693	6070.68	\$1,001.66	21	0	No Change	33	0.69	0%	6070.68	\$1,001.66	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
560	TV Room	4400	6	1	Recessed Down Light, 13w CFL Lamp	13	0.078	343.2	\$56.63	6	0	No Change	13	0.08	0%	343.2	\$56.63	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
227.21	Corridor B	8760	4	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	2277.6	\$375.80	4	0	No Change	65	0.26	0%	2277.6	\$375.80	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
231.41	Restroom	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	378.4	\$62.44	1	0	No Change	86	0.09	0%	378.4	\$62.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
231.41	Shower Room	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	378.4	\$62.44	1	0	No Change	86	0.09	0%	378.4	\$62.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
551		4400	1	1	Recessed Down Light, 100w A Lamp	100	0.1	440	\$72.60	1	0	No Change	100	0.10	0%	440	\$72.60	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
227.21	Nurse's Station	8760	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	1138.8	\$187.90	2	0	No Change	65	0.13	0%	1138.8	\$187.90	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
231.41	Restroom	4400	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	86	0.086	378.4	\$62.44	1	0	No Change	86	0.09	0%	378.4	\$62.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
227.21	Staff Lounge	4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
221.21	Dining Room	4400	6	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.372	1636.8	\$270.07	6	0	No Change	62	0.37	0%	1636.8	\$270.07	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
211.14	Custodial Closet	1200	1	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.033	39.6	\$6.53	1	0	No Change	33	0.03	0%	39.6	\$6.53	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
211.14	Equipment Storage	1200	1	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.033	39.6	\$6.53	1	0	No Change	33	0.03	0%	39.6	\$6.53	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
227.21	Laundry	4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
227.21	Kitchen	2600	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	338	\$55.77	2	0	No Change	65	0.13	0%	338	\$55.77	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
221.21	Dining Room	2600	4	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.248	644.8	\$106.39	4	0	No Change	62	0.25	0%	644.8	\$106.39	\$0.00	\$0.00	0.00	0	\$0.00	0.00			
227.21	Residents Kitchen	2600	4	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	676	\$111.54	4	0	No Change	65	0.26	0%	676	\$111.54	\$0.00	\$0.00	0.00	0	\$0.00	0.00			

ECM #2: Lighting Controls

EXISTING LIGHTING					PROPOSED LIGHTING CONTROLS																SAVINGS			
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Cont.	Controls Description	Watts Used	Total kW	Reduction (%)	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback	
211.14	Clean Linen A	4400	1	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.033	145.2	\$23.96	1	0	No Change	33	0.03	0%	145.2	\$23.96	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
211.14	Clean Linen B	4400	1	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.033	145.2	\$23.96	1	0	No Change	33	0.03	0%	145.2	\$23.96	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
555	TV Room	4400	6	1	Recessed Down Light, 65w BR30 Lamp	65	0.39	1716	\$283.14	6	0	No Change	65	0.39	0%	1716	\$283.14	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
227.21	Corridor C	8760	4	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	2277.6	\$375.80	4	0	No Change	65	0.26	0%	2277.6	\$375.80	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
227.21	Tub Room	4400	2	2	2x2, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572	\$94.38	2	0	No Change	65	0.13	0%	572	\$94.38	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
221.41	Restroom	4400	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	58	0.058	255.2	\$42.11	1	0	No Change	58	0.06	0%	255.2	\$42.11	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
Kitchen Area																								
221.15	Food Directors Office	2600	6	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Surface Mnt., White Lens	58	0.348	904.8	\$149.29	6	1	Dual Technology Occupancy Sensor - Switch Mnt.	58	0.28	20%	723.84	\$119.43	\$125.00	\$125.00	0.07	180.96	\$29.86	4.19	
211.11	Kitchen Corridor	2600	12	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.396	1029.6	\$169.88	12	0	No Change	33	0.40	0%	1029.6	\$169.88	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
211.11	Storage Room	2600	2	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.066	171.6	\$28.31	2	0	No Change	33	0.07	0%	171.6	\$28.31	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
211.31	Kitchen	2600	50	1	1x4, 1 Lamp, 32w T8, Elect. Ballast, Pendant Mnt., Prismatic	30	1.5	3900	\$643.50	50	0	No Change	30	1.50	0%	3900	\$643.50	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
221.11	Ref 3	1200	1	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	62	0.062	74.4	\$12.28	1	0	No Change	62	0.06	0%	74.4	\$12.28	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
221.11	Ref 1	2600	1	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	62	0.062	161.2	\$26.60	1	0	No Change	62	0.06	0%	161.2	\$26.60	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
221.11	Dish Room	2600	4	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	62	0.248	644.8	\$106.39	4	1	Dual Technology Occupancy Sensor - Switch Mnt.	62	0.20	20%	515.84	\$85.11	\$125.00	\$125.00	0.05	128.96	\$21.28	5.87	
211.11	Supply Room	2600	4	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.132	343.2	\$56.63	4	1	Dual Technology Occupancy Sensor - Switch Mnt.	33	0.11	20%	274.56	\$45.30	\$125.00	\$125.00	0.03	68.64	\$11.33	11.04	
242.21	Hall	2600	7	4	2x4, 4 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	107	0.749	1947.4	\$321.32	7	0	No Change	107	0.75	0%	1947.4	\$321.32	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
222.21	Office	2600	2	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.124	322.4	\$53.20	2	1	Dual Technology Occupancy Sensor - Switch Mnt.	62	0.10	20%	257.92	\$42.56	\$125.00	\$125.00	0.02	64.48	\$10.64	11.75	

ECM #2: Lighting Controls

EXISTING LIGHTING				PROPOSED LIGHTING CONTROLS								SAVINGS											
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Cont.	Controls Description	Watts Used	Total kW	Reduction (%)	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback
221.11	Mens Rest Room	2600	2	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	62	0.124	322.4	\$53.20	2	0	No Change	62	0.12	0%	322.4	\$53.20	\$0.00	\$0.00	0.00	0	\$0.00	0.00
221.11	Womens Rest Room	2600	2	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	62	0.124	322.4	\$53.20	2	0	No Change	62	0.12	0%	322.4	\$53.20	\$0.00	\$0.00	0.00	0	\$0.00	0.00
617	Kitchen Hood	2600	10	1	Hood Light w/Globe & Cage, 100w A Lamp	100	1	2600	\$429.00	10	0	No Change	100	1.00	0%	2600	\$429.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
211.11	Office	2600	1	1	1x4, 1 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	33	0.033	85.8	\$14.16	1	0	No Change	33	0.03	0%	85.8	\$14.16	\$0.00	\$0.00	0.00	0	\$0.00	0.00
221.11	Dairy Ref	2600	1	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic	62	0.062	161.2	\$26.60	1	0	No Change	62	0.06	0%	161.2	\$26.60	\$0.00	\$0.00	0.00	0	\$0.00	0.00
222.21	Lunch Room	2600	30	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	1.86	4836	\$797.94	30	1	Dual Technology Occupancy Sensor - Remote Mnt.	62	1.49	20%	3868.8	\$638.35	\$450.00	\$450.00	0.37	967.2	\$159.59	2.82
750	Exterior	4400	8	1	175w Mercury Vapor Area Light	205	1.64	7216	\$1,190.64	8	0	No Change	205	1.64	0%	7216	\$1,190.64	\$0.00	\$0.00	0.00	0	\$0.00	0.00
751		4400	11	1	250w Mercury Vapor Area Light	295	3.245	14278	\$2,355.87	11	0	No Change	295	3.25	0%	14278	\$2,355.87	\$0.00	\$0.00	0.00	0	\$0.00	0.00
	Totals		969	807			59.3	280,345.3	\$46,257	969	17			58.4		277,805.9	\$45,837.97		\$2,450	0.99	2,539	\$419	5.85

Project Name: LGEA Solar PV Project - Intermediate Care Center							
Location: Rockleigh, NJ							
Description: Photovoltaic System - Direct Purchase							
Simple Payback Analysis							
		Photovoltaic System - Direct Purchase					
Total Construction Cost		\$2,956,650					
Annual kWh Production		722,402					
Annual Energy Cost Reduction		\$108,360					
Annual SREC Revenue		\$252,841					
First Cost Premium		\$2,956,650					
Simple Payback:		8.19					Years
Life Cycle Cost Analysis							
Analysis Period (years):		25		Financing %:		0%	
Financing Term (mths):		0		Maintenance Escalation Rate:		3.0%	
Average Energy Cost (\$/kWh)		\$0.150 (Estimated)		Energy Cost Escalation Rate:		3.0%	
Financing Rate:		0.00%		SREC Value (\$/kWh)		\$0.350	
Period	Additional Cash Outlay	Energy kWh Production	Energy Cost Savings	Additional Maint Costs	SREC Revenue	Net Cash Flow	Cumulative Cash Flow
0	\$2,956,650	0	0	0	\$0	(2,956,650)	0
1	\$0	722,402	\$108,360	\$0	\$252,841	\$361,201	(\$2,595,449)
2	\$0	718,790	\$111,611	\$0	\$251,576	\$363,188	(\$2,232,261)
3	\$0	715,196	\$114,959	\$0	\$250,319	\$365,278	(\$1,866,983)
4	\$0	711,620	\$118,408	\$0	\$249,067	\$367,475	(\$1,499,508)
5	\$0	708,062	\$121,960	\$7,293	\$247,822	\$362,489	(\$1,137,019)
6	\$0	704,522	\$125,619	\$7,257	\$246,583	\$364,945	(\$772,074)
7	\$0	700,999	\$129,388	\$7,220	\$245,350	\$367,517	(\$404,556)
8	\$0	697,494	\$133,270	\$7,184	\$244,123	\$370,208	(\$34,348)
9	\$0	694,007	\$137,268	\$7,148	\$242,902	\$373,022	\$338,673
10	\$0	690,537	\$141,386	\$7,113	\$241,688	\$375,961	\$714,634
11	\$0	687,084	\$145,627	\$7,077	\$240,479	\$379,030	\$1,093,664
12	\$0	683,648	\$149,996	\$7,042	\$239,277	\$382,231	\$1,475,895
13	\$0	680,230	\$154,496	\$7,006	\$238,081	\$385,570	\$1,861,465
14	\$0	676,829	\$159,131	\$6,971	\$236,890	\$389,050	\$2,250,515
15	\$0	673,445	\$163,905	\$6,936	\$235,706	\$392,674	\$2,643,189
16	\$0	670,078	\$168,822	\$6,902	\$234,527	\$396,447	\$3,039,636
17	\$0	666,727	\$173,886	\$6,867	\$233,355	\$400,374	\$3,440,010
18	\$0	663,394	\$179,103	\$6,833	\$232,188	\$404,458	\$3,844,468
19	\$0	660,077	\$184,476	\$6,799	\$231,027	\$408,704	\$4,253,172
20	\$0	656,776	\$190,010	\$6,765	\$229,872	\$413,117	\$4,666,289
21	\$1	653,492	\$195,711	\$6,731	\$228,722	\$417,702	\$5,083,991
22	\$2	650,225	\$201,582	\$6,697	\$227,579	\$422,463	\$5,506,455
23	\$3	646,974	\$207,630	\$6,664	\$226,441	\$427,407	\$5,933,861
24	\$4	643,739	\$213,858	\$6,631	\$225,309	\$432,537	\$6,366,398
25	\$5	640,520	\$220,274	\$6,597	\$224,182	\$437,859	\$6,804,257
Totals:		17,016,866	\$3,950,737	\$145,733	\$5,955,903	\$9,760,907	\$48,774,373
Net Present Value (NPV)						\$6,804,282	
Internal Rate of Return (IRR)						11.9%	

Building	Roof Area (sq ft)	Panel	Qty	Panel Sq Ft	Panel Total Sq Ft	Total KW _{DC}	Total Annual kWh	Panel Weight (33 lbs)	W/SQFT
Intermediate Care Center	42,000	Sunpower SPR230	2571	14.7	37,804	591.33	722,402	84,843	15.64



[Red Rectangle] := Proposed PV Layout

Notes:

1. Estimated kWh based on the National Renewable Energy Laboratory PVWatts Version 1 Calculator Program.



AC Energy & Cost Savings



(Type comments here to appear on printout; maximum 1 row of 80 characters.)

Station Identification	
City:	Atlantic_City
State:	New_Jersey
Latitude:	39.45° N
Longitude:	74.57° W
Elevation:	20 m
PV System Specifications	
DC Rating:	591.3 kW
DC to AC Derate Factor:	0.810
AC Rating:	479.0 kW
Array Type:	Fixed Tilt
Array Tilt:	10.0°
Array Azimuth:	180.0°
Energy Specifications	
Cost of Electricity:	11.2 ¢/kWh

Results			
Month	Solar Radiation (kWh/m ² /day)	AC Energy (kWh)	Energy Value (\$)
1	2.58	38411	4302.03
2	3.33	45357	5079.98
3	4.31	63345	7094.64
4	5.20	72155	8081.36
5	5.85	82408	9229.70
6	6.14	80212	8983.74
7	6.06	81030	9075.36
8	5.54	74465	8340.08
9	4.85	64027	7171.02
10	3.76	52281	5855.47
11	2.65	36631	4102.67
12	2.23	32079	3592.85
Year	4.38	722402	80909.03

Output Hourly Performance Data

[About the Hourly Performance Data](#)

Output Results as Text

[Saving Text from a Browser](#)

Run [PVWATTS v.1](#) for another US location or an International location
Run [PVWATTS v.2](#) (US only)

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**MELINK
CORPORATION**

INTELLI-HOOD VARIABLE EXHAUST CONTROLLER

ENERGY SAVINGS REPORT

CUSTOMER: Bergen County

COMPANY: CEG

RETROFIT

ADDRESS: Intermediate Care Center

Rockleigh, NJ

May-12-11

APPLICATION: Kitchen

- MOTOR OPERATING SAVINGS: \$1,777 /YEAR

- HEATING SAVINGS: \$3,581 /YEAR

- COOLING SAVINGS: \$0 /YEAR

- TOTAL SAVINGS: \$5,358 /YEAR

- INSTALLED COST: \$32,500

- PAYBACK PERIOD: 6.1 YEARS

- RATE OF RETURN - 5 YEARS: -2.3 %

10 YEARS: 15.5 %

The projected savings shown above are based on the above store's operating hours, HVAC system, cooking load, and geographic location.

I. MOTOR OPERATING SAVINGS

INPUT DATA:

A Operating Hours Per Day	13	HRS/DAY
B Operating Days Per Week	7	DAYS/WK
C Operating Weeks Per Year	52	WKS/YR
D Horsepower of Fan Motor(s)	5	HP
E Load Factor of Fan Motor(s)	0.88	
F Cost Per Kilowatt Hour	0.165	\$/KWHR

CONSTANT EXHAUST VOLUME ANALYSIS:

G Total Time (A x B x C)	4732	HRS/YR
H Total KWHR/HP/YR (0.746/0.9 x G)	3922.3	KWHR/HP/YR

VARIABLE EXHAUST VOLUME ANALYSIS:

% Rated RPM H	% Run Time I	Time HRS/YR J=FxI	Output KW/HP K	System Effic. L	Input KW/HP M=K/L	KWHR/ HP/YR N=JxM
100	5	236.6	0.746	0.9	0.829	196.1
90	15	709.8	0.544	0.9	0.604	429.0
80	15	709.8	0.382	0.9	0.424	301.3
70	20	946.4	0.256	0.9	0.284	269.2
60	25	1183	0.161	0.9	0.179	211.6
50	10	473.2	0.093	0.9	0.103	48.9
40	5	236.6	0.048	0.9	0.053	12.6
30	5	236.6	0.020	0.9	0.022	5.3
20	0	0	0.015	0.9	0.017	0.0
10	0	0	0.010	0.90	0.011	0.0

O Total KWH/HP/YR (Total of Column N)	1474.0
---------------------------------------	--------

CALCULATION:

$$\text{SAVINGS} = (H - O) \times D \times E \times F = \underline{\underline{\$1,777 \text{ /YEAR}}}$$

II. CONDITIONED MAKE-UP AIR - HEATING

INPUT DATA:

A Previous Net Exhaust Volume	7500	CFM
B New Net Exhaust Volume (1)	5100	CFM
C Winter Building Temperature	70	F
D Previous Net Heat Load (2)	1175429	kBTU
E New Net Heat Load (2)	799292	kBTU
F Operating Hours Per Day	13.00	HRS/DAY
G Operating Days Per Week	7	DAYS/WK
- Heating Fuel Type	Gas	
H Cost Per Fuel Unit (3)	1.19	\$/UNIT
J BTU Per Fuel Unit (4)	100	kBTU/UNIT
K System Efficiency (4)	75%	

CALCULATION:

$$\text{SAVINGS} = (D - E) \times 0.6 \times H / (J \times K)$$

$$= \$3,581 \text{ /YEAR}$$

=====

NOTES:

(1) Determine the New Exhaust Volume by completing TABLE 1. The New Exhaust Volume equals the AVG % RPM x the Previous Exhaust Volume.

(2) Using design weather data via the Outdoor Airload Calculator and multiplied by days/year ratio.

(3) Using local energy costs.

(4) Using typical system efficiency.

TABLE 1

% Rated RPM (F)	% Run Time (I)	F x I
100	5	5
90	15	14
80	15	12
70	20	14
60	25	15
50	10	5
40	5	2
30	5	2
20	0	0
10	0	0

AVG % RPM = 68%

III. CONDITIONED MAKE-UP AIR SAVINGS - COOLING

INPUT DATA:

A Previous Net Exhaust Volume	7500 CFM
B New Net Exhaust Volume (1)	5100 CFM
C Previous Net Cooling Load (2)	0 kBTU
D New Net Cooling Load (2)	0 kBTU
E AC Correction Factor (3)	1
F Cost Per Fuel Unit (5)	0.165 \$/kWH
G COP (6)	2.6

CALCULATION:

$$\text{SAVINGS} = (C - D) \times 0.6 \times E \times F / (3.413 \times G)$$

$$= \frac{\$0 \text{ /YEAR}}{\text{=====}}$$

NOTES:

(1) Using New Exhaust Volume from CONDITIONED MAKE-UP AIR SAVINGS - HEATING on page 2. See Note 1.

(2) Obtained from Outdoor Airload Calculator

(3) Using design weather data.

(4) The multiplier corrects for actual % outside air.

(5) Using local energy costs.

(6) Using typical system efficiency.

AFTER-TAX CASH FLOW ANALYSIS

INPUT DATA:

FIRST YEAR SAVINGS	\$5,358 /YEAR
INITIAL COST PLUS INSTALLATION	\$32,500
MARGINAL TAX RATE	0%
ESTIMATED ANNUAL INCREASE IN ENERGY COSTS	6%

<u>YEAR</u>	<u>SAVINGS</u>	<u>COST</u>	DEPREC. <u>%</u>	DEPREC. <u>\$</u>	NET AFTER-TAX <u>CASH FLOW</u>
0		-32,500			-32,500
1	5358	-	29	9425	5358
2	5680	-	20	6500	5680
3	6021	-	13	4225	6021
4	6382	-	10	3250	6382
5	6765	-	9	2925	6765
6	7171	-	9	2925	7171
7	7601	-	9	2925	7601
8	8057	-			8057
9	8540	-			8540
10	9053	-			9053

CALCULATIONS:

NET PRESENT VALUE = -\$10,935 ; 5 YEARS @ 15%	INTERNAL RATE OF RETURN (IRR) = -2.3 %
NET PRESENT VALUE = \$593 ; 10 YEARS @ 15%	INTERNAL RATE OF RETURN (IRR) = 15.5 %

NOTE:

Net After-tax Cash Flow is calculated as follows:

$$\text{NATCF} = \text{SAVINGS} - \text{COSTS} - \text{TAX RATE}(\text{SAVINGS} - \text{COSTS} - \text{DEPRECIATION})$$

Net Present Value is calculated as follows:

$$\text{NPV} = C(0) + C(1)/(1 + r) + C(2)/(1 + r)^2 + \dots + C(n)/(1 + r)^n$$

(where C(n) is the net cash flow for the nth year

and r is the opportunity cost of capital)

IRR is calculated by trial and error using the formula:

$$\text{NPV} = C(0) + C(1)/(1 + \text{IRR}) + C(2)/(1 + \text{IRR})^2 + \dots + C(n)/(1 + \text{IRR})^n$$