9/29/2023

Winter Park Fire Station 62

ASHRAE Level II Energy Audit

15 lightyears
Energy Testing | Solar Power | Green Certification

TLC ENGINEERING SOLUTIONS

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Executive Summary

TLC Engineering Solutions (TLC) and 15 Lightyears performed an ASHRAE Level 2 facility energy audit of the Winter Park Fire Station 62 as a part of a contract with the City of Winter Park.

This report is related to the energy-consuming systems only and is intended to fulfill the requirements of an ASHRAE Level 2 Energy Audit, per the guidelines set forth by the ASHRAE document "Procedures for Commercial Building Energy Audits." The purpose was to observe existing conditions and gather information that would enable TLC to render an opinion concerning conditions or deficiencies that could affect efficient use of this facility, and to identify potential areas for improvement. Neither the field visits nor this report is intended to uncover hidden defects or the presence of hazardous materials.

TLC reviewed the as-built design drawings dated March 16, 2001, current utility bills from January 2021 through December 2022, subsequent project documentation, and visited the site in January 2023 to review the mechanical and electrical equipment, the HVAC and lighting controls systems, and observe each space type and its general energy use intensity. In the course of its work, TLC obtained extensive photo documentation of the conditions of the facility. Several of the photographs are included in Appendix C of this report, and the reader is encouraged to thoroughly review the photographs and descriptions, as they are intended to support and supplement the observations described herein.

After the time on site, TLC developed energy saving spreadsheets to assist with the analysis of recommended Energy Conservation Measures (ECMs), and Facility Improvement Measures (FIMs). The combination of all the walkthrough and post-walkthrough activities led to the development of the ECM and FIM list. A complete description and analysis of each ECM, as well as a table summarizing estimated cost and savings of each measure, can be found later in this report in the Energy Saving Opportunities section.

Project Information & Contacts

ASHRAE Level II Audit of the Winter Park Fire Station 62
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General Facility Description

The Winter Park Fire Station 62 is a functioning fire station of approximately 2,766 square feet. An aerial view of the fire station is shown below.

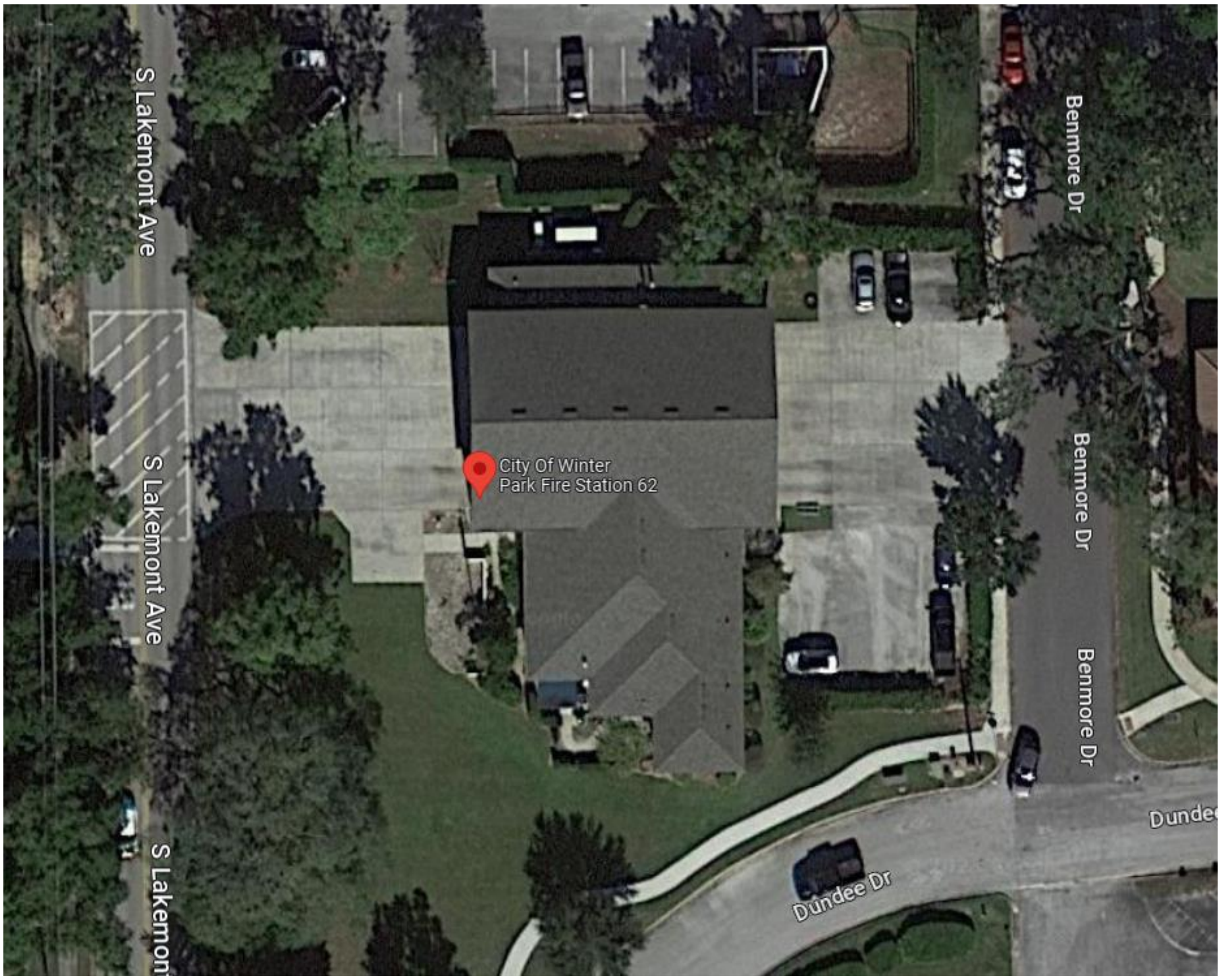


Figure 1: Aerial View of the Winter Park Fire Station 62

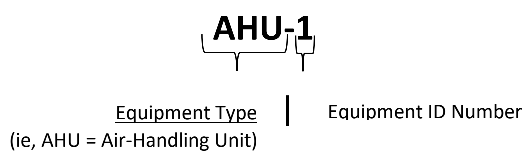
The fire station has a variety of rooms used to aid the occupants. Approximately half of the building is dedicated garage space that stores the fire safety and rescue vehicles. In this space, there is also a fitness room, EMS room, clothing storage room, and restrooms. The other half of the building includes a kitchen, dining area, day room, bedrooms, and a patio.

Mechanical Systems

Fire Station 62's mechanical systems vary in age, with most equipment installed between 2010 and 2020. Overall, the building utilizes split-system air conditioning units and exhaust fans. Mechanical system information was obtained via a combination of resources, including information gathered during TLC's audit walk-through of the building and as-built design drawings provided by the City of Winter Park (dated March 16, 2001). The below breakdown of the mechanical systems and areas they serve is TLC's best attempt to consolidate all avenues of information into one master list.

Equipment Naming Convention

The general naming convention used on the mechanical drawings is shown below. Please note, this convention applies to most of the equipment, but not all equipment.



Air Handling Units

Air conditioning for the fire station is provided by three (3) split-system air conditioning units, which includes indoor air handlers and outdoor condensing units. AHU-1 is located in the north side Mechanical Room. AHU-2 and AHU-3 are located on the south side Mechanical Room. CU-1 is located on the outside of the north side of the building, and CU-2 and CU-3 are located on the outside of the south side of the building. The units installed are single-speed, and are energized and de-energized as needed to control space temperature via Ecobee smart thermostats. Areas served by the AHUs include all rooms except the Garage and Mechanical Room.

Exhaust Fans

Exhaust fans dispense air horizontally outside the building and are located on the walls of the dedicated spaces, providing general exhaust for restrooms and the fitness room located within the building. Additionally, specialized spaces such as the garage, are provided with exhaust via dedicated fans.

Building Controls

The building is not currently controlled by a centralized Building Automation System (BAS). All equipment within the building operates as a standalone system. Instead, the split-systems have been outfitted with Ecobee smart thermostats. The thermostats provide remote monitoring and setpoint change capability to the Winter Park Facilities personnel, as well as limited energy analysis such as runtime trending.

Lighting Systems

Interior lighting throughout the facility is predominantly linear fluorescent fixtures. The lighting is controlled manually with no occupancy controls. The audit team noted that a small number of fixtures in the building had been retrofitted with light-emitting diode (LED) technology.

Domestic Water Fixture (Plumbing) Systems

The building is served by two (2) electric water heaters. The water heaters are located in the janitor storage room and the existing mechanical room, alongside the respective hot water recirculation pumps.

One water heater contains 86 gallons, with 5115 KWH/year capacity. The other water heater contains 40 gallons, with a 4131 KWH/year capacity.

Building Envelope

The building envelope systems date to the original 2002 construction of this facility. The façade is stucco over tilt-up concrete panels. The fire station has a pitched asphalt shingle roof with an attic, and batt insulation installed above the ceiling. However, during the audit walk it appeared that the insulation in the attic was damaged or in need of supplementation to optimize energy performance.

Key Operating Parameters

The building is currently operated 24/7 due to the nature of the building's mission.

Site Visit

The site was audited by TLC engineers in January 2023. A full evaluation of existing energy consuming systems, compliant with ASHRAE Standard 211-2019 was performed. During the audit, TLC personnel were escorted by the City of Winter Park facilities manager, Leif Bouffard. He, as well as any facility staff that were available for comment, were questioned on system operation, condition, and maintenance of the building systems.

Utility Analysis

Historical Utility Data

The building is currently served by electricity and water utilities. Electrical utility consumption and demand values were provided for the months of January 2021 through June 2023. The monthly consumption profile features consumption spikes in the month of March for both provided baseline years of consumption. This is likely due to an annual event in the building operations schedule that requires increased electricity utilization. Other aspects of the profile are as expected where consumption is higher in the warmer months due to cooling needs. No billing statements were provided, but a blended rate for kWh savings was determined based on published rates. Calculation of the blended utility rate takes into account the non-fixed costs associated with electrical utilities use by the facility, including fuel charges, per-kWh cost, demand charges, etc. Table 3 details the components of the blended rate calculation.

Table 1: Annual Baseline Energy Consumption

Utility	Total
Annual Electrical Consumption (kWh)	120,960
Annual Electrical Cost	-

The following graph and table show the total consumption and demand per monthly billing period for electricity.

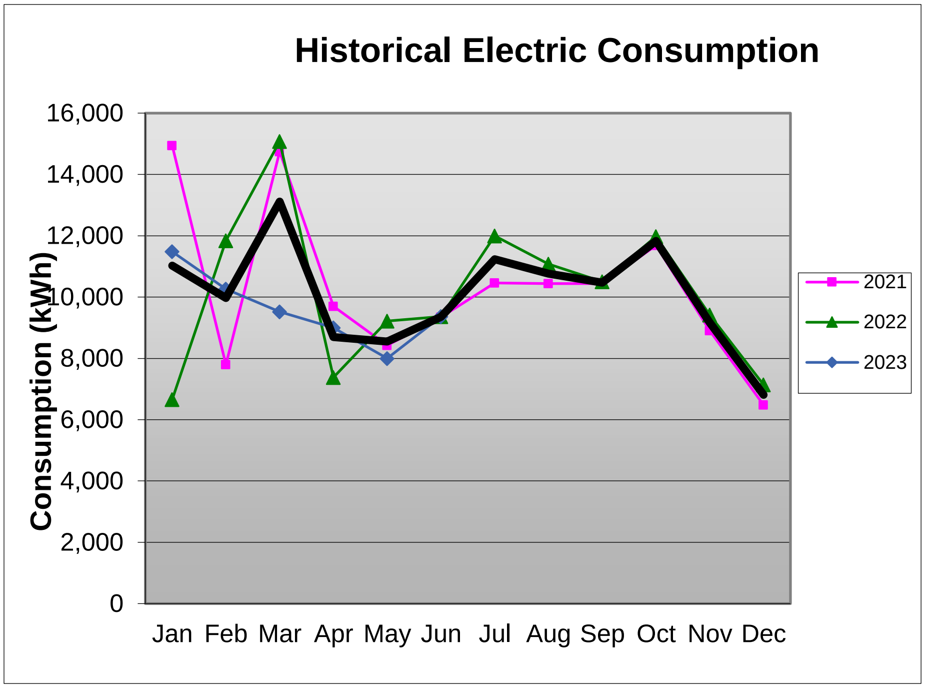


Figure 2: Fire Station 62 Electric Consumption

Table 2: Fire Station 62 Electricity Consumption Data

Date	Consumption (kWh)	Demand (kW)
Jan-21	14,940	83.00
Feb-21	7,800	111.20
Mar-21	14,740	113.20
Apr-21	9,700	60.80
May-21	8,420	71.60
Jun-21	9,340	66.20
Jul-21	10,460	67.40
Aug-21	10,440	25.60
Sep-21	10,440	26.60
Oct-21	11,680	25.80
Nov-21	8,900	26.20
Dec-21	6,480	26.20
Jan-22	6,660	24.20
Feb-22	11,840	55.00
Mar-22	15,080	62.00
Apr-22	7,380	30.80
May-22	9,220	39.60
Jun-22	9,360	39.60
Jul-22	12,000	39.60
Aug-22	11,080	24.38
Sep-22	10,500	25.78

Date	Consumption (kWh)	Demand (kW)
Oct-22	11,980	27.99
Nov-22	9,420	31.60
Dec-22	7,140	31.73
Jan-23	11,480	63.16
Feb-23	10,260	63.16
Mar-23	9,520	63.16
Apr-23	9,000	63.16
May-23	8,000	63.16
Jun-23	9,360	63.16

Benchmarking

TLC compared energy consumption for Fire Station 62 using common benchmarks to gauge how the site compares to similar ones both regionally and nationally, principally through the use of Energy Star Portfolio Manager. The building's Energy Use Intensity (EUI), which is used by energy engineers to determine overall energy consumption to a common unit of measure, was compared to other similar buildings throughout the United States. The Energy Use Intensity measures annual consumption of electricity per square foot, in kBTU/sf/year.

These benchmarks were developed by the Department of Energy and are based on feedback from building operators all over the country. Using the utility billing information and observing the system operation allows the energy profiles to be broken down to greater detail. The facility was modeled in Portfolio Manager as public safety (fire/police) building.

The historical energy consumption was entered into Portfolio Manager. Based on most recent 24-months of utility data, the chart below compares Winter Park Fire Station 62 to the average energy use intensity (EUI) of similar buildings in Energy Star's database.

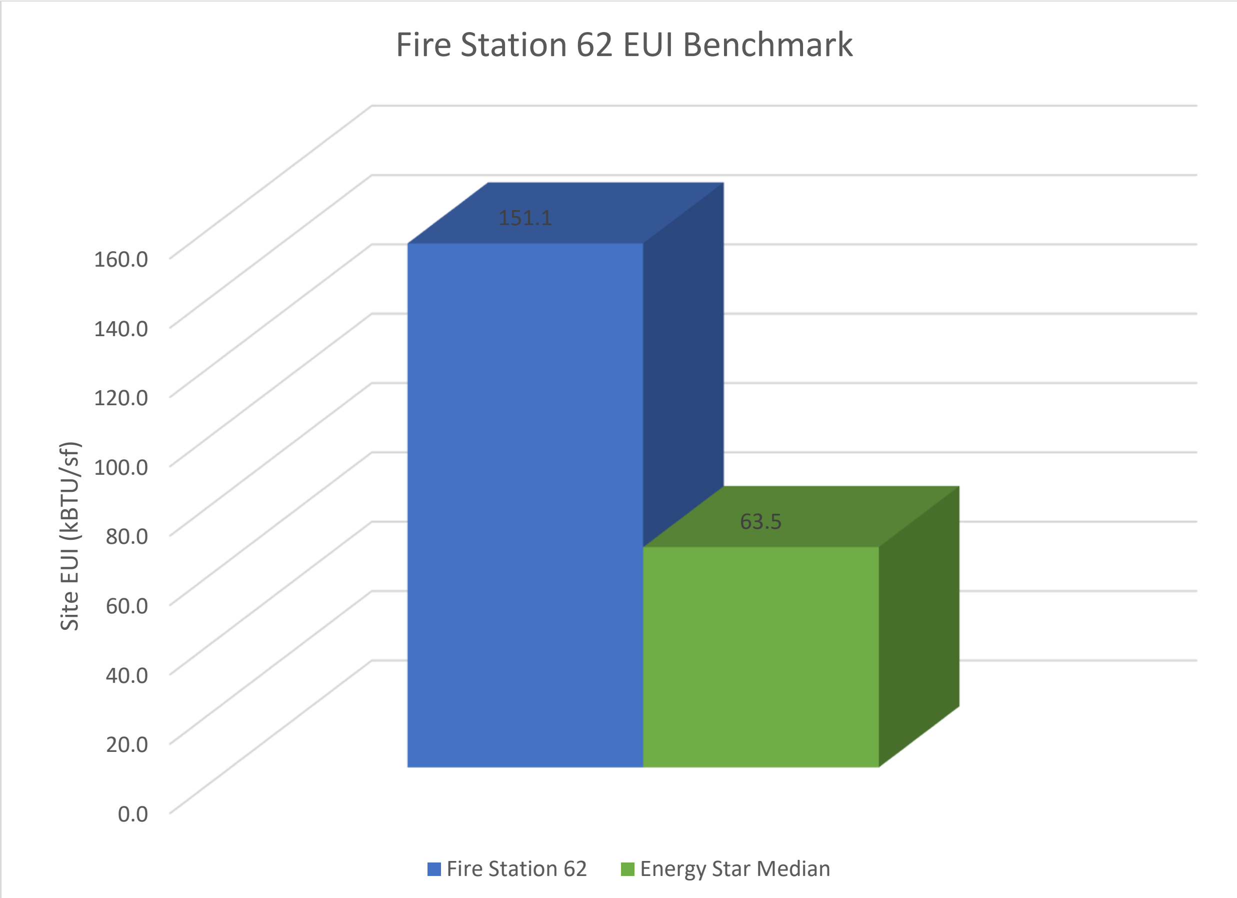


Figure 3: Fire Station 62 Energy Performance Comparison

Based on most recent 24 months of utility data, a comparison can be drawn between Fire Station 62 and the average energy use intensity (EUI) of similar buildings throughout the United States. The median EUI for an public safety building in the United States is 63.5 kBTU/sf, and the calculated EUI of Fire Station 62 is 151.1 kBTU/sf. It is worth noting that the median value reported by Energy Star is dependent on the annual responses from building surveys, and that the occupant load and climate conditions of buildings of the same type can vary significantly. In the case of Fire Station 62, Winter Park's cooling-heavy climate likely contributes to a higher EUI than the average fire station or police department anywhere in the United States. The energy conservation measures detailed in this report will serve to decrease the EUI of the fire station building through efficiency increases.

Utility Rate Analysis

The building is provided with electricity by the City of Winter Park (CoWP), following their Rate Schedule GSD-1, General Service – Demand. The utility rate charges shown below were used to calculate the costs associated with the provided consumption and demand. Energy savings calculated for this building have been assigned a blended rate of $0.1140/kWh, which is the calculated blended rate not including fixed customer charges.

Table 3: Utility Rate Schedule

Description	Charge
Demand Charge	$5.05 per kW of billing demand
Energy Charge	$0.04216 per kWh
Fuel Cost Recovery Factor	$0.02281 per kWh
Gross Receipts Tax	2.5641%
Franchise Fee	6.00%
Electric Utility Tax	10.00%
EL State Sales Tax (Commercial Only)	7.45% (First $5,000)
EL State Sales Tax (Commercial Only)	6.95% (Over $5,000)

Average Rates

As noted above, a blended cost per kWh has been calculated from the rate schedule. Savings for this building have been calculated using the blended rate. The following table details the average rate over the period of analysis.

Table 4: Average Utility Rate

Utility	Average
Electricity	$0.1140/kWh

Energy Saving Opportunities

The operation and conditions of equipment at Firestation 62 were observed to offer a few different avenues for improvement. This is to be expected given the age of the facility and how long it has been in service. Improvements can be made by improving the insulation and lighting as well as optimizing the control sequences and settings. The following table summarizes the recommended ECMs for this facility that should be considered for future projects.

Table 5: ECM/FIM Summary

Energy Savings Measure	FIM/ECM	ECM Category	Annual kWh Savings	Annual $ Savings	Cost $	Payback (years)
Lighting Improvements	ECM	Low Cost	30,257	$3,449	$2,808	0.8
HVAC Controls Optimization	ECM	Low Cost	816	$93	$1,200	12.9
Envelope Improvements	ECM	Medium Cost	1,037	$118	$12,522	105.9
Total			**32,110**	**$3,661**	**$16,530**	**4.5**

*ROI calculations exclude capital improvement items, as they are intended more for facility improvement than for energy savings.

The cost and paybacks shown in the table above are estimates based on the information gathered during the auditing process. TLC utilized RSMeans 2023, as well as engineering best practices, to estimate the cost of these suggested measures. Final pricing will vary based on contractors' estimation and final equipment selections. Final payback periods are also dependent on contractor pricing.

Lighting Improvements

General Description

This measure involves converting older style lighting fixtures, such as fluorescent and incandescent, to modern LED lighting fixtures and lamps. Unless a building has been built or renovated in the past few years, it is common to find extensive use of fluorescent and incandescent fixtures throughout the building. Fluorescent and incandescent lighting technologies are a product of their time and often remain without intentional replacement. Older lighting technologies require more wattage to produce the same amount of light as LED fixtures. This also results in a higher heat output from the lamps which raises HVAC cooling costs.

Existing fluorescent and incandescent lighting fixtures will be replaced/retrofitted with new LED lighting fixtures. This will greatly reduce the energy required to illuminate the building. Additionally, cooling systems will have to run less often to offset the heat generated by the lighting. There are several additional benefits to LED lighting technology. LED lighting has longer burn hour life, faster on/off response time, and easier dimming capabilities compared to fluorescent and incandescent technologies. Because LED light fixtures have longer burn hour life, this will reduce the material and time cost of replacing burned out lamps.

Site Specifics

The facility was observed to have predominantly linear fluorescent fixtures with T8 lamps in all but the sleeping quarters for the firefighters. Existing non-LED lighting will be replaced with new LED lighting on a one-for-one basis. Existing lighting material waste will be disposed of according to local regulations.

HVAC Controls Optimization

General Description

The scope for this ECM involves optimizing the building HVAC controls through one or multiple controls strategies. For this project, the controls strategy recommended would be occupancy scheduling with setback temperatures.

Consistent occupied and unoccupied temperature settings will be implemented based on the building type and their needs. Occupied schedules for the HVAC controls will be set up to dictate the hours when the building is considered occupied versus unoccupied. Whenever a building enters unoccupied mode, the building HVAC controls will utilize the unoccupied settings in lieu of the occupied settings.

Site Specifics

The facility is a 24/7 facility, so there is no opportunity for setback, however the occupied setpoint has some room for adjustment and could save energy by being set to 73F instead of 70F.

Envelope Improvements

General Description

This measure proposes to add insulation to the building envelope to reduce heat transfer. Heat is transferred through opaque surfaces by thermal conduction, where thermal energy excites the molecules causing collisions which transfer heat. Heat transfer typically occurs through different layers of composite structures with differing thermal properties, with some conducting heat much more rapidly than others. The image below shows conduction through a composite wall made up of three materials with differing thermal properties.

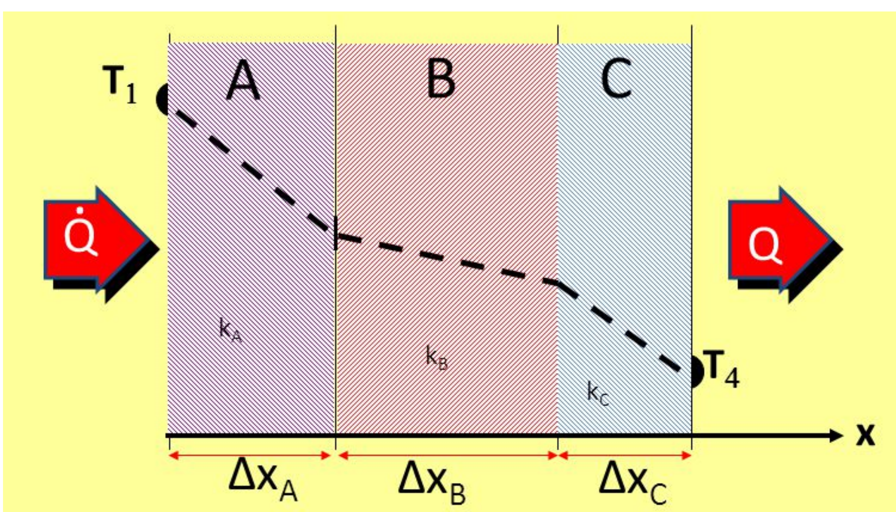


Figure 4: Conduction Through Composite Wall

While some components of the building envelope are included for structural or other needs, building insulation is required by current energy codes to reduce the amount of heat transfer and improve thermal comfort. Older buildings may have never had portions of their envelope insulated, or the insulation may have deteriorated over time or been removed. New insulation will be added to the building envelope to improve thermal comfort and reduce energy usage by the HVAC systems. When properly insulated, the heat transfer through the building envelope is reduced and the HVAC systems do not have to work as hard to maintain temperature setpoints. A properly insulated building will also reduce hot and cold spots, allowing for a more uniform temperature distribution throughout the space.

Site Specifics

At Fire Station 62, the insulation above the ceiling was observed during the audit to be in need of repair. Insulation will be added to the roof spanning the entire building to meet code and reduce undesired thermal transfer through the roof of the building.

Calculation Methodology – Spreadsheet System Models

Savings for this report were evaluated using spreadsheet building models for the lighting and HVAC systems. The methodologies used for each measure are described separately in this section. Industry Standard methods of evaluation were used and are detailed in this section. Additionally, assumptions made to calculate the energy savings are detailed.

Lighting Improvements

Savings for this measure have been based on a reduction in the lighting energy based on a reduction in lighting installed wattage. The following table shows the major inputs used in the calculation of savings for this measure.

Table 6: Lighting Improvements Major Inputs

Input Name	Bldg./Area Affected	Input Value	Basis of Input
Building Area	Entire building	8,635sf	Provided value
Existing Lighting Power Density	Entire building	1.0 W/sf	Typical value for T8 lamps throughout
Proposed Lighting Power Density	Entire building	0.6 W/sf	Typical value for LED lamps throughout
Annual Burn Hours	Entire building	8,760	Building schedule

Calculations:

Savings for this measure were comprised of energy savings. The energy savings were the difference in the existing and proposed kWh for all the lighting fixtures in the building. The energy usage in kWh for the building was calculated using the following formula.

$$Energy\ Usage = \frac{Building\ Area \times LPD \times Hours}{1{,}000}$$

HVAC Controls Optimization

Savings for this measure have been based on a reduction in cooling energy due to setting HVAC Controls to less energy intensive temperature setpoints. The following table shows the major inputs used in the calculation of savings for this measure.

Table 7: Controls Optimization Major Inputs

Input Name	Bldg./Area Affected	Input Value	Basis of Input
% Cooling Energy Reduction	Entire building	2%	Engineering judgment

Calculations:

Savings for this measure were based on calculating the annual cooling energy and saving a percentage of it. The existing annual cooling energy was calculated from the electric utility baseline as the sum of all the electrical consumption for each month exceeding the lowest month's consumption. The following formula was used to calculate existing annual cooling energy.

$$Existing\ Cooling\ kWh = Annual\ Total\ kWh - (12 \times Baseload\ Month\ kWh)$$

Envelope Improvements

Savings for this measure have been based on improving the insulation in the roof of the building. The following table shows the major inputs used in the calculation of savings for this measure.

Table 8: Infiltration Reduction Major Inputs

Input Name	Bldg./Area Affected	Input Value	Basis of Input
Affected Envelope Area	Entire Building	8,635	Roof area
Existing U-Value	Entire Building	0.053	Engineering judgement
Proposed U-Value	Entire Building	0.026	Engineering judgement
Heating Efficiency	Entire Building	1.0 COP	Electric strip heat
Cooling Efficiency	Entire Building	0.92 kW/ton	Manufacturer info and typical degradation
Cooling Setpoint/Setback	Entire Building	72°F/80°F	Engineering judgment
Heating Setpoint/Setback	Entire Building	70°F/60°F	Engineering judgment
Controls Occ. Schedule	Entire Building	24/7	Building schedule

Calculations:

Savings for this methodology were based on using hourly temperature data for the project location. Balance points for occupied and unoccupied heating and cooling were estimated using engineering judgement. For each hour, the outside temperature was compared to the applicable balance points to determine if the HVAC system was in cooling, economizer, drift, or heating mode. Economizer mode represents when there is a cooling demand that is assisted by heat transfer through the building envelope. Drift mode occurs when there is no demand for heating or cooling. For each hour, the heat transfer in MBtu through the building envelope component was calculated with the following formula:

$$Heat\ Transfer = \frac{Area \times U\ Value \times \Delta T}{1000}$$

In the equation above, the area represented the area of the envelope component to be improved in square feet. The U-value was in units of Btu/h-ft^2-°F, while the ΔT was the temperature difference between the space setpoint and the average outside temperature. A second set of hourly calculations was performed using the proposed U-value in place of the existing U-value. The cooling energy savings in kWh was calculated for hours when in cooling or economizer modes by the following formula:

$$Energy\ Saved = \frac{(Existing\ Heat\ Transfer - Proposed\ Heat\ Transfer) \times Efficiency}{12}$$

In the formula above, the cooling efficiency was in kW/ton. The heating energy savings in therms was calculated for hours when in heating mode by the following formula:

$$Energy\ Saved = \frac{(Existing\ Heat\ Transfer - Proposed\ Heat\ Transfer)}{100 \times Efficiency}$$

In the formula above, the heating efficiency was in units of COP.

Appendix A – Lighting Line by Line

The following table shows a list of design fixtures in the building. This is not a comprehensive list of all fixtures but details a good representation. This includes only permanent fixtures and does not include any construction lighting. It is important to note that the following lighting fixture schedule is from the original renovation drawings, dated 2001, and may no longer be accurate.

Mark	Lamp Data		Fixture Description	Fixture Data			Voltage	See Note
	No.	Type		Manufacturer	Catalog Number	Mount		
A	3	F32W T8	2X4' FLUORESCENT TROFFER WITH ACRYLIC LENS	SIMKAR	FKRW-244-332-B11-B11-120	HARD CEILING RECESSED	120	
B	1	F18W CFL	8" DOWNLIGHT WITH (1) 18W COMPACT FLUORESCENT LAMP, ALZAK LENS	JUNO	CV8-118T-800C-WH	HARD CEILING RECESSED	120	
C	2	F32W T8	4' INDUSTRIAL STRIP FLUORESCENT	SIMKAR	IE-232-B11-A-120	HARD CEILING PENDANT	120	
D	1	F26DTT	6" COMPACT FLUORESCENT SHOWER LIGHT	PATHWAY	PD76OR-G24Q3-FC7-IE	HARD CEILING RECESSED	120	
E	1	F25W T8	3' FLUORESCENT OVER MIRROR FIXTURE WITH ACRYLIC WRAPAROUND LENS	SIMKAR	FCO125WE-B11-120	SURFACE	120	
F	1	9W-PL	NIGHT LIGHT	JUNO	PL813-840WH-120V	RECESSED	120	
G	2	25W T8	3' UNDERCABINET FIXTURE	SIMKAR	JBH-225-B11	SURFACE	120	
H	2	F32W T8	1x4' FLUORESCENT TROFFER WITH ACRYLIC LENS	SIMKAR	FK-124-232-B11-120	HARD CEILING RECESSED	120	
I	3	F32W T8	4' PENDANT INDIRECT FIXT. (UPSIDE DOWN MOUNTED W/ HANGING KIT INDUSTRIAL STRIP)	SIMKAR	IF-332-B11-B11-120-CA24	HARD CEILING PENDANT	120	2
J	1	50W R20	4" INCANDESCENT DOWNLIGHT WITH BLACK BAFFLE FOR READING IN BED	JUNO	IC1-14B-TC1	HARD CEILING RECESSED	120	
K	2	F42W PL	9" COMPACT FLUORESCENT DOWNLIGHT	JUNO	CH9-242T/950C-WH	HARD CEILING RECESSED	120	
L	1	F32W PL	6" COMPACT FLUORESCENT WALL WASHER	JUNO	CV6-132T/600C-WW5-WH	HARD CEILING RECESSED	120	
M	3	F32W T8	2x4' FLUORESCENT 18 CELL PARABOLIC TROFFER	SIMKAR	FE2P-244-332-B11-B11-120	HARD CEILING RECESSED	120	
P	1	100W	130V PORCELAIN SOCKET WITH PULL CHAIN	P & S	172	HARD CEILING SURFACE	120	
Q	1	150W PAR	8" DOWNLIGHT WITH BLACK MICROGROOVE BAFFLE	JUNO	TC908-654B	HARD CEILING RECESSED	120	
R	1	F32W T8	4' EXTERIOR ADJUSTABLE SIGN LIGHT	SIMKAR	OS-132	HARD CEILING SURFACE	120	
S	1	150W MH	SPOT LIGHTS FOR FLAG	NORTH STAR	OQS-150-OMC-OQS-OQA	HARD CEILING SURFACE	120	
T	1	175W MH	WALL PACKS	NORTH STAR	WPM-359H-120H	HARD CEILING SURFACE	120	
W	2	75W PAR	EXTERIOR LAMPHOLDER	P & S	WPLKIT2	HARD CEILING SURFACE	120	
Y	4	F32W T8	4' ACRYLIC WRAPAROUND	SIMKAR	SY950-2232-B11-120V	HARD CEILING SURFACE	120	
Z	1	100W MH	EXTERIOR DECORATIVE WALL SCONCE WITH REMOTE BALLAST AND WHITE OPAQUE LENS	PACIFIC LIGHTING & STANDARDS	NR/LPC-WM-100-H-120-VG-F5	HARD CEILING SURFACE	120	
X	#	LED	LED EXIT SIGN, WHITE WITH RED LETTERING	JUNO	EXR30-WH	HARD CEILING SURFACE	120	

LIGHTING FIXTURE SCHEDULE NOTES:

1. ACCEPTABLE SUBSTITUTIONS BY SESCO AND RAWLEIGH-BOWDEN.
2. MOUNT AT 7'-6" TO BOTTOM OF FIXTURE. DRILL 3/8" HOLE IN REFLECTOR AT EACH END OF FIXTURE ABOVE V-HOOK HANGING SLOTS AND HOLES.

LIGHTING FIXTURE SCHEDULE

NTS

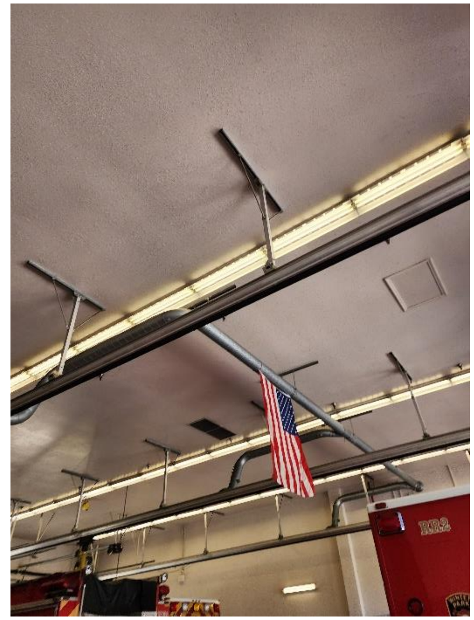
Appendix B – Mechanical Equipment

The following table shows a listing of all recorded major equipment in the building.

Building	Type	Equip	Location Served	Tag	Qty	Capacity	Units	Make	Model	Serial Number	Year	Age
Fire Station 62	AHU	Air Handling Unit		AHU-1	1	1/4	HP	Rheem	RHSL-HM3017JA	W101011126	2010	13
Fire Station 63	AHU	Air Handling Unit		AHU-2	1	3/4	HP	Goodman	ASPT39C14BA	2001073815	2020	3
Fire Station 64	AHU	Air Handling Unit		AHU-3	1	3/4	HP	Goodman	ASPT49C14AC	1910200614	2020	3
Fire Station 65	CU	Condensing Unit			1	3	Tons	Goodman	GSX140361KD	2002240056	2020	3
Fire Station 66	CU	Condensing Unit			1	4	Tons	Goodman	GSX140481KD	1901070246	2020	3
Fire Station 67	CU	Condensing Unit			1	2.5	Tons	Rheem	13AJM30A01	8031W171017405	2010	13
Fire Station 68	EWH	Electric Water Heater - 86 Gallon			1	5115.0	KWH/year	State	P68220RTGW	002419231		
Fire Station 69	EWH	Electric Water Heater - 40 Gallon			1	4131.0	KWH/Year	State	P64020LSGH	002403001		
Fire Station 70	EF	Exhuast Fan		EF-9	1	1/6	HP	Cook	90S0N10D	›S6722460000018011201		

Appendix C – Site Walkthrough Photos

C-1: Fire Station Garage



C-2: Garage lighting

C-3: Thermostat

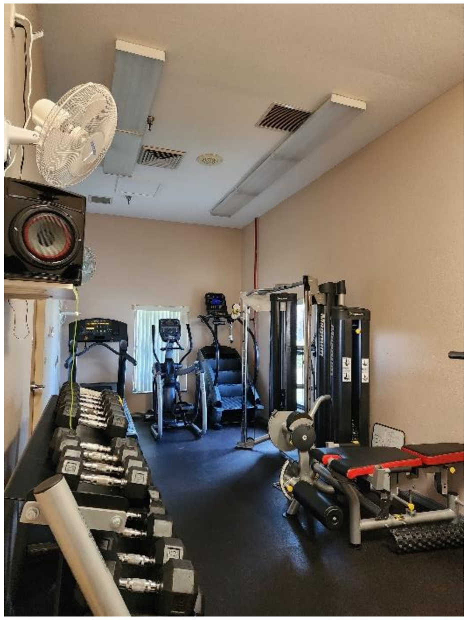
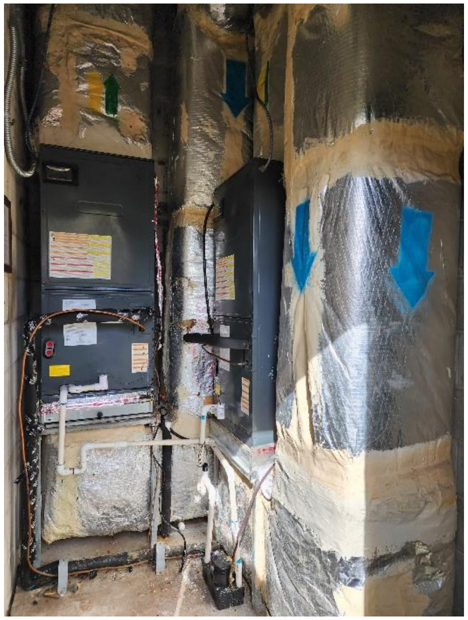
C-4: Fire Station lighting

C-5: 86 Gallon Electric Water Heater

C-6: Sink Faucet

 C-7: Condensing Units	 C-8: Air Handler

 C-9: 40 Gallon Electric Water Heater	 C-10: Station Lighting

 C-11: Training Gym	 C-12: Air Handlers

 C-13: Air Handler ducts	 C-14: Condensing Unit
 C-15: Exterior Lighting	