MATANUSKA-SUSITNA BOROUGH INFORMATION MEMORANDUM IM No. 25-153

SUBJECT: INFORMING THE MATANUSKA-SUSITNA BOROUGH ASSEMBLY OF THE SUBMITTAL OF A COMMERCIAL - PROPERTY ASSESSED CLEAN ENERGY AND RESILIENCE APPLICATION (C-PACER) BY WASILLA HS HOLDINGS, LLC AND THE MANAGERS SIGNATURE ON THE ASSOCIATED FUNDING DOCUMENTS

AGENDA OF: July 15, 2025

ASSEMBLY ACTION:

Presented to the Assembly 07/15/25 - EMW

AGENDA ACTION REQUESTED: For information only.

Route To	Signatures
Originator	Recoverable Signature X Pamela Graham Signed by: Pamela Graham
Department/Finance Director	Recoverable Signature X Cheyenne Heindel Signed by: Cheyenne Heindel
Borough Attorney	7/1/2025 X Nicholas Spiropoulos Signed by: Nicholas Spiropoulos
Borough Manager	7/1/2025 X Michael Brown Signed by: Mike Brown
Borough Clerk	Recoverable Signature X Lonnie McKechnie Signed by: Lonnie McKechnie

ATTACHMENT(S): MSB C-PACER Application Packet (28 pages)

SUMMARY STATEMENT:

On September 27, 2022, the Matanuska-Susitna Borough Assembly adopted Ordinance Serial No. 22-100 establishing MSB 3.26 - Commercial Property Assessed Clean Energy & Resilience (C-PACER) Program and making the Mat-Su C-PACER program the second in the State, following the Municipality of Anchorage.

Commercial Property Assessed Clean Energy & Resilience (C-PACER) is an innovative financing program that enables owners of commercial and industrial properties to obtain low-cost, long-term

financing for energy efficiency, renewable energy and resilience projects and then pay the costs back over time through a voluntary assessment on the property tax.

On June 25, 2025, the Borough received its first C-PACER application from Wasilla HS Holdings, LLC, for the Home2Suites by Hilton Sun Mountain Center in Wasilla. This new construction project will have 107 rooms, fitness center with pool and spa, laundry, guest pantry and breakfast area. The C-PACER portion of the financing for this project will be roughly $11,000,000.

C-PACER projects include several agreements between the various parties. The Borough will execute two agreements, one with the Capital Provider and one with the Property Owner. These agreements will include the annual payment amounts, including the Borough's fees for administering the payment process.

Exhibit A: Application Form

Legal name of property owner or owning entity: Wasilla HS Holding, LLC

If owned by an entity, please provide entity signatory name and contact information:

Full Name of Authorized Entity Signatory	Ric Marko
Email address	rmarko@affinityhospitality.com
Phone number	661-201-5148
Address	3705 Arctic Blvd. #450
City, State Zip	Anchorage, AK 99503

Primary contact for this application (if different from property owner/entity signatory)

Full Name Primary Contact	Sam Houck
Email address	Sam.Houck@Nuveen.com
Phone number	959-261-8735
Address	730 Third Ave, 3rd Floor
City, State Zip	New York, NY 10017

Property Information:

Property Tax ID#	9196000L000
Physical Address (Location)	2247 W Tysons Trail
City, State Zip	Wasilla, Alaska 99654
Property Type	Hotel

	YES	NO
Is the proposed project site an existing building?		✓
Is this a refinancing request?		✓
Is the property current on all property taxes and municipal assessments?	✓	
Can you confirm that the property is neither insolvent nor in bankruptcy proceedings?	✓	
What is the assessed value of the property?	$	
What is the year of assessment?		
What is the appraised value of the property, if applicable?	$4,100,000.00	
What is the year of the appraisal, if applicable?	2025	

ALASKA C-PACER Matanuska-Susitna Borough

Is there an active mortgage holder for this property?		☐	☑
Who is the mortgage holder?	None		
What is the outstanding balance of the mortgage?		$0.00	
Can you confirm that the property is current on all mortgage payments?		☑	☐

What types of improvement will you be making?

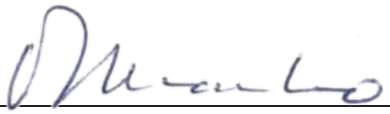
- ☒ Energy efficiency
- ☐ Renewable energy
- ☒ Water conservation
- ☒ Air quality
- ☒ Seismic improvements
- ☐ Stormwater management, flood mitigation and protection
- ☐ Fire hardening, fire or wind resistance
- ☐ Erosion management
- ☐ Snow load management
- ☐ Microgrids for energy storage and backup power generation
- ☐ Water or wastewater efficiency including reuse and energy recovery
- ☐ Electric vehicle charging stations
- ☐ Retrofitting that improves the envelope, structure, or systems of the building

Total project cost: 39,958,190.00 Total amount of C-PACER financing requested: 11,025,000.00

Term of the assessment: 30

Attachments:

- ☐ Exhibits
- ☐ Assessment Property Card or Proof of Project and Property Eligibility
- ☐ Title Report
- ☐ Proof of Insurance
- ☐ Capital Provider Offer to Fund

Signature on behalf of property owner: 

Date signed: 06/25/25

Full Name & Title (if applicable) Richard D. Marko - Executive Manager

Company (if applicable) Wasilla HS Holding LLC

EE Consultants LLC

Energy Assessment Report

Home2Suites Sun Mountain Center Wasilla, AK

2242 W Tysons Trail

Wasilla, AK 99654

PRIMARY CONTACT
Farhan Khatri P.E., CEM, PMP, LEED AP, QCXP, PV ASSOCIATE
Director
EE Consultants LLC
C 608.213.6165

FKhatri@EEConsultantsLLC.com

DATE ISSUED: 24 JUNE 2025

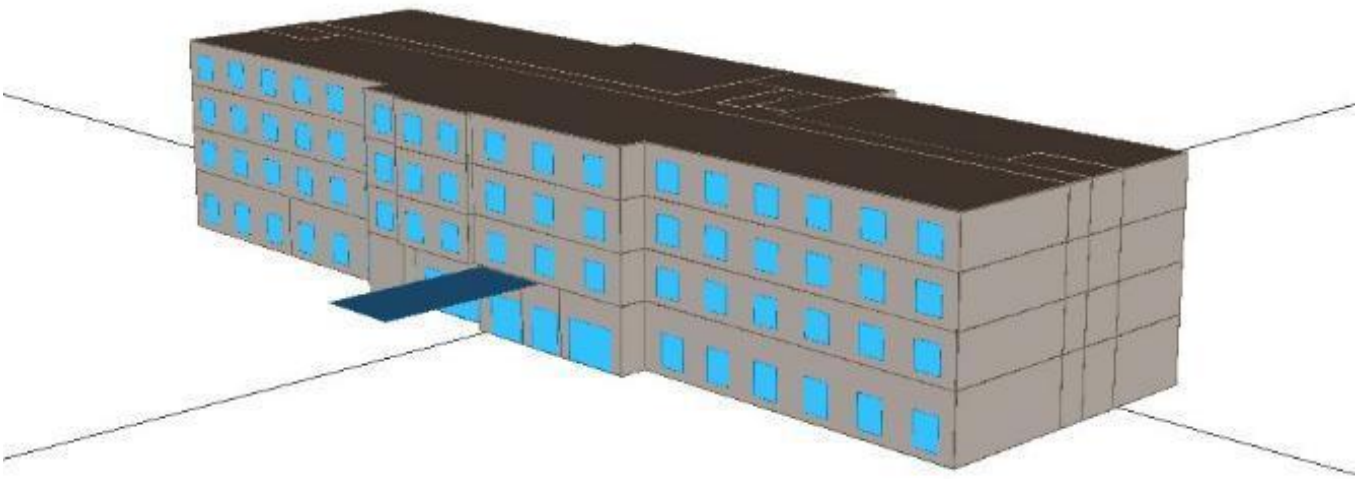
Table of Contents

1.0 Executive Summary

The following information is based on detailed energy analysis and project using the information provided by the client.

Project Summary	
Property Name:	Home2Suites Sun Mountain Center Wasilla, AK
Property Address:	2242 W Tysons Trail Wasilla, AK 99654
Property Type:	Hotel
Property Size (sf):	70,164
Project Type:	New Construction
Baseline Energy Code:	IECC 2018
Utility Price Assumption:	Electric: Alaska Electric Light and Power Natural Gas: Enstar Natural Gas Company Water: City of Wasilla Public Works
Eligible Savings – First Year:	$22,570
Weighted Avg. Useful Life:	29.5 years
Total Savings over Useful Life:	$734,001 (based on 3% escalation rate)
Energy Savings (%)	11.8%
C-PACER Applicable Costs:	$10,888,312

A detailed energy analysis was performed using eQuest, a DOE approved energy analysis software.



eQuest Model

2.0 Baseline / As-Designed Comparison

EE Consultants LLC has employed whole building energy simulation to analyze the baseline and proposed designs. This simulation is based on the design documentation provided by the project team and code baseline analysis, with the remaining details outlined in this section. The energy model incorporates yearly hour-by-hour weather analysis, hourly variation in schedules, equipment, occupancy, power, thermal mass effects, multiple zones, and part-load mechanical system performance.

The model reflects the building geometry, orientation, construction, mechanical and lighting systems, and operation based on building plans, existing conditions, and client interviews. The simulations utilize average typical meteorological year weather data based on 30-year averages. The "as-designed" building reflects current design concepts and standards (construction, equipment, schedules, lighting, etc.). The table below outlines the building characteristics for the baseline and "as-designed" cases, where the as-designed case is defined as the building described by the current design documents.

Measures are described and summarized in the Energy Efficiency Measures section of this report.

Table of Model Assumptions:

Property	Baseline (IECC 2018)	As-Designed	Baseline Source	As-Designed Source
Building Envelope	Climate Zone 7		- Architectural COMCheck, Sheet G300, - Electrical COMCheck, Sheet E800, - IECC 2018, Table C404.2, - IPC Table P2903.2, - Mechanical COMCheck, Sheet M601, - Table C403.3.2(1) and (2) of IECC 2018	
Assembly U Value				
· Roof (Wood Joists)	0.021	0.020	Architectural COMCheck, Sheet G300	
· Walls (Framed)	0.051	0.036		
· Windows (U-value)	0.29	0.30		
· Window Solar Heat Gain Coefficient (SHGC)	0.45	0.38		

Property	Baseline (IECC 2018)	As-Designed	Baseline Source	As-Designed Source
· Windows (U-value) - Storefront	0.77	0.29		
· Window Solar Heat Gain Coefficient (SHGC)	0.22	0.23		
· Door (U-value)	0.37	0.24		
Lighting				
Lighting Power (Watts)	34,133	17,226	Electrical COMCheck, Sheet E800	
Lighting Power Density (W/SqFt)	0.49	0.25		
Total Exterior Lighting Power (W)	2,626	2,222	Electrical COMCheck, Sheet E800	
· Allowed Supplemental (W)	-			
· Driveway & Parking (W/sqft)	0.030	-		
Plumbing / Domestic Hot Water			IECC 2018, Table C404.2	Sheet P102, Plumbing Drawings
Domestic Hot Water				
· Source	Natural Gas	Natural Gas		
· Type	Storage water heater	Storage water heater		
· Efficiency (EF)	0.80	0.96		
Low Flow Fixtures				
· Shower (gpm)	2.50	1.75	IPC Table P2903.2	Sheet P102, Plumbing Drawings
· Sink Faucet (gpm)	2.20	0.50		
· Kitchen Sink (gpm)	2.20	1.80		
· Toilet (gpf)	1.60	1.28		
· Urinal (gpf)	0.50	0.125		
HVAC				
Break, Mech, Storage, vestibule, housekeeping, etc.				
· Unit Type	Split System Heat Pump	Split System Heat Pump	Mechanical COMCheck, Sheet M601	
· Heating Type	Heat pump	Heat pump		

Property	Baseline (IECC 2018)	As-Designed	Baseline Source	As-Designed Source
· Heating Efficiency (HSPF)	8.20	10.60		
· Cooling Type	DX	DX		
· Cooling Efficiency (EER)	14.00	18.60		
IT, MDF/Comm room				
· Unit Type	PTHP	PTHP	Mechanical COMCheck, Sheet M601	
· Heating Type	Heat pump	Heat pump		
· Heating Efficiency (COP)	2.89	3.66		
· Cooling Type	DX	DX		
· Cooling Efficiency (EER)	10.40	14.64		
Guest Rooms				
· Unit Type	PTAC	PTAC	Mechanical COMCheck, Sheet M601	
· Heating Type	Heat pump	Heat pump		
· Heating Efficiency (COP)	3.02	3.50		
· Cooling Type	DX	DX		
· Cooling Efficiency (EER)	11.90	12.40		
Stairs				
· Unit Type	Air Heater	Air Heater	Mechanical COMCheck, Sheet M601	
· Heating Type	Electric	Electric		
· Heating Efficiency (COP)	1.00	1.00		
Corridors				
· Unit Type	MAU	MAU	Table C403.3.2(1) and (2) of IECC 2018	Mechanical Drawings, Sheet M201
· Heating Type	Furnace	Furnace		
· Heating Efficiency (COP)	0.80	0.82		
· Cooling Type	DX	DX		
· Cooling Efficiency (EER)	10.00	11.50		

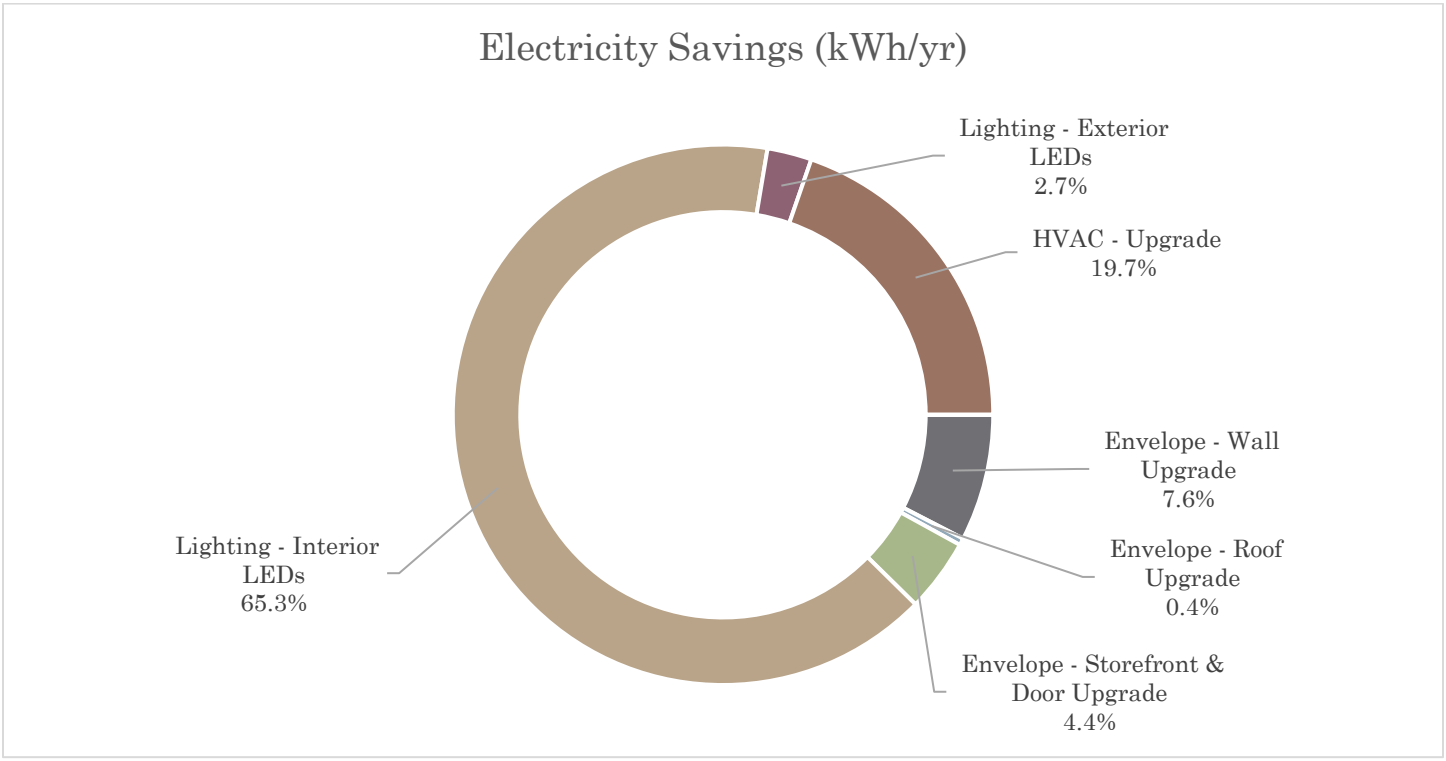
3.0 Summary of Measure Savings

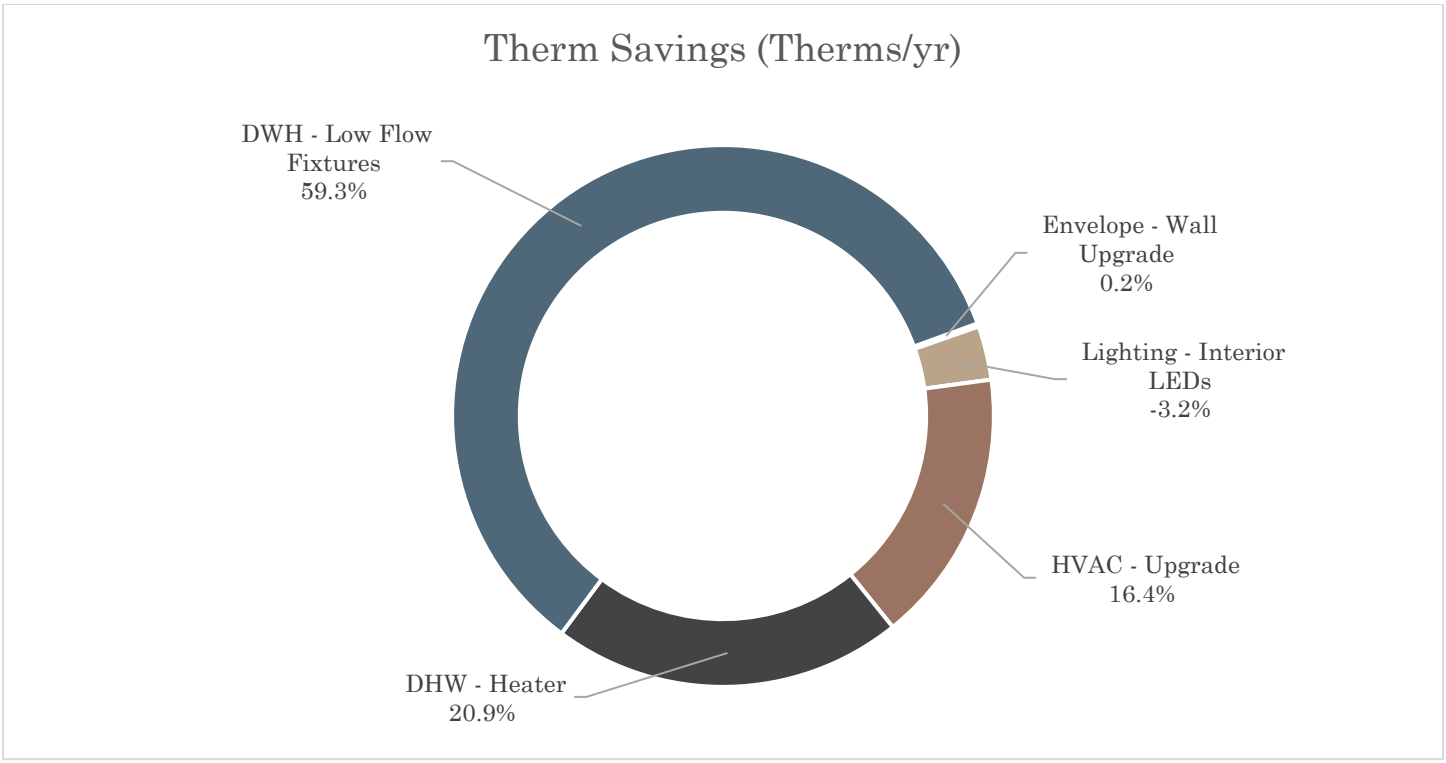
The following is a summary of savings by measure comparing As Designed to Baseline.

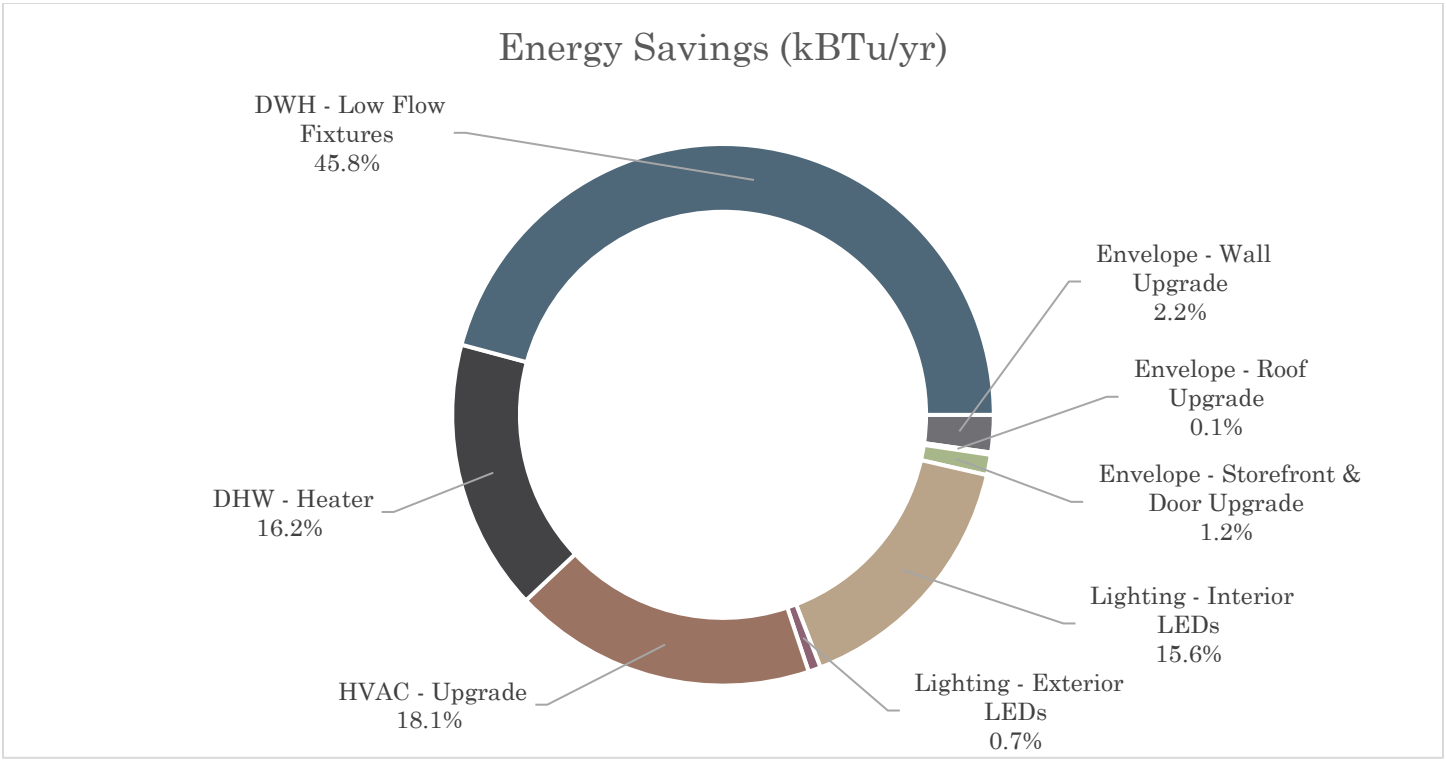
# EEM	Measure Description	Electricity Savings (kWh/yr)	Electricity Savings ($/yr)	Demand Savings (kW/yr)	Demand Savings ($/yr)	Gas/Fuel Savings (Therms/yr)	Gas/Fuel Savings ($/yr)	Water Savings (Gal/yr)	Water Savings ($/yr)	Energy Savings (kBtu/yr)	Operational Savings ($/yr)	Total Cost Savings ($/yr)	EUL (yrs.)	Life Cycle Cost Savings
1	Envelope - Wall Upgrade	5,043	$531	16	$164	11	$9	0	$0	18,278	0	$705	50	$79,479
2	Envelope - Roof Upgrade	278	$30	1	$9	2	$2	0	$0	1,138	0	$40	30	$1,923
3	Envelope - Storefront & Door Upgrade	2,914	$314	9	$88	0	$0	0	$0	9,954	0	$402	30	$19,146
4	Lighting - Interior LEDs	43,425	$4,462	97	$958	-204	-$179	0	$0	127,792	$496	$5,736	27.4	$233,520
5	Lighting - Exterior LEDs	1,769	$184	5	$51	0	$0	0	$0	6,037	$1,186	$1,420	22.8	$43,370
6	HVAC - Upgrade	13,108	$1,450	96	$986	1,039	$914	0	$0	148,610	0	$3,350	20	$90,017
7	DHW - Heater	0	$0	0	$0	1,330	$1,170	0	$0	132,978	0	$1,170	15	$21,770
8	DWH - Low Flow Fixtures	0	$0	0	$0	3,764	$3,312	705,418	$6,433	376,280	0	$9,745	19.8	$244,776
Totals		**66,538**	**$6,971**	**223**	**$2,256**	**5,942**	**$5,229**	**705,418**	**$6,433**	**821,066**	**$1,682**	**$22,570**	**29.5**	**$734,001**

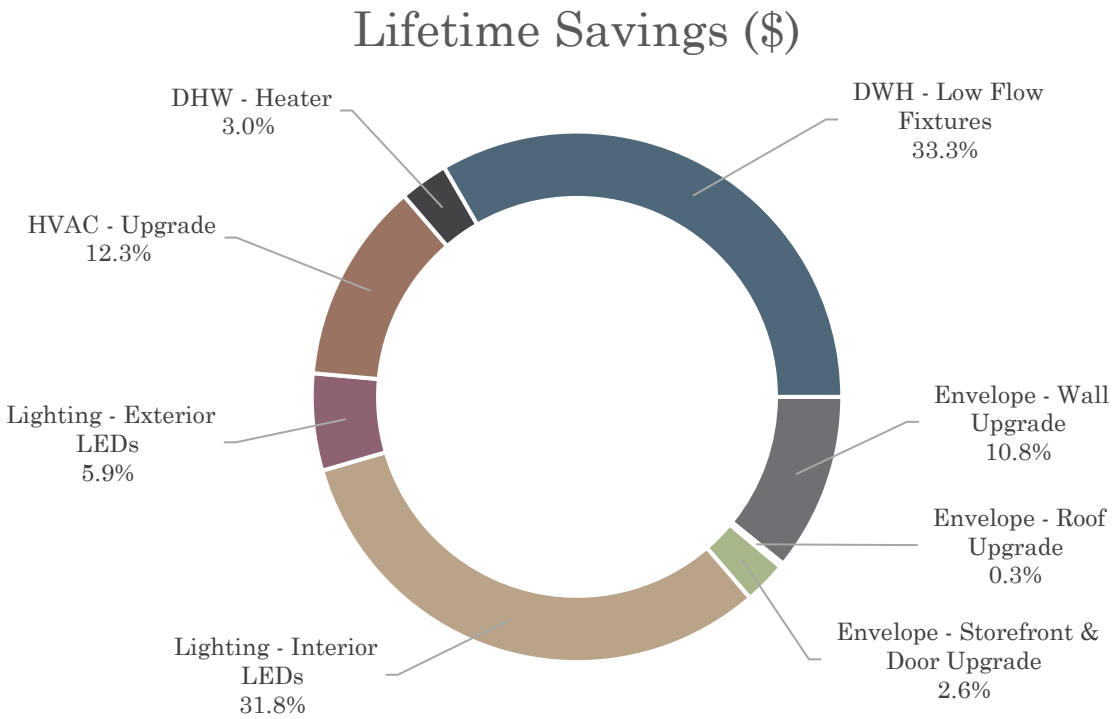
Overall Expected Useful Life (EUL) is based on Cost-Weighted EUL. Please refer to section 5 of this report for more details on EUL.

4.0 Graphical Summary of Measure Savings






Energy Savings (kBTu/yr)
DWH - Low Flow Fixtures 45.8%
Envelope - Wall Upgrade 2.2%
Envelope - Roof Upgrade 0.1%
Envelope - Storefront & Door Upgrade 1.2%
Lighting - Interior LEDs 15.6%
Lighting - Exterior LEDs 0.7%
HVAC - Upgrade 18.1%
DHW - Heater 16.2%


Lifetime Savings ($)
DWH - Low Flow Fixtures 33.3%
Envelope - Wall Upgrade 10.8%
Envelope - Roof Upgrade 0.3%
Envelope - Storefront & Door Upgrade 2.6%
Lighting - Interior LEDs 31.8%
Lighting - Exterior LEDs 5.9%
HVAC - Upgrade 12.3%
DHW - Heater 3.0%

5.0 Estimated Useful Life

Following is the Estimated Useful Life (EUL) used for the different energy-saving measures. The estimated useful life of measures is calculated to start from the Certificate of Occupancy.

# EEM	Measure Type	Estimated Useful Life (yrs.)	EUL Source
1	Envelope - Wall Upgrade	50	BOMA
2	Envelope - Roof Upgrade	30	BOMA
3	Envelope - Storefront & Door Upgrade	30	BOMA
4	Lighting - Interior LEDs	27.4	Actual Fixture Calc
5	Lighting - Exterior LEDs	22.8	Actual Fixture Calc
6	HVAC - Upgrade	20	Ian M. Shapiro publishing by John Wiley & Sons
7	DHW - Heater	15	BOMA Average
8	DWH - Low Flow Fixtures	19.8	BOMA
Cost-Weighted Average		29.5	

Following is the calculated EUL for the interior lighting based on the light rated hours and run hours:

Lighting - Interior LED Fixture EUL Calc	Hours
LED Life [hours rated]	50,000
Operating Hours/Year [hours]	1,825
Interior LED Life [years]	27.4

Following is the calculated EUL for the exterior lighting based on the light rated hours and run hours:

Lighting - Exterior LED Fixture EUL Calc	Hours
LED Life [hours rated]	100,000
Operating Hours/Year [hours]	4,380
Interior LED Life [years]	22.8

An average plumbing fixture based EUL average was performed to calculate the overall EUL for the plumbing low flow fixtures:

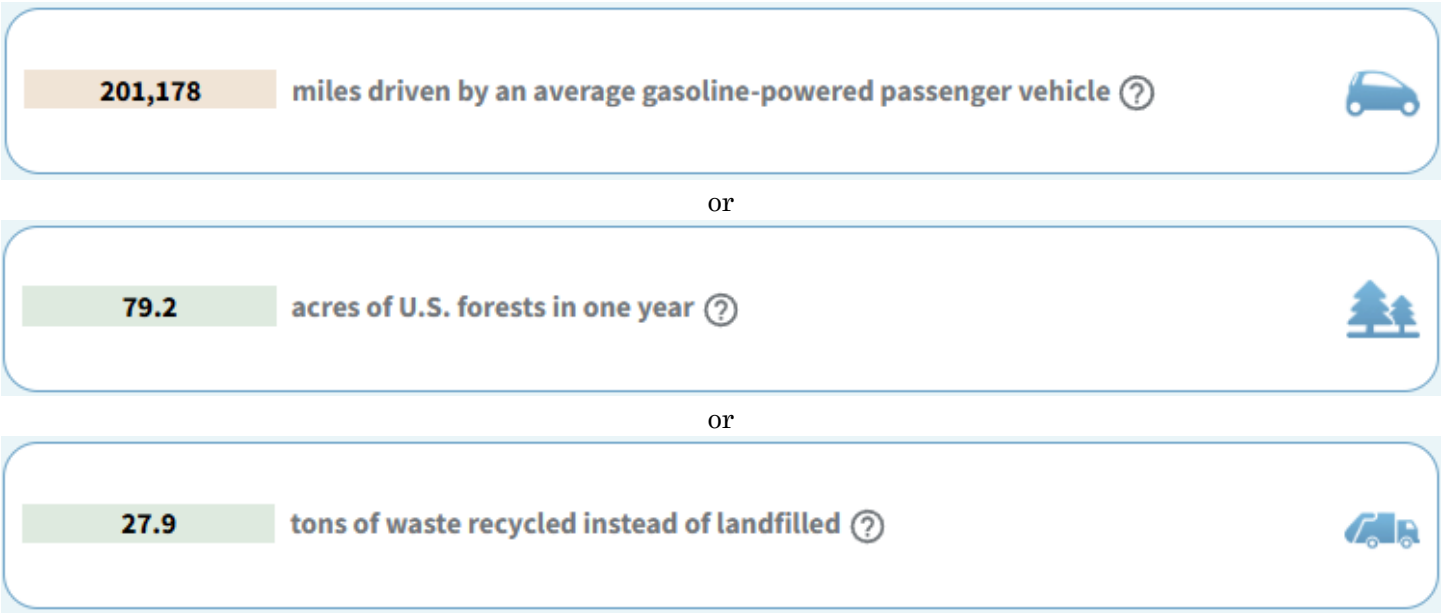
Low Flow Fixture Components	EUL - BOMA
Flush valves	12
Faucets	7
Water Closet	30
Urinals	30
Calculated Average	19.8

6.0 Greenhouse Gas Savings

The following is a summary of greenhouse gas savings by measure. EPA's average emissions factors were used of 0.000709 mT/kWh for electric and 0.0053 mT/Therm for gas.

# EEM	Measure Description	Electricity Savings (kWh/yr)	Gas/Fuel Savings (Therms/yr)	GHG Savings (Metric Ton CO2e)
1	Envelope - Wall Upgrade	5,043	11	4
2	Envelope - Roof Upgrade	278	2	0
3	Envelope - Storefront & Door Upgrade	2,914	0	2
4	Lighting - Interior LEDs	43,425	(204)	30
5	Lighting - Exterior LEDs	1,769	0	1
6	HVAC - Upgrade	13,108	1,039	15
7	DHW - Heater	0	1,330	7
8	DWH - Low Flow Fixtures	0	3,764	20
Totals		66,538	5,942	79

This greenhouse gas avoidance is equivalent to the emissions which can be represented by any of the following metrics.



Source: The United States Environmental Protection Agency/Energy and Environment Calculators

7.0 Building Utility Consumption

The following is a summary of Baseline and As-Designed building energy consumption.

Description	Electricity Cost ($/year)	Gas/Fuel Cost ($/year)	Water Cost ($/year)	Estimated Operational Cost ($/year)	Total Cost ($/year)	Cost per Square Foot ($/sqft)[1]
Baseline	$57,797	$44,525	$13,613	$14,033	$129,967	$1.85
As-Designed	$50,826	$39,296	$7,179	$12,351	$109,653	$1.56
Savings	$6,971	$5,229	$6,433	$1,682	$22,570	$0.32

1. Cost/Square Foot based on 70,164 sq. ft

The building plug loads, and other loads common to the two models, are included in the analysis. The purpose of this analysis however is to evaluate the differential energy savings between two scenarios instead of estimating actual energy consumption.

The following table provides the overall building energy benchmark and EUI analysis. It shows that overall the measures save 11.8% of energy as compared to the baseline.

Description	Electricity Consumption (kWh/yr)	Gas/Fuel Consumption (therms/yr)	Energy Consumption (kbtu/yr)	Energy Benchmark (kbtu/sf/yr)
Baseline	554,265	50,597	6,949,628	99
As-Designed	487,727	44,655	6,128,562	87
Savings	66,538	5,942	821,066	11.8%

Building Site Energy Use Intensity (EUI) was used to validate the model. EnergyStar reports the median for hotels and lodging buildings EUI to be 102 kBtu/SF. The baseline energy benchmark is taken at 99 kBtu/SF which is more conservative approach to the energy savings.

Metric	Design Project	Design Target*	Median Property*
ENERGY STAR score (1-100)	68	80	50
Source EUI (kBtu/ft²)	133.2	117.7	156.3
Site EUI (kBtu/ft²)	87.4	77.2	102.5
Source Energy Use (kBtu)	9,348,323.5	8,258,194.5	10,964,051.7
Site Energy Use (kBtu)	6,129,624.5	5,414,835.4	7,189,045.4
Energy Cost ($)	90,122.41	79,613.07	105,698.81

8.0 C-PACER Applicable Cost Breakdown

The following is the C-PACER applicable cost analysis. All costs are provided by the Contractors, Client, Lender and/or Borrower.

C-PACER APPLICABLE BUILDLING CONSTRUCTION COSTS

Following are the breakdown of Building Construction Cost and the C-PACER applicable portions:

Cost Code	Description	Construction Cost	% Applicable	PACE Applicable Hard Costs
1	**Land Costs**	Amount		
11000	Land Cost	$1,250,280		
12000	Title & Escrow-Title Policy & Closing Costs	$22,505		
13000	Misc. Expenses	$5,000		
14000	Legal & Third Party Costs	$30,000		
15000	Other (Misc. Closing Expenses)	$10,000		
1	**Sub-Total Land Costs**	**$1,317,785**		
2	**Soft Costs**			
	Please refer to Soft Costs Table			
2	**Sub-Total Soft Costs**	**$2,164,035**		
3	**Hard Costs**			
	CONSTRUCTION COST ESTIMATE			
	DIV 01 GENERAL REQUIREMENTS			
	1040.000 - Project Management	$195,000	30%	$58,500
	1045.000 - Project Superintendent	$195,000	30%	$58,500
	1046.000 - Assistant Superintendent	$140,000	30%	$42,000
	1047.000 - Apprentice Labor & General Cleanup	$67,200	30%	$20,160
	1048.000 - Project Coordinator (in GC office overhead)	$0		
	1050.000 - Vehicle & Fuel	$27,500		
	1060.000 - Travel, Lodging & Per Diem	$78,000		
	1070.000 - Small Tools & Equipment	$10,000		
	1310.000 - Blueprinting	$3,500	30%	$1,050
	1320.000 - Express Mail / Postage	$700		
	1330.000 - Temporary Signs	$1,400		
	1400.000 - Safety & First Aid	$10,000		
	1500.000 - Mobilization & Set-Up	$5,000	30%	$1,500
	1505.000 - Drinking Water (GC & Owner Trailers)	$1,400		
	1510.000 - Temporary Power & Lighting Distribution (incl both offices)	$28,000	30%	$8,400
	1512.000 - Temporary Construction - Weather Protection	$14,000	30%	$4,200
	1514.000 - GC Field Office, Furniture & Equipment	$21,000		
	1515.000 - Owner's Office, Furniture & Equip.	$16,800		
	1516.000 - GC Office Supplies	$7,000		

Cost Code	Description	Construction Cost	% Applicable	PACE Applicable Hard Costs
	1517.000 - Storage Containers (FF&E)	$16,800		
	1520.000 - Temporary Power Consumption (until TCO) Eq & Install in 16900	$42,000	30%	$12,600
	1521.000 - Temporary Phone	$4,200	30%	$1,260
	1522.000 - Temporary Toilet (incl. pumping Owner Office toilet)	$8,400	30%	$2,520
	1523.000 - Temporary Water (until C of O)	$1,400	30%	$420
	1524.000 - Temporary Gas/Heat	$91,000	30%	$27,300
	1525.000 - Temporary Construction - Security Boardup	$8,400	30%	$2,520
	1526.000 - Winter Protection	$0		
	1530.000 - Security Fencing (site perimeter)	$14,000		
	1531.000 - Security Cameras & Monitoring (6 cameras)	$70,000		
	1532.000 - Security Guard - Full Time from Framing to Opening (prior last 60 days)	$130,200		
	1550.000 - Project & Construction Signs (GC to install owner signs as well)	$700		
	1610.000 - Miscellaneous Material	$2,800		
	1630.000 - Equipment Rental (incl lift for all trades & FF&E)	$95,000	30%	$28,500
	1650.000 - Scaffolding (Set at Roof Framing for Fall Protect. - In EFIS)	$0		
	1670.000 - Snow Removal & Street Cleaning	$7,000		
	1710.000 - Dumpster & Hauling (Incl FF&E Dumpsters)	$42,000		
	1732.000 - Final Clean & Polish	$28,000		
	1740.000 - Project Reports & As-Builts (Included in GC Overhead)	$0		
	Sub Totals:	**$1,383,400**		
	DIV 02 SITEWORK			
	2010.000 - Survey Control & Staking	$22,000		
	2020.000 - Soil/Concrete Testing - Special Inspection (By Owner)	$0		
	2050.000 - Erosion Control & Stabilized Entries	$15,000		
	2150.000 - Site Demolition (Included in Excavation)	$0		
	2100.000 - Termite Treatment (Not Required)	$0		
	2210.000 - Dewatering (NIC/Minor Pumping by GC) (Shoring?)	$0		
	2230.000 - Clear, Grub & Unusable Disposal in Bio-Swale (in 2250)	$0		
	2250.000 - Rough Grading - Cut, Fill, Compaction, Import, Export	$340,000		
	2251.000 - Pit Run Import & Place	$0		
	2252.000 - Soils Export (Included in Excavation)	$0		
	2253.000 - Building Excavation & Backfill	$90,000		
	2254.000 - Building Stone Base & Prep for Slab	$36,000		
	2255.000 - Fine Grading - Site Concrete & Landscape Areas	$45,000		

Cost Code	Description	Construction Cost	% Applicable	PACE Applicable Hard Costs
	2256.000 - Fine Grading - Asphalt (Included in Excavation)	$0		
	2260.000 - Erosion Control - SWPPP Maintenance	$12,000		
	2500.000 - Temporary Roads	$10,000		
	2510.000 - Paving Base Stone (Included in Asphalt)	$0		
	2512.000 - Asphalt Paving	$115,179		
	2515.000 - Striping, Fire/HC Markings & Signage	$0		
	2516.000 - Precast Concrete Wheel Stops (N/A)	$0		
	2520.000 - Concrete Paving (Included in Curbs)	$0		
	2525.000 - Concrete Curbs	$77,536		
	2530.000 - Concrete Flatwork & Ramps	$85,000		
	2531.000 - Textured & Colored Concrete Flatwork	$0		
	2532.000 - Concrete Utility Slabs & Housekeeping Pads (In Curbs)	$0		
	2533.000 - Concrete Light Pole Bases (In Electrical)	$0		
	2535.000 - Trash Enclosure, Fnd, Slab & Paving (In Curbs)	$0		
	2610.000 - Site Utilities - Existing Relocations (In Excavation)	$0		
	2620.000 - Site Utilities - Fire Line & Riser, Street Cut & Patch	$65,000		
	2621.000 - Site Utilities - Domestic & Irrigation Water (In 2620)	$0		
	2630.000 - Site Utilities - Sanitary Sewer - Force Main	$90,000	90%	$81,000
	2640.000 - Site Utilities - Sanitary Septic Tanks & Pump Station	$120,000	90%	$108,000
	2640.000 - Site Utilities - Storm Drain & Dissipation Stone Trench	$90,000		
	2641.000 - Site Utilities - Roof/Planter Drain Tie-Ins (In 2640)	$0		
	2645.000 - Site Utilities - Detention (In 2640)	$0		
	2650.000 - Site Utilities - Gas Line (Trenching by GC /Line by Gas Co.)	$5,000	90%	$4,500
	2655.000 - Site Utilities - Electric/Phone/Cable (Trench & Bkfl by GC)	$5,000	90%	$4,500
	2700.000 - Off-Site Improvements & Traffic Control ((Street Tie-Ins Only)	$0		
	2650.000 - Planter Allowance (By Owner)	$0		
	2850.000 - Site Signage (Included in Paving)	$0		
	2870.000 - Pipe Bollards (In Misc. Metals)	$0		
	2900.000 - Landscaping	$190,000		
	2910.000 - Irrigation	$75,000		
	2950.000 - Landscaping 90 Day Maintenance & 12 Month Guaranty	$0		
	Sub Totals:	**$1,487,715**		
	DIV 03 CONCRETE			
	3200.000 - Rebar & Embeds (in 3300)	$0		

Cost Code	Description	Construction Cost	% Applicable	PACE Applicable Hard Costs
	3300.000 - Concrete Foundations (Cost includes Winter Conditions)	$645,000		
	3380.000 - Shotcrete	$0		
	3500.000 - Concrete Slab (In Concrete Foundation)	$0		
	3505.000 - Concrete Pool Deck (In Concrete Foundation)	$0		
	3510.000 - Gypcrete (1-1/2" Gypcrete 2000)	$144,390		
	Sub Totals:	**$789,390**		
	DIV 04 MASONRY			
	4200.000 - Masonry	$0		
	4250.000 - Trash Enclosure CMU	$26,000		
	4450.000 - Cultured Stone Veneer	$150,000	90%	$135,000
	Sub Totals:	**$176,000**		
	DIV 05 METALS			
	5100.000 - Structural Steel	$240,000		
	5200.000 - Erection	$55,000		
	5300.000 - Metal Canopies Over Corridor Doors (Deleted)	$0		
	5510.000 - Misc. Metals	$3,500		
	5520.000 - Metal Stair Handrails	$18,000		
	Sub Totals:	**$316,500**		
	DIV 06 CARPENTRY			
	6100.000 - Carpentry - Rough Labor & Equipment (Cost Includes Winter Conditions)	$1,104,465	35%	$386,563
	6150.000 - Carpentry - Framing Hardware Supply (In 6155) ATS Rods	$82,000	35%	$28,700
	6155.000 - Carpentry - Lumber & Plywood Supply (Ida-Pac)	$1,034,142	35%	$361,950
	6190.000 - Carpentry - Engineered Wood Supply In 6155 - ROOF TRUSSES	$133,494	25%	$33,373
	6196.000 - Carpentry - Install Windows	$15,857	15%	$2,378
	6198.000 - Carpentry - Outdoor Wood Trellis	$27,474		
	6199.000 - Carpentry - Dumpster Wood Framing (In 6100)	$0		
	6200.000 - Finish Carpentry (In 6420)	$0		
	6400.000 - Cabinets - Guestrooms - Working Wall & Tops (By FF&E)	$0		
	6405.000 - Cabinets - Guestrooms - Vanities & Tops (By FF&E)	$0		
	6410.000 - Cabinets & Tops - Guestrooms - Unload, Stock & Install	$68,015		
	6420.000 - Cabinets - Common Area Casework (By FF&E)	$0		
	6430.000 - Common Area Wire Shelving (OFCI)	$0		
	Sub Totals:	**$2,465,447**		
	DIV 07 THERMAL & MOISTURE PROTECTION	$0		
	7100.000 - Waterproofing Pit	$6,000		
	7200.000 - Building Insulation, Vapor Barrier & Foam Seal	$269,988	90%	$242,989

Cost Code	Description	Construction Cost	% Applicable	PACE Applicable Hard Costs
	7210.000 - Foundation Insulation & Flashing	$16,097		
	7250.000 - Exterior Insulation & Weather Wrap (In 7580)	$0		
	7500.000 - Roofing (60 Mil Fully Adhered TPO Single-Ply / Alter. for 80 Mil Membrane)	$495,000	90%	$445,500
	7500.000 - Roofing (Alter. for 80 Mil Membrane)	$25,000	90%	$22,500
	7580.000 - Siding (Including Panel System, EIFS, scaffolding, weather wrap, exclude bag & heat)	$992,343	90%	$893,109
	7580.000 - Siding (bag & heat)	$96,000	90%	$86,400
	7600.000 - Sheet Metal (in 7500)	$0		
	7620.000 - Gutters & Downspouts (in 7500)	$2,311		
	7710.000 - Roof Hatches/Linen Chute Vent (In 7500)	$0		
	7720.000 - Roof Vents & Curbs (in 7500)	$0		
	7800.000 - Fire Caulking, Sleeves, Fire/Sound Putty Pads (Subs & GC)	$32,000		
	7900.000 - Joint Sealers	$30,000	90%	$27,000
	Sub Totals:	**$1,964,739**		
	DIV 08 DOORS & WINDOWS			
	8100.000 - Hollow Metal Doors & Frames (Welded Frames-No Timely) In 8120 Add HD Galv at Pool/Spa+Roof Stair D	$4,731	90%	$4,258
	8120.000 - Wood Doors & Hollow Metal	$352,253	15%	$52,838
	8110.000 - Door & Hardware Installation	$73,152	15%	$10,973
	8305.000 - Access Doors (In Trades)	$0		
	8375.000 - Overhead Coiling Doors (at Exterior Storage)	$3,729		
	8400.000 - Aluminum Storefront (Includes Pool Storefront)	$175,000	90%	$157,500
	8450.000 - Automatic Entry Doors (In Storefront)	$0		
	8500.000 - Aluminum Windows (Quaker, flashing, tax included)	$218,294		
	8600.000 - Glass & Glazing (Door & Int. Lites / In Storefront)	$0		
	8650.000 - Glass & Glazing - Roof Beacon (Omitted in Gen 3.2)	$0		
	8700.000 - Finish Hardware (In 8120)	$0		
	8720.000 - Electronic Card Locks (Onity or Kaba, including frt, tax, training)	$63,084		
	8850.000 - Mirrors - Guestrooms (FF&E)	$0		
	8850.000 - Mirrors - Exercise Room (In Storefront)	$0		
	Sub Totals:	**$890,243**		
	DIV 09 FINISHES			
	9210.000 - Exterior Insulation Finish System (EIFS) w 7580	$0		
	9220.000 - Exterior Temp. Heat & Cover (In Winter Conditions)	$0		
	9250.000 - Drywall, Hang, Tape & Finish	$576,979	15%	$86,547
	9255.000 - Drywall - Acoustical Sealant (In Drywall)	$0		
	9260.000 - Lt. Ga. Metal Framing	$90,841	25%	$22,710

Cost Code	Description	Construction Cost	% Applicable	PACE Applicable Hard Costs
	9310.000 - Ceramic Tile - Guestrooms - Installation w Adhesive & Grout	$274,166		
	9312.000 - Ceramic Tile - Common Area w 9310	$0		
	9312.000 - Ceramic Tile - Pool w 9310	$0		
	9315.000 - Ceramic Tile - Materials (By FF&E)	$0		
	9380.000 - Quartz Tops - Common Area	$35,000		
	9381.000 - Quartz Tops - Guestrooms	$62,400		
	9382.000 - Granite & Marble Installation	$69,804		
	9390.000 - Cultured Marble Surrounds & Shower Pans	$135,518		
	9391.000 - Tub Surround Installation	$43,000		
	9392.000 - Granite Window Sills (Includes material & freight / Install w 9381)	$16,716		
	9510.000 - Acoustical Ceilings	$25,947		
	9540.000 - FRP / Marlite Walls (Food Prep/Laundry)	$7,629		
	9650.000 - Resilient Flooring & Base, Stair Nosing & Skirts (OFCI)	$35,955		
	9680.000 - Carpet/Pad Installation (Carpet by Owner)	$81,026		
	9800.000 - Epoxy Floorcovering	$15,000		
	9900.000 - Painting & Caulking	$228,895		
	9910.000 - Concrete Floor Sealer (In Painting?)	$0		
	9950.000 - Wallpaper Installation (VWC by Owner)	$81,061		
	Sub Totals:	**$1,779,936**		
	DIV 10 SPECIALTIES			
	10050.000 - Flagpole	$6,500		
	10101.000 - Recessed Floor Mats (By FF&E)	$0		
	10200.000 - Folding Partition (N/A)	$0		
	10260.000 - Wall & Corner Guards (Material & Install)	$10,023		
	10350.000 - Lockers (OFCI)	$953		
	10450.000 - Exterior Signage (Exterior by Owner)	$0		
	10451.000 - Interior Signage (FF&E - GC Install in12800)	$0		
	10520.000 - Fire Extinguishers & Cabinets	$7,499		
	10600.000 - Safety Deposit Boxes (Material & Install)	$0		
	10650.000 - Safe Installation (OFCI) In 10820	$0		
	10670.000 - Shelving (OFCI) In 10820	$0		
	10800.000 - Toilet Accessories Supply	$44,929		
	10810.000 - Toilet Partitions	$5,536		
	10820.000 - Bath Hardware & Misc. Installation	$23,607		
	10850.000 - Shower Doors	$48,500		
	10870.000 - Mirrors (Exercise & Restrooms)	$5,440		
	10920.000 - Firepit (OFCI) In 10820	$0		
	10940.000 - BBQ Grilles (OFCI) In 10820	$0		

Cost Code	Description	Construction Cost	% Applicable	PACE Applicable Hard Costs
	10950.000 - Knox Box	$667		
	10970.000 - Bike Rack	$477		
	Sub Totals:	**$154,132**		
	DIV 11 EQUIPMENT			
	11000.000 - Appliances (OFCI)	$0		
	11050.000 - Appliance Unload, Protect, Distribute & Install	$10,198		
	11200.000 - Ice Machines (OFCI) in 11050	$0		
	11300.000 - Food Service Equipment (OFCI) in 11050	$0		
	11350.000 - Food Service Equipment Unload & Install (OFCI) in 11050	$0		
	11410.000 - Stainless Steel (N/A)	$0		
	11500.000 - House Laundry Equipment (OFCI) in 11050	$0		
	11550.000 - Guest Laundry Equipment (OFCI) in 11050	$0		
	11600.000 - Exercise Equipment (OFOI) (Unload in 11050)	$0		
	Sub Totals:	**$10,198**		
	DIV 12 FURNISHINGS			
	12490.000 - Window Treatments (FF&E - OFOI)	$0		
	12500.000 - Furniture, Fixtures & Equipment (FF&E - OFCI) see 125550	$0		
	12550.000 - FF&E Installation	$92,235		
	12600.000 - Entry Planters & Urns (FF&E - OFCI) in 12550	$0		
	12800.000 - Signage Interior Installation (Signs by FF&E -OFCI) in 12550	$1,500		
	12900.000 - BBQ Grills (FF&E - OFCI)	$200		
	Sub Totals:	**$93,935**		
	DIV 13 SPECIAL CONSTRUCTION			
	13150.000 - Pool & Spa (Incl. 2 HC Lifts & Added Half Round Spa)	$304,092		
	13200.000 - Pool 90 Day Maintenance (By GC until TC of O)	$0		
	Sub Totals:	**$304,092**		
	DIV 14 CONVEYING SYSTEMS			
	14200.000 - Elevators (2) Thyssen MRL Holeless	$353,841		
	14800.000 - Linen Chute	$20,557		
	Sub Totals:	**$374,398**		
	DIV 15 MECHANCIAL			
	15300.000 - Fire Sprinklers (Design-Build per MOA & Hilton Requirements)	$320,279		
	15325.000 - Fire Sprinklers - Dry System (Attic - Not Required with warm roof design)	$0		
	15350.000 - Fire Pump (Required - Water Flow-Pressure insufficient in 15300)	$0		
	15400.000 - Plumbing - Underground	$90,000	25%	$22,500
	15410.000 - Plumbing - Above Slab Rough	$760,000	25%	$190,000

Cost Code	Description	Construction Cost	% Applicable	PACE Applicable Hard Costs
	15415.000 - Plumbing - Water Rough	$792,410	75%	$594,308
	15420.000 - Plumbing - Water Service, Meter Assembly & Insulation	$100,000	90%	$90,000
	1545.000 - Plumbing Fixtures	$250,000	90%	$225,000
	1546.000 - Plumbing Fixtures Labor	$500,000	90%	$450,000
	15460.000 - Plumbing Water Heaters	$200,000	90%	$180,000
	15470.000 - Plumbing Domestic Pump	$75,000	90%	$67,500
	15471.000 - Plumbing Gas Piping	$75,000	90%	$67,500
	15472.000 - Plumbing Condensate Piping	$20,000	90%	$18,000
	15475.000 - Plumbing - Excavation for Underground (in Civil)	$0		
	15480.000 - Water Softener	$39,000		
	15500.000 - HVAC	$1,267,850	90%	$1,141,065
	15500.000 - PTACs Materials Amana Heat Pumps	$157,751	90%	$141,976
	15550.000 - PTAC Installation (incl in 15500)	$0		
	15600.000 - EMS (Stand-Alone System - By Owner Vender - RI by EC)	$0		
	15700.000 - Sidewalk Heat System	$50,339		
	Sub Totals:	**$4,697,629**		
	DIV 16 ELECTRICAL			
	16100.000 - Electrical Service & Switchgear	$769,916	90%	$692,924
	16110.000 - Electric - Bldg. Power & Lighting	$1,236,987	90%	$1,113,288
	16115.000 - Electric - Ext. Power & Lighting	$362,382	90%	$326,144
	16120.000 - Light Fixtures LED (Decorative Fixtures By FF&E)	$91,865	90%	$82,679
	16200.000 - Low Voltage (Box & Cable) -Guestroom - Terminations by Others	$85,600	90%	$77,040
	16250.000 - Low Voltage (Box & Cable)-PS-Equip & Term. By Others	$20,000	90%	$18,000
	16300.000 - Music System (Box & Cable)-PS-Equip & Term by Others	$3,500		
	16400.000 - CCTV Camera System (Box & Cable)-PS-Equip &Term by Others	$5,000		
	16600.000 - Fire Alarm	$179,402		
	16900.000 - Temp. Power & Lighting	$36,500	30%	$10,950
	Sub Totals:	**$2,791,152**		
	Division Totals:	**$19,678,906**		
	FEES, INSURANCE AND BONDS			
	GC Overhead & Profit	$897,470	30%	$269,241
	GC Contingency & Winter Conditions NTE Allowance	$500,000	30%	$150,000
	GC Liability/Vehicle Insurance	$89,134		
	Tax	$0		
	Bonds - GC Performance & Payment Bonds	$174,992		
	Bonds - Sub Performance & Payment Bonds (By GC - SubGuard Alternate)	$0		

Cost Code	Description	Construction Cost	% Applicable	PACE Applicable Hard Costs
	Builder's Risk (By Owner or reimbursable cost if by GC)	$0		
	Sub Totals:	**$1,661,596**		
	Total Construction Budget	**$21,340,502**		
31000	Construction Costs - Div 2 thru 16	$21,340,502		
31200	Construction Costs - Div 2 Sitework (in 3100)	$0		
31500	Construction Costs - Owner Supplied Materials	$426,914		
31600	Construction Costs - CHP Units Allowance	$750,000	30%	$225,000
31700	Construction Costs - Winter Conditions - Owner Budget (GC in 31000)	$100,000		
31800	Construction Costs - Utility Connections	$220,000	30%	$66,000
32200	Soil Remediation Allowance	$50,000		
32400	Off-Site Improvements & Lot Fill Allowance (NIC - by SUN MT.)	$0		
34000	Furniture, Fixtures & Equipment (FF&E) & Purchasing	$3,093,700		
35000	Technology (Phone, Data, TV, Security, Music Systems, PMS)	$449,400		
36000	Operating Supplies & Equipment (OS&E)	$329,560		
36900	Exterior Signage	$48,000		
37000	Freight / Logistics / Logistics Fee	$459,990		
37500	Warehousing / Storage / Material Handling	$100,000		
38000	Builder's Risk Insurance	$350,000		
39100	3rd Party Structural/Roof/MEP/Facade 3rd Party Deputy Inspector/Special Inspections	$77,815		
39200	Security & Construction Cameras	$35,000		
39300	Sales Tax (in line cost line items)	$0		
39400	Quality Control Program/Field Engineer (CM Assistant)	$60,000		
39500	Construction Management (T&M billed hourly)	$398,000		
39600	Project Management/Sales Office	$37,450	30%	$11,235
39700	Corporate Travel & Incidentals	$90,950		
39800	Reprographics & IT	$12,000		
39900	Pre-Opening Costs	$588,121		
39910	Start-Up Supplies	$9,202		
39950	Utility Deposits & Misc. Fees/Costs	$21,186	30%	$6,356
39999	Hard Cost Contingency	$1,500,000	30%	$450,000
3	**Sub-Total Hard Costs**	**$30,547,790**		
4	**Financing Costs**			
41000	Lender Fees - Const/SWAP Loan	$199,791		
41100	Remaining Closing Costs (Northrim)	$16,639		
41200	Debt Capital Sourcing Fee	$299,686		
42000	Fund Manager Capital Raise Fee (TBD If additional capital raise necessary)	$0		
42200	C-PACER Transaction Cost Estimate & Program Fees	$257,740		
43000	Appraisal & Feasibility Study Costs	$22,140		

Cost Code	Description	Construction Cost	% Applicable	PACE Applicable Hard Costs
43500	Loan Costs/Third Party Legal & Other Costs	$9,990		
44000	Legal Expense - Closing to Opening	$75,000		
45000	Accounting Expense	$45,000		
46000	Construction Bank Inspection Expense	$63,000		
47000	Escrows - Tax & Insurance Accounts	$25,000		
48000	Debt Service/Bank Charges	$1,762,875		
4	**Sub-Total Financing Costs**	**$2,776,861**		
	Sub-Total Development Costs 50000 a Guarantor Fee (Guarantor fee required if all members are not signers. Add 1% of outstanding debt per year)	**$36,806,471**		
51000	Developer Fee (50% Contributed)	$920,162	30%	$276,049
	Sub-Total Development Costs and Fees	**$37,726,633**		
55000	Sr. Debt Service Payment Reserve	$1,323,599		
55500	C-PACER Capitalized Interest	$907,958		
5	**TOTAL DEVELOPMENT COSTS, FEES & RESERVES**	**$39,958,190**		
	Total Hard Costs (not including Soft Costs)	**$37,794,155**		**$10,430,473**

MEASURE ASSOCIATED HARD COSTS

Following are the hard costs associated with different measures based on the Building Construction Costs. The lender has chosen to not include some measures in C-PACER:

EEM #	Measure	PACE Applicable Hard Cost
1	Envelope - Wall Upgrade	$2,504,523
2	Envelope - Roof Upgrade	$961,536
3	Envelope - Storefront & Door Upgrade	$568,215
4	Lighting - Interior LEDs	$1,358,501
5	Lighting - Exterior LEDs	$667,547
6	HVAC - Upgrade	$2,118,187
7	DHW - Heater	$548,512
8	DWH - Low Flow Fixtures	$1,703,452
	Total Applicable PACE Hard Costs	**$10,430,473**

HARD COST RATIO ANALYSIS

Following is the ratio of C-PACER applicable hard costs to total hard costs:

PACE Applicable Hard Cost Percent Analysis	
Total Hard Costs	$37,794,155
PACE Applicable Hard Costs	$10,430,473
PACE Hard Cost Ratio	28%

C-PACER APPLICABLE PROJECT SOFT COSTS

Following are the total project costs and their applicable C-PACER portions:

Cost Code	Item Description	Cost	PACE Hard Cost Ratio	PACE Applicable Soft Cost
2	Soft Costs			
21000	Market-Feasibility Studies (Combined Market Study & Appraisal)	$5,000		
21100	Franchise Fees	$75,000	28%	$20,699
21300	Diligence Studies, Entitlements, Planning, CUP (Site/Market Analysis/Traffic)	$25,000	28%	$6,900
21400	Utility Company Fees (Water Sewer, Enstar Gas, MEA Electric, MTA DIA & Phone Fees)	$200,000	28%	$55,196
21500	Permits, Plan Review Fees	$55,000	28%	$15,179
22000	Design Survey and Post-Construction ALTA As-Built Survey	$5,500	28%	$1,518
22100	Geotechnical Study & Borings	$9,000		
22200	Material Testing	$50,000	28%	$13,799
22200	Architectural, Structural, MEP Engineering	$374,345	28%	$103,312
22300	Architectural, Structural, MEP Engineering - Master Planning	$62,025	28%	$17,118
22400	Civil Engineering/Survey/Permitting/Dry Utilities/Bidding/CA during construction	$75,500		
22400	Civil Engineering - Master Planning	$45,000		
22500	Architectural-SMEP-Civil A/S & Reimbursables Budget	$30,000	28%	$8,279
22550	Landscape & Irrigation Design (Corvus Design)	$8,583		
22600	Interior Design, A/S & Reimbursables	$52,000		
22700	A/E Design Consultants - Eagle Monitoring	$47,405	28%	$13,083
22750	Phase 1 ESA	$2,500	28%	$690
22900	Design Renderings	$5,000	28%	$1,380
23000	Development Overhead Costs	$290,000	28%	$80,035
23100	Data Storage, Reprographics & Misc Expenses	$10,000	28%	$2,760
23200	Project Management Office (in line 3t)	$0		
23500	Corporate Travel Expense - Development	$25,000		
24000	Insurance - General Liability/E&O/Property Coverage (COC Builders Risk in line 3n)	$160,000		

Cost Code	Item Description	Cost	PACE Hard Cost Ratio	PACE Applicable Soft Cost
25000	Property Taxes (during construction)	$50,000		
26000	Working Capital - Operating Account Opening Funds	$75,000		
29000	Legal Fees - Development	$100,000	28%	$27,598
29500	LLC Formation & Organization Expense	$252,177	28%	$69,596
29999	Soft Cost Contingency	$75,000	28%	$20,699
2	Sub-Total Soft Costs	$2,164,035		
	Total Applicable Soft Cost	$2,164,035		$457,839

TOTAL C-PACER APPLICABLE HARD AND SOFT COSTS

Following are the total C-PACER applicable hard and soft costs:

Total Applicable PACE Costs	
PACE Applicable Hard Cost	$10,430,473
PACE Applicable Soft Cost	$457,839
Total PACE Applicable Costs	$10,888,312

9.0 Energy Conservation Measure Descriptions

Following is a discussion of the energy conservation measures used for the Summary of Measure Savings analysis.

EEM 1.0: Wall Upgrades

The baseline uses a wall U-value of 0.051 Btu/hr.ft^2.F and an as-designed wall U-value of 0.036 Btu/hr.ft^2. °F.

EEM 2.0: Roof Upgrades

The baseline uses a roof U-value of 0.021 Btu/hr.ft^2.F and an as-designed roof U-value of 0.020 Btu/hr.ft^2. °F.

EEM 3.0: Storefront & Door Upgrades

The baseline uses a storefront U-value of 0.77 Btu/hr.ft^2.F. and a Solar Heat Gain Coefficient (SHGC) of 0.22. The as-designed window uses a U-value is 0.29 Btu/hr.ft^2.°F and an SHGC is 0.24.

The baseline for exterior doors is 0.37 Btu/hr.ft^2.°F and the as-designed is 0.24 Btu/hr.ft^2.°F.

EEM 4.0: Lighting – Interior LEDs

LED Lighting upgrades beyond code are modeled based on the lighting count for the spaces. The baseline lighting power used is 0.49 w/sft, and the as designed lighting power used is 0.25 w/sft. Operational savings are also realized due to the longer lifespan of LED bulbs and fixtures over traditional lighting technologies.

EEM 5.0: Lighting – Exterior LEDs

Exterior LED lighting will be installed on the project. The code baseline lighting used is a total of 2,626 W. As-designed exterior LED lighting power is a total of 2,222 W.

EEM 6.0: HVAC Upgrade

The project uses Heat Pump units with a baseline heating COP ranging from 2.89 to 3.02, and a cooling EER ranging from 10.4 to 14.0. As-designed units are proposed to have a heating COP ranging from 3.50 – 3.66 and cooling EER ranging from 12.40 – 18.60.

Furthermore, corridors uses make up air unit with baseline heating efficiency of 80% and cooling EER of 10. As-designed units are proposed to have a heating efficiency of 82% and cooling EER of 11.5.

A detailed documentation of the HVAV systems is included under table 2.

EEM 7.0: DHW – Heater

The baseline case uses natural gas water heaters (DHW) for domestic hot water requirement with a system efficiency of 80%, compared to natural gas hot water heaters in the as-designed with 96% efficiency.

EEM 8.0: DHW – Low Flow Fixtures

Low flow Faucets, WC that restrict the flow of water through the faucets, or toilet. Given the many faucets, WCs in the facility, installing low flow fixtures can have a significant impact on water use as well as natural gas used to heat hot water. Hot water is provided to the showers at a temperature of 120°F. Baseline flow rates for each fixture can be found in the table below.

Fixture Flow Rates		
Fixture Type	Baseline	As-Designed
· Shower (gpm)	2.50	1.75
· Sink Faucet (gpm)	2.2	0.5
· Kitchen Sink (gpm)	2.2	1.8
· Toilet (gpf)	1.6	1.28
· Urinal (gpf)	0.5	0.125