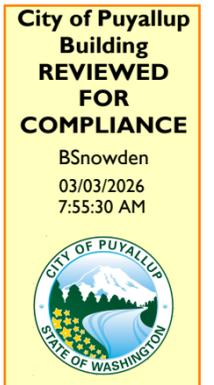
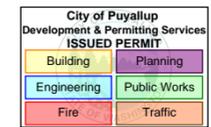


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- Plug, Process, and Other Loads
- Renewable Energy
- Exceptional Calculations

Full-Sized legible color report must be on site and made available by the Permittee for all inspections.



Executive Summary

Compliance Path: ASHRAE 90.1-2016: Appendix G
 Code or Beyond Code
 Program: 2021 Washington State Energy Code
 Project Name: East Town Crossing
 Project # or ID: 810-010
 Project location: Puyallup, Puyallup, WA
 Climate zone: 4C
 Energy Model based on: Not Reported

Were the <i>exceptional calculation</i> methods used?	Not Reported
-------------------------------------------------------	--------------

Table 1: Project Performance Summary

Energy Modeling Outcome	Energy Code tab for Com	
% improvement beyond ASHRAE 90.1-2016	n/a energy cost savings	excluding on-site renewable energy and exceptional calculations
% improvement beyond ASHRAE 90.1-2016	n/a energy cost savings	including on-site renewable energy and exceptional calculations

	kWh	MMBtu
Baseline (≈90.1 2004) Total Electricity Consumption	49,989	171
Proposed Total Electricity Consumption	68,215	233
Total Electricity Consumption Savings (wrt ≈90.1 2004)	-18,226	-62

	therm	MMBtu
Baseline (≈90.1 2004) Total Fuel Consumption		266
Proposed Total Fuel Consumption		0
Total Fuel Consumption Savings (wrt ≈90.1 2004)		266

	Baseline (≈90.1 2004)	Proposed
Electricity Consumption [MMBtu]	171	233
Fuel Consumption [MMBtu]	266	0
Total Energy Consumption [MMBtu]	437	233

Compliance Form tab(s) and table(s): Compliance Calculations - Table 5

Table 2: Renewable Energy & Exceptional Calculation Savings

	Savings [MMBtu]	Percent of Proposed Energy Use	
Renewable Energy	0.0	0.0%	Savings do not exceed the contribution cap
Exceptional Calculations	0.0	0.0%	Savings do not exceed the contribution cap

Compliance Form tab(s) and table(s): Compliance Calculations - Table 5; Renewable Energy - Table 4; Exceptional Calculations - Table 2

Table 3: Building Area Summary

Building Area Type(s)	Conditioned Floor Area, ft ²		Unconditioned Floor Area, ft ²		Spaces not Enclosed, ft ²		Total, ft ²	# of Above Grade Floors	# of Below Grade Floors	Building Performance Factors			
	New Construction	Renovation	New Construction	Renovation	New Construction	Renovation				Cost	Site Energy	Source Energy	GHG Emissions
Multifamily	4,975						4,975			n/a	0.51	n/a	n/a
Sub-total	4,975	-	-	-	-	-	-	-	-	-	-	-	-
Total	4,975		-		-		4,975	-	-	-	-	-	-
Area-Weighted Average BPF										n/a	0.51	n/a	n/a

Compliance Form tab(s) and table(s): General Information - Table 1; Compliance Calculations - Table 6

Table 3b: Dwelling Units

Name	Number of Bedrooms	Floor Area per Unit [ft ²]	Quantity
Manager Apartment	2	1547	1

Compliance Form tab(s) and table(s): General Information - Table 2

Table 4: Summary of Energy Sources

Energy Type	Energy Units	Demand Units	Utility Rate Type	Source-Site Ratio	Greenhouse Gas Emissions			Energy Content MMBtu per Energy Consumption Unit
					Emission Factor Database	Energy Grid	Emission Factor [Metric ton CO ₂ /MMBtu]	
Electricity	kWh	kW		2.8	Default for AHJ/RA	n/a	0.093058	0.003412
Natural Gas	therm	kBtu/hr		1.05	Default for AHJ/RA	n/a	0.05307	0.1

Compliance Form tab(s) and table(s): Energy Sources - Table 1

Table 5: Average Energy Cost per Unit Energy

Energy Type	Energy Consumption Units	Baseline Design \$/Unit	Proposed Design \$/Unit	% Variance in Cost per Unit
Electricity	kWh			
Natural Gas	therm			

Compliance Form tab(s) and table(s): Compliance Calculations - Table 3

Contact Information**Table 6: Project Contacts**

Contact Type	Contact Last Name	Contact First Name	Title	Company	Email*	Project Role
Applicant	0	0	0	0	0	0
Owner/Agent	0	0	0	0	0	0
Designer/Contractor	0	0	0	0	0	0
Lead Energy Modeler	Drebi	Asim	Energy Modeler	Robison Engineering	adrebi@robisonengineering.com	0
Energy Modeler 1	0	0	0	0	0	0

Compliance Form tab(s) and table(s): Contact Information - Table 1

*See Table 1 on the Contact Information tab for contact phone numbers.

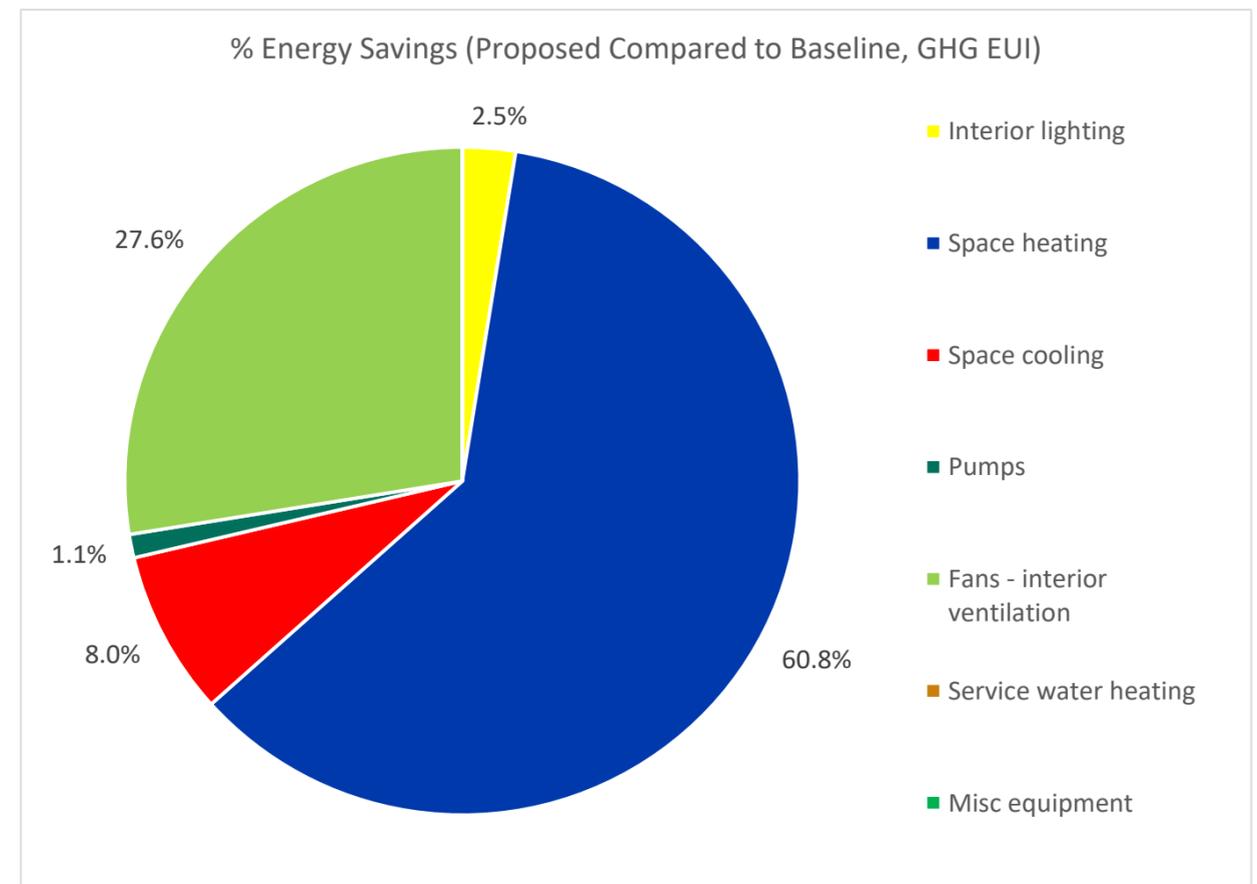
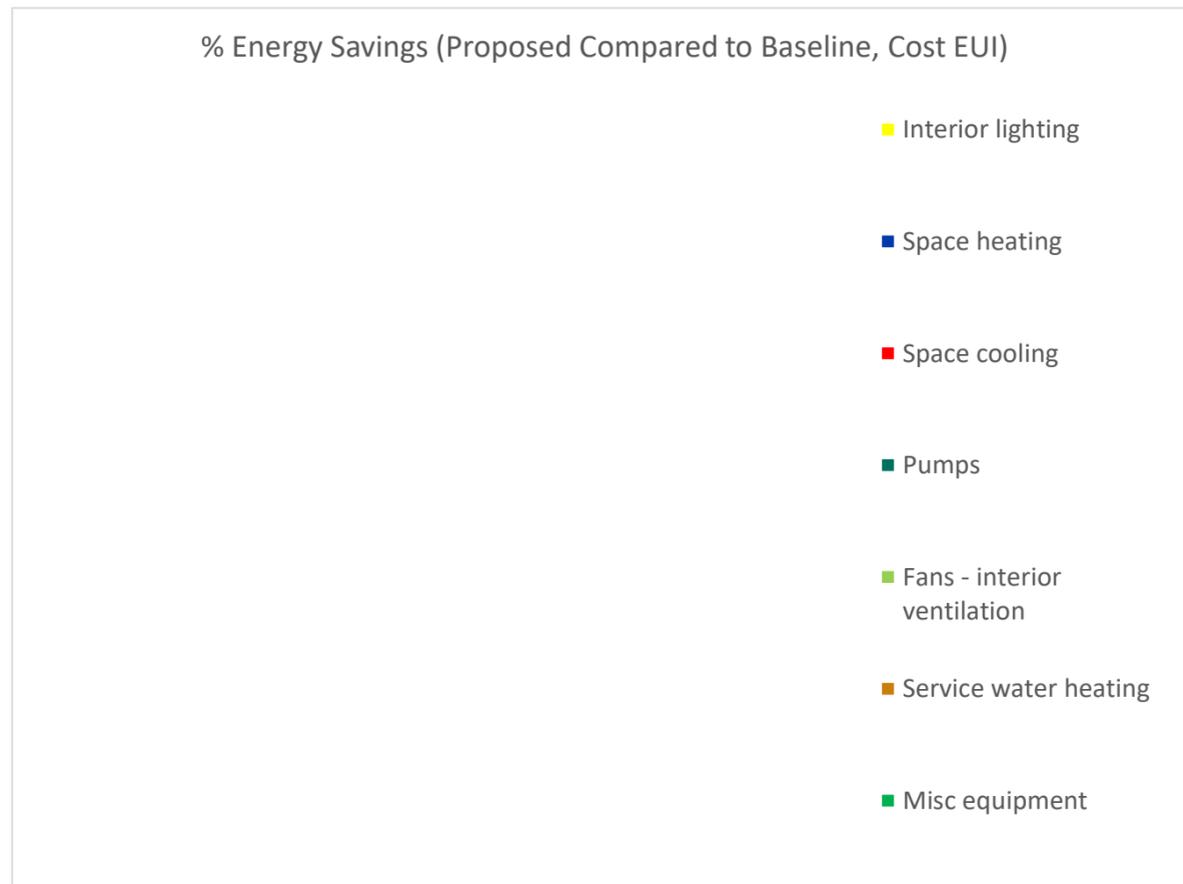
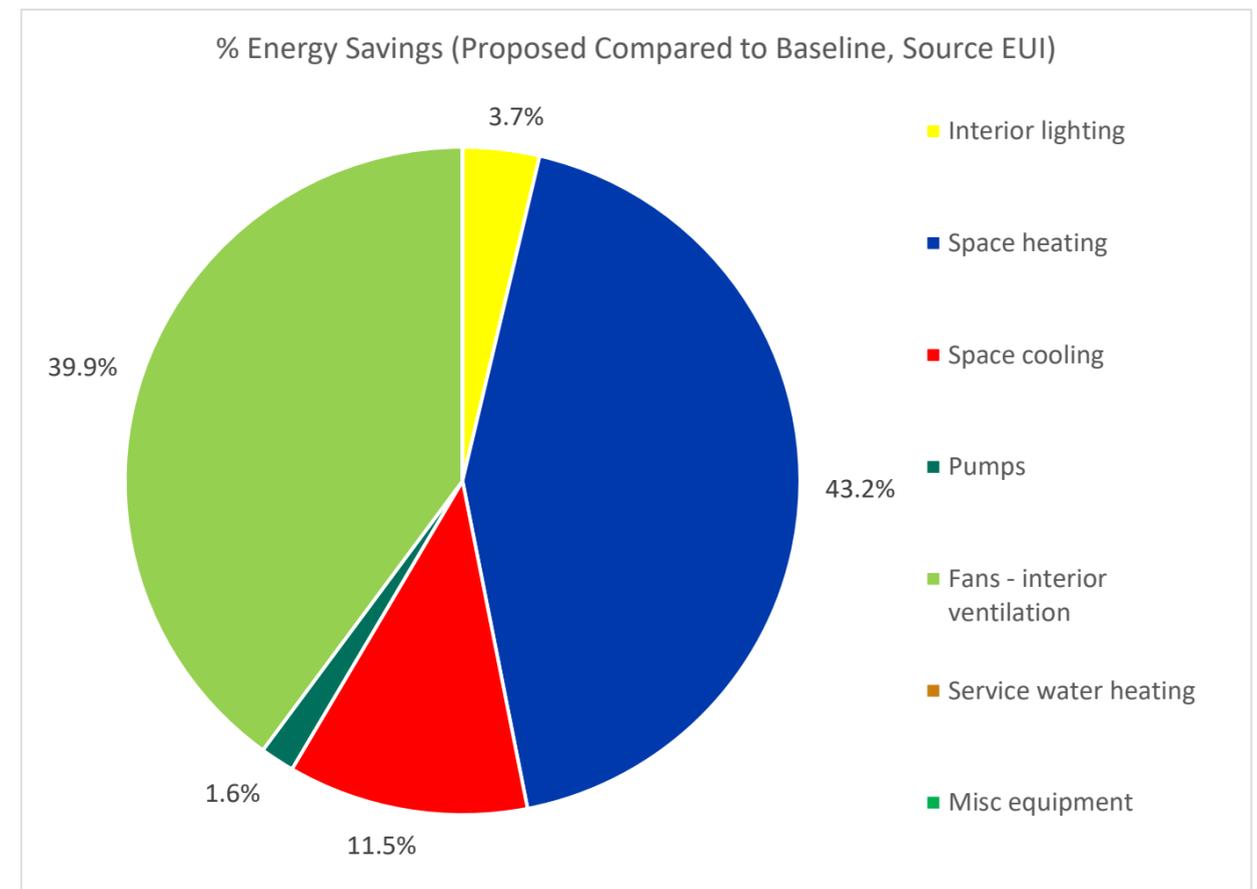
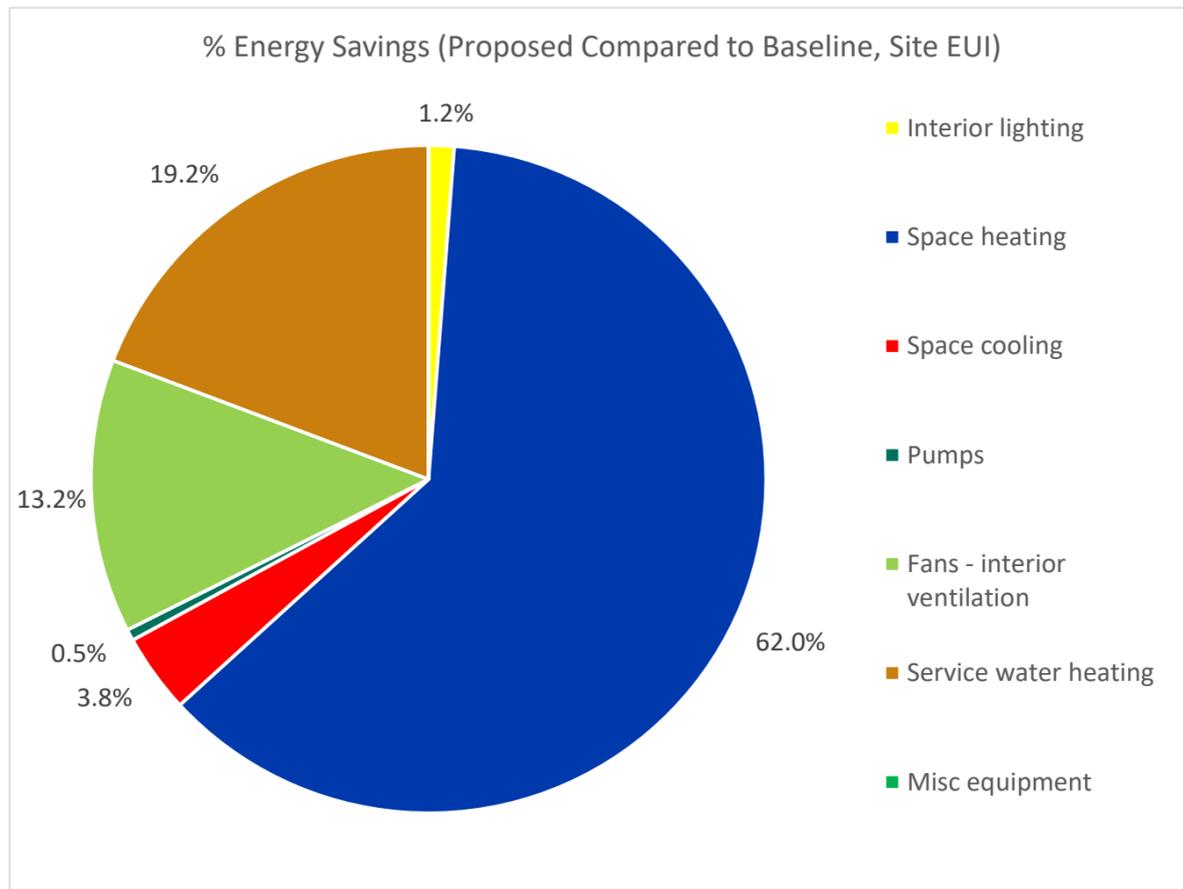
Project Performance and Compliance Outcome

Table 7: Baseline vs Proposed Energy Use Intensity (EUI) by End-use

End-use	Site Energy Use Intensity (kBtu/sf/yr)			Source Energy Use Intensity (kBtu/sf/yr)			Energy Cost Intensity (\$/sf/yr)			GHG Emissions Intensity (kg CO2/sf/yr)		
	Proposed	Baseline	% Savings	Proposed	Baseline	% Savings	Proposed	Baseline	% Savings	Proposed	Baseline	% Savings
Interior lighting	2.5	3.0	16.6%	7.0	8.4	16.6%	\$0.0	\$0.0	-	0.2	0.3	16.6%
Space heating	5.8	31.2	81.3%	16.3	32.8	50.2%	\$0.0	\$0.0	-	0.5	1.7	67.2%
Space cooling	1.3	2.9	54.7%	3.6	8.0	54.7%	\$0.0	\$0.0	-	0.1	0.3	54.7%
Pumps	0.0	0.2	100.0%	0.0	0.6	100.0%	\$0.0	\$0.0	-	0.0	0.0	100.0%
Fans - interior ventilation	9.2	14.6	37.2%	25.7	40.8	37.2%	\$0.0	\$0.0	-	0.9	1.4	37.2%
Service water heating	14.4	22.3	35.4%	40.3	23.4	-72.3%	\$0.0	\$0.0	-	1.3	1.2	-13.3%
Misc equipment	13.6	13.6	0.0%	38.1	38.1	0.0%	\$0.0	\$0.0	-	1.3	1.3	0.0%
Renewable Energy	0.0	-	-	0.0	-	-	\$0.0	-	-	0.0	-	-
Exceptional Calculations	0.0	-	-	0.0	-	-	\$0.0	-	-	0.0	-	-
Total	46.8	87.8	46.7%	131.0	152.1	13.9%	\$0.0	\$0.0	-	4.4	6.0	27.8%

Impactful = impactful enduses as defined in the [Review Manual](#)

Compliance Form tab(s) and table(s): Energy Performance Summary - Table 1



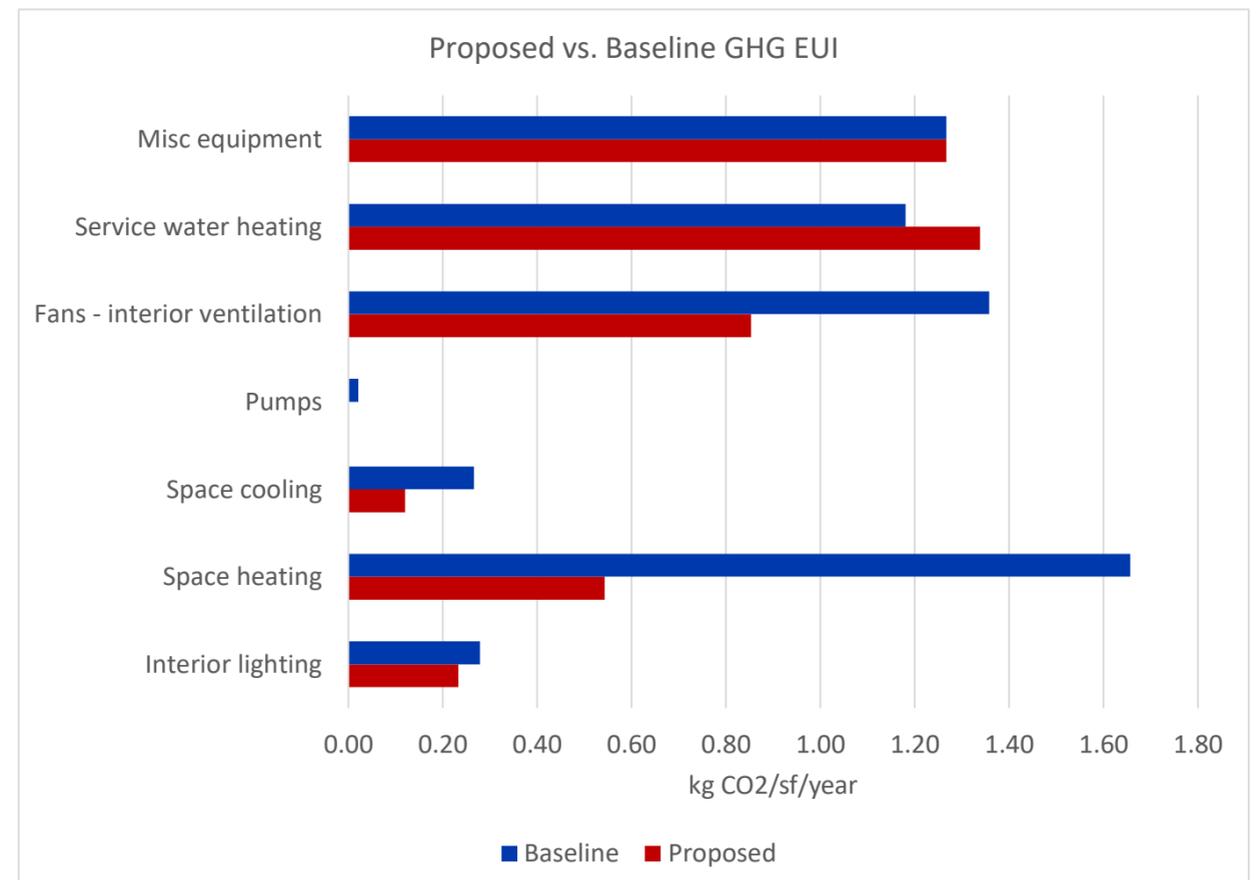
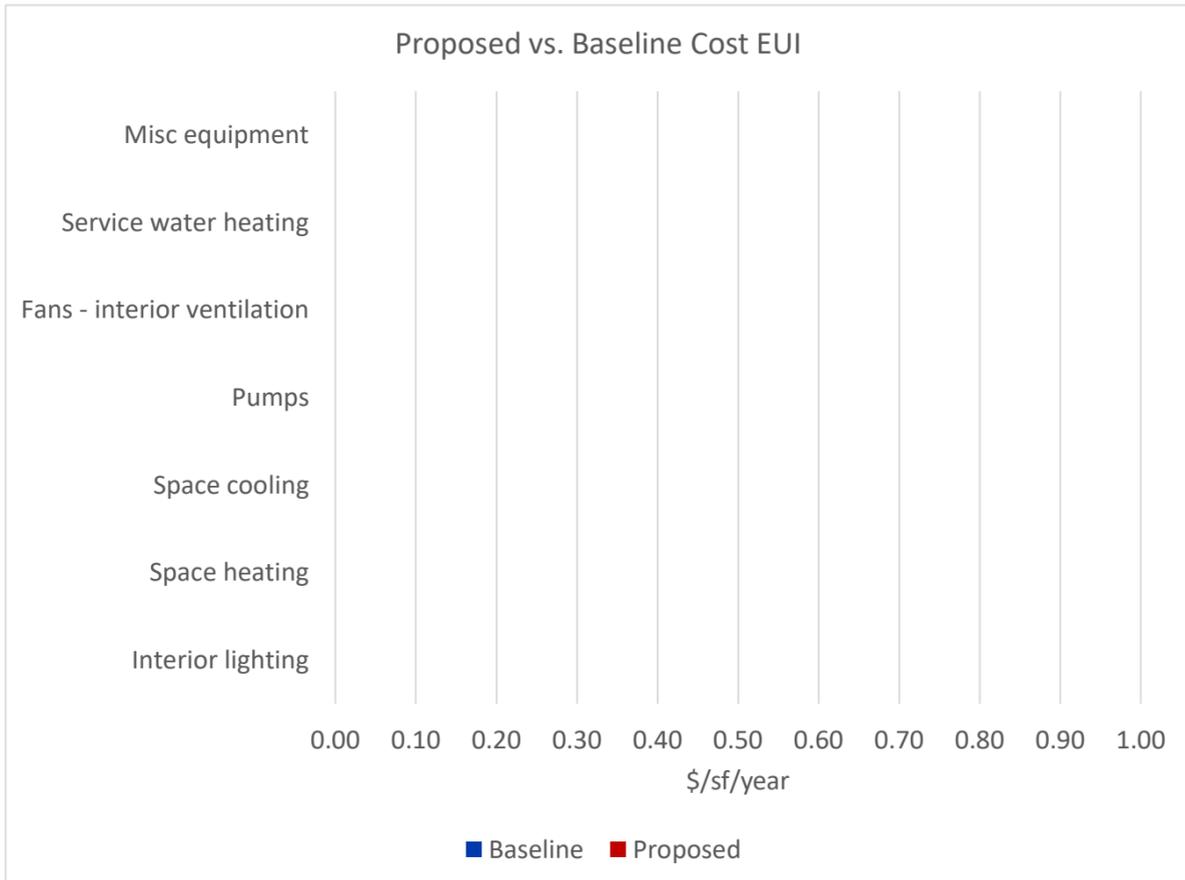
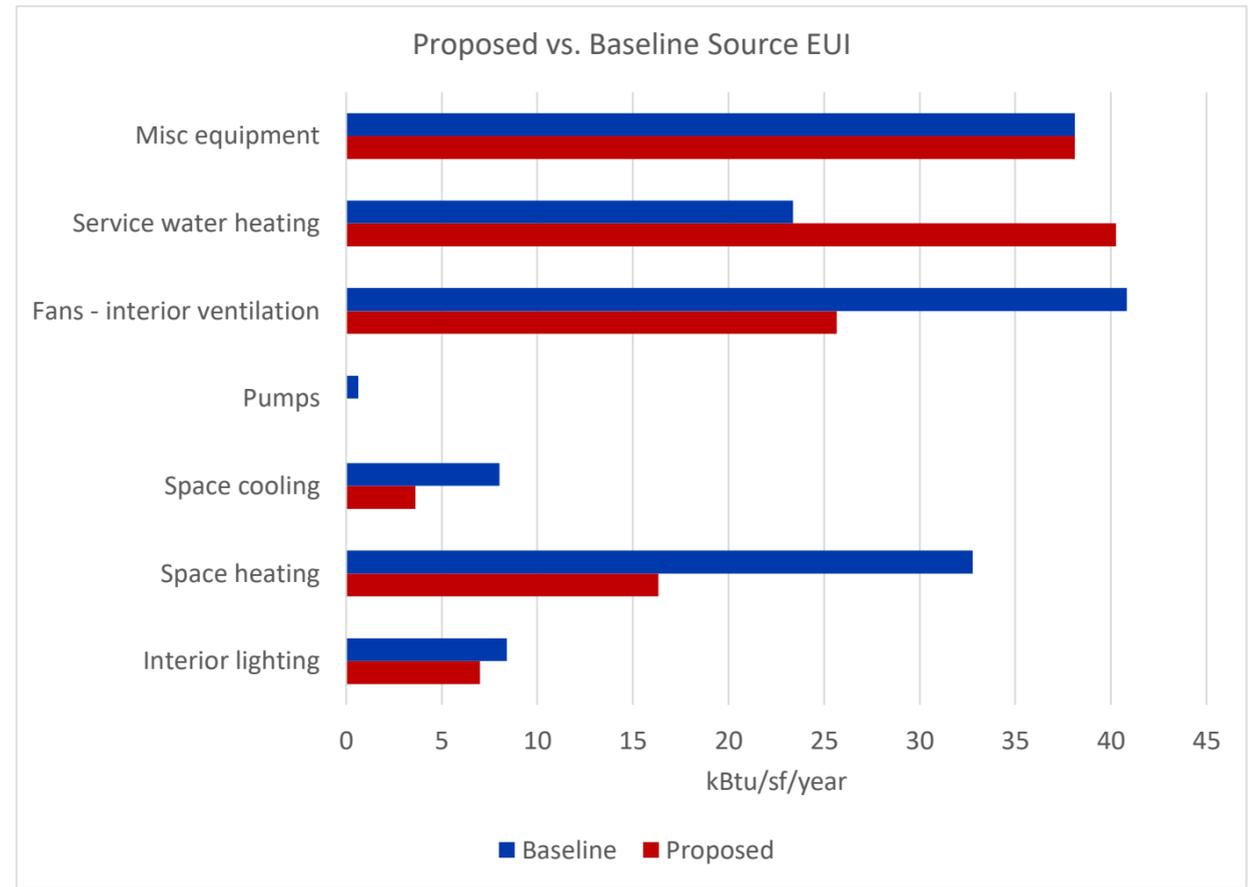
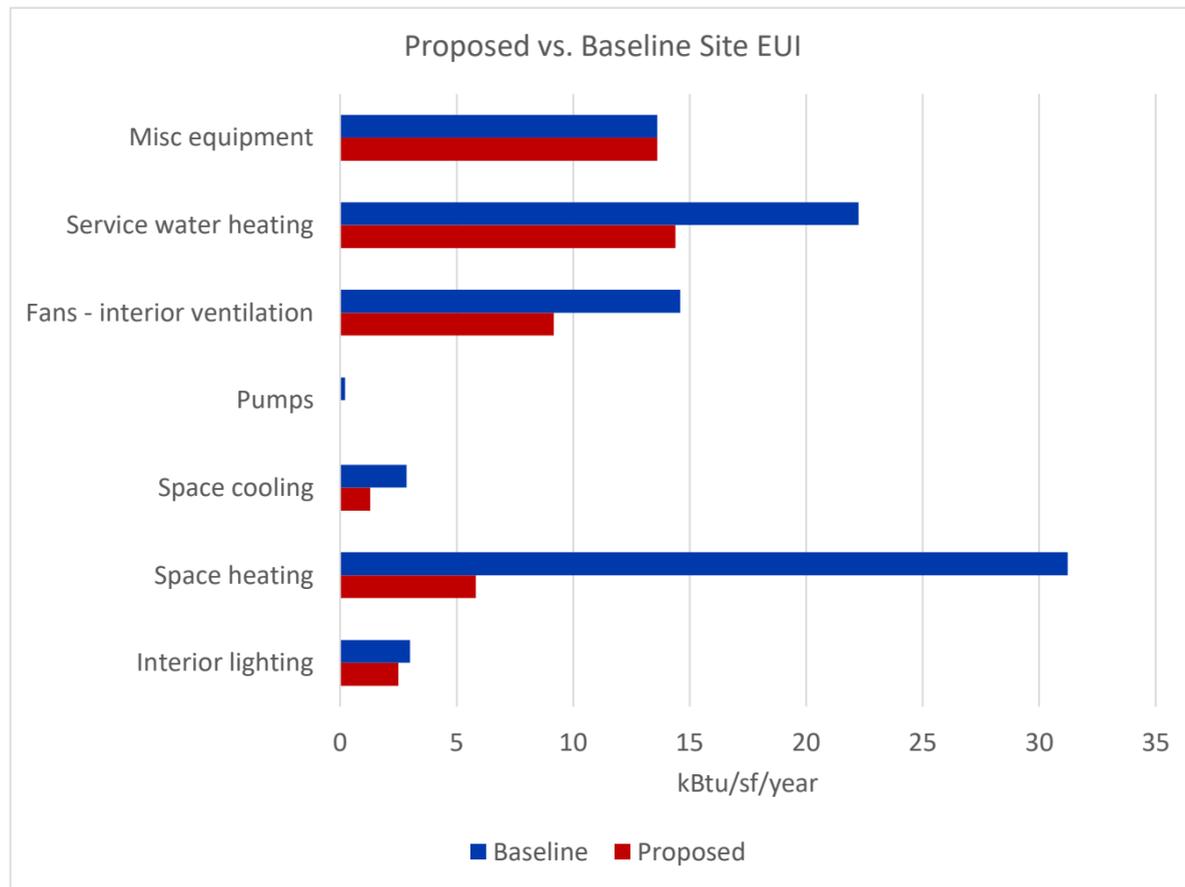


Table 8: Baseline and Proposed Design Energy by End-use Site Energy and Demand Excluding Renewable Energy and Exceptional Calculations

End-use	Unregu- lated?	Energy Type	Annual Site Energy				Energy Demand Units	Non-Coincident Peak Demand	
			Baseline	Proposed	Baseline End- use % of Total	Percent Contribu- tion to Savings*		Average Baseline Design	Proposed
			MMBtu	MMBtu	%	%			
Interior lighting		Electricity	15	12	3.4%	1.2%	kW		
Interior lighting (unregulated)	X	Electricity					kW		
Exterior lighting		Electricity					kW		
Space heating		Natural Gas	155		35.6%	76.2%	kBtu/hr		
Space heating		Electricity		29		-14.2%	kW		
Heat pump supplemental heater		Electricity					kW		
Space cooling		Natural Gas					kBtu/hr		
Space cooling		Electricity	14	6	3.3%	3.8%	kW		
Pumps		Electricity	1		0.3%	0.5%	kW		
Heat rejection		Electricity					kW		
Fans - interior ventilation		Electricity	73	46	16.6%	13.2%	kW		
Fans - parking garage		Electricity					kW		
Service water heating		Natural Gas	111		25.4%	54.3%	kBtu/hr		
Service water heating		Electricity		72		-35.1%	kW		
Misc equipment	X	Natural Gas					kBtu/hr		
Misc equipment	X	Electricity	68	68	15.5%		kW		
Industrial process	X	Electricity					kW		
Refrigeration equipment (regulated)		Electricity					kW		
Refrigeration equipment (unregulated)	X	Electricity					kW		
Elevators and escalators		Electricity					kW		
Other regulated		Natural Gas					kBtu/hr		
Other regulated		Electricity					kW		
Other unregulated	X	Natural Gas					kBtu/hr		
Other unregulated	X	Electricity					kW		

Compliance Form tab(s) and table(s): Compliance Calculations - Table 2, Table 5

*Percent contribution to savings is calculated as the savings (baseline - proposed MMBtu) for each end use divided by the total savings from all end uses.

Table 9: Regulated and Unregulated Energy Consumption by Fuel Type

Fuel	Regulated Consumption [MMBtu]		Unregulated Consumption [MMBtu]	
	Baseline	Proposed	Baseline	Proposed
Electricity	103	165	68	68
Natural Gas	266			

Compliance Form tab(s) and table(s): Compliance Calculations - Table 5

Table 10: Unmet Load Hours

Unmet Loads	Proposed Design	Baseline Design
Compliance		
Total		
Number of hours heating loads are not met		
Number of hours cooling loads are not met		

Compliance Form tab(s) and table(s): Compliance Calculations - Table 1

Table 11: Compliance Calculations

Parameter	Symbol	Performance Metric			
		Cost \$	Site Energy MMBtu	Source Energy MMBtu	GHG Emissions Mt CO2e
Proposed building performance before site-generated renewable energy and exceptional calculations	PBP nre_nec	-	-	-	-
Proposed design on-site renewable savings	-	-	-	-	-
Exceptional calculations savings excluding on-site renewable energy	-	-	-	-	-
Proposed building performance including on-site renewable energy and exceptional calculations	PBP	\$0	0	0	0

Proposed building performance including exceptional calculations and excluding on-site renewables	PBPnre	\$0	0	0	0
Baseline building unregulated energy, GHG emissions, and/or energy cost	BBUEC	-	68	190	6
Baseline building regulated energy, GHG emissions, and/or energy cost	BBREC	-	369	567	24
Baseline building performance	BBP	-	437	757	30
Building Performance Factor	BPF	n/a	0.51	n/a	n/a
Performance Index Target	PCIt	n/a	0.59	n/a	n/a
Performance index without on-site renewable energy and exceptional calculations	PCI nre_nec	-	0.0	0.0	0.0
Performance index including exceptional calculations	PCI ec	-	0.0	0.0	0.0
Performance Index including exceptional calculations and on-site renewable energy	PCI	-	0.0	0.0	0.0
Performance Index adjusted based upon ASHRAE 90.1-2019 Section 4.2.1.1	PCladjusted	-	-	-	-
% improvement beyond ASHRAE 90.1-2016, excluding proposed design on-site renewable energy and exceptional calculations	-	n/a	100.0%	n/a	n/a
% improvement beyond ASHRAE 90.1-2016, including proposed design on-site renewable energy and exceptional calculations	-	n/a	-	n/a	n/a

Please see the 2021 Washington State Energy Code tab for project compliance.

Compliance Form tab(s) and table(s): Compliance Calculations - Table 7

Building Envelope

For each component below = exceeds the mandatory/prescriptive requirement = does not meet the mandatory/prescriptive requirement

Table 12: Surface Area Summary by Orientation and Building Area Type

Building Area Type	Orientation	Surface Type	New, Existing, Remain, or Retrofit	Surface Type Area, Gross ft ²	Proposed Design				Baseline Design				Prescriptive
					Weighted Average U/C/F-Factor	Fenestration Area		Weighted Average U/C/F-Factor	Fenestration Area				
						ft ²	%		ft ²	%			

Compliance Form tab(s) and table(s): Proposed Envelope Assemblies - Table 1, Table 2; Envelope Areas - Table 1, Table 2, Table 3

*Weighted average U/C/F factor includes opaque assemblies and fenestration.

Table 13: Surface Area Summary by Orientation and Surface Type

Orientation	Surface Type	New, Existing, Remain, or Retrofit	Surface Type Area, Gross ft ²	Proposed Design				Baseline Design				Prescriptive
				Weighted Average U/C/F-Factor*	Fenestration Area		Weighted Average U/C/F-Factor*	Fenestration Area				
					ft ²	%		ft ²	%			

Compliance Form tab(s) and table(s): Proposed Envelope Assemblies - Table 1, Table 2; Envelope Areas - Table 1, Table 2, Table 5

*Weighted average U/C/F factor includes opaque assemblies and fenestration.

Table 14a: Surface Area Summary by Surface Type

Surface Type	Surface Type Area, Gross ft ²	Proposed Design				Baseline Design				Prescriptive**	
		Weighted Average U/C/F-Factor*	Fenestration Area		Weighted Average U/C/F-Factor*	Fenestration Area		Weighted Average U/C/F-Factor*	Fenestration Area		
			ft ²	%		ft ²	%		ft ²	%	
Roof	-	-	-	-	-	-	-	-	-	-	-
Above-Grade Exterior Wall	-	-	-	-	-	-	-	-	-	-	-
Below-Grade Exterior Wall	-	-	-	-	-	-	-	-	-	-	-
Exposed Floor	-	-	-	-	-	-	-	-	-	-	-
Slab-On-Grade Floor	-	-	-	-	-	-	-	-	-	-	-
Below-Grade Floor	-	-	-	-	-	-	-	-	-	-	-
Above and Below-Grade Exterior Wall	-	-	-	-	-	-	-	-	-	-	-

Compliance Form tab(s) and table(s): Proposed Envelope Assemblies - Table 1, Table 2; Envelope Areas - Table 1, Table 2, Table 6

*Weighted average U/C/F factor includes opaque assemblies and fenestration.

**Prescriptive requirements assume no exceptions are applicable.

Lighting

For each component below = exceeds the mandatory/prescriptive requirement = does not meet the mandatory/prescriptive requirement

Table 15: Interior Lighting Compliance Method

Building Area Type	Compliance Method
Multifamily	

Compliance Form tab(s) and table(s): Lighting Space Types - Table 1

Table 16: Interior Lighting by Space Type

Space/Building Area Type	Floor Area [ft ²]	Wattage			Lighting Power Density			OS Credit Applied to Proposed Lighting Schedules	% Savings of Proposed Design Relative to the Allowance per 90.1 Table 9.4.2-2+Exempt	Percent Contribution to Savings between the Baseline and Proposed Wattage
		Proposed Design Wattage	Baseline Design Wattage	Prescriptive Wattage	Proposed Design LPD	Baseline Design LPD	Prescriptive LPD			
Provide the necessary inputs on Lighting Space Types	-	-	-	-	-	-	-	-	0.0%	0.0%
Total	-	-	-	-	-	-	0.00	-	-	-

Compliance Form tab(s) and table(s): Interior Lighting Counts - Table 1; Interior Lighting Summary - Table 1

 = Top three space and/or building area types percent contribution to interior lighting wattage savings.

Table 17: Exterior Lighting Summary

Type	Proposed Design Lighting Power including Exempt Lighting [Watt]	Baseline Design including Exempt Lighting [Watt]	Total Exterior Lighting Power Allowance, per 90.1 Table 9.4.2-2 + Exempt [Watt]	% Savings of Proposed Design Relative to Allowance
Total Tradeable	-	-	-	0.0%
Total Non-tradeable	-	-	-	0.0%
Base Site Allowance	-	-	-	0.0%
Total	-	-	-	0.0%

Compliance Form tab(s) and table(s): Exterior Lighting - Table 1, Table 2

Heating, Ventilation, and Air Conditioning

For each component below = exceeds the mandatory/prescriptive requirement = does not meet the mandatory/prescriptive requirement

Table 18a: Baseline HVAC Air-Side System Summary

Modeled System Types	# of Systems	Heating		Cooling		Airflow		Fan Power	
		Total Heating Capacity, kBtu/h	Modeled Weighted Average Heating Efficiency	Total Cooling Capacity, kBtu/h	Modeled Weighted Average Cooling Efficiency, COPnfcooling	Total Supply CFM	Total OA CFM	Total kW (Supply + Return + Exhaust + Terminal Fans)	Total Fan kW/CFMs
Sum			-		-				-

Compliance Form tab(s) and table(s): Baseline HVAC PRM - Table 1a, Table 2a, Table 3a

Table 18b: Proposed HVAC Air-Side System Summary

Modeled System Types (Heating equipment/Cooling equipment/Supply fan control*)	# of Systems	Heating			Cooling			Airflow		Fan Power	
		Total Heating Capacity, kBtu/h	Weighted Average Heating Efficiency	Weighted Average Mandatory Heating Efficiency Requirement	Total Cooling Capacity, kBtu/h	Cooling Efficiency, Full Load/Part Load	Weighted Average Mandatory Cooling Efficiency Requirement, Full Load/Part Load	Total Supply CFM	Total OA CFM	Total kW (Supply + Return + Exhaust + Terminal Fans)	Total Fan kW/CFMs
Sum			-	-		-	-				-

Compliance Form tab(s) and table(s): Proposed HVAC - Table 1a, Table 2a, Table 3

*CV = Constant volume

*VAV = Variable air volume

Table 19: Air-Side Heating and Cooling Coil Total Capacities

Fuel	Heating Capacity [kBtu/hr]		Cooling Capacity [kBtu/hr]	
	Proposed Design	Baseline Design	Proposed Design	Baseline Design
Electricity	0	0	0	0
Fossil Fuel	0	0		
On-site Boiler Plant	0	0		
On-site Chiller Plant			0	0
Purchased Heat	0	0		
Purchased CHW			0	0
Total	0	0	0	0

Compliance Form tab(s) and table(s): Proposed HVAC - Table 1b; Baseline HVAC PRM - Table 1b

Table 20: Fan System Design, Power and Controls Summary (CV versus VAV)

Fan Type	Constant Volume						Variable Volume					
	Proposed Design			Baseline Design			Proposed Design			Baseline Design		
	CFM	kW	kW/CFMs									
Supply Fan (SF)	0	0	0	0	0	0	0	0	0	0	0	0
Relief/Return Fan (RF)	0	0	0	0	0		0	0	0	0	0	
Exhaust Fan (EF)	0	0	0	0	0		0	0	0	0	0	
Subtotal	0	0	0	0	0	0	0	0	0	0	0	0
Terminal Units Fan (TUF)		0			0			0			0	
Total		0			0			0			0	

Compliance Form tab(s) and table(s): Baseline HVAC PRM - Table 3b

Table 21: Total Fan System Design, Power and Controls Summary

Fan Type	Total Fan Power									
	Proposed Design					Baseline Design				
	CFM	kW	kW/CFMs	% of Subtotal kW	Outdoor Air (OA) CFM	CFM	kW	kW/CFMs	% of Subtotal kW	Outdoor Air (OA) CFM
Supply Fan (SF)	0	0	0	0.0%		0	0	0	0.0%	
Relief/Return Fan (RF)	0	0	0	0.0%		0	0		0.0%	
Exhaust Fan (EF)	0	0	0	0.0%		0	0		0.0%	
Subtotal	0	0	0	0.0%		0	0	0	0.0%	
Terminal Units Fan (TUF)		0					0			
Total		0			0		0			0

Compliance Form tab(s) and table(s): Baseline HVAC PRM - Table 3b

Table 22: Summary of Baseline and Proposed Heating Plants

Proposed	Baseline
N/A	Modeled heating plant: Type: Fuel: Quantity: Total capacity, Btu/h: Efficiency:

Compliance Form tab(s) and table(s): Proposed HVAC - Table 7a; Baseline HVAC PRM - Table 5a

Table 23: Summary of Baseline and Proposed Cooling Plants

Proposed	Baseline
N/A	N/A

Compliance Form tab(s) and table(s): Proposed HVAC - Table 6a; Baseline HVAC PRM - Table 4a

Table 24: Chilled Water (CHW), Hot Water (HW) and Condenser Water (CW) Loops Summary

Loop Type	Total (Primary + Secondary) [kW]					
	Proposed Design			Baseline		
	Variable Flow	Constant Flow	Total	Variable Flow	Constant Flow	Total
All						

Compliance Form tab(s) and table(s): Proposed HVAC - Table 5a, Table 5b; Baseline HVAC PRM - Table 6a, Table 6b

Service Water Heating

For each component below = exceeds the mandatory/prescriptive requirement = does not meet the mandatory/prescriptive requirement

Table 25: Summary of Baseline and Proposed Service Water Heaters

Component	Proposed	Baseline
-----------	----------	----------

Compliance Form tab(s): Service Water Heating - Table 1, Table 2

Table 26: Service Water Heating Load Calculator Summary

Total Peak Service Hot-Water Load <u>Including</u> Multifamily (If Applicable)	Proposed Design Service HW Load [Btu/hr]	Baseline Design Service HW Load [Btu/h]	Proposed Design Service HW Peak Flow [gallons / minute]	Baseline Design Service HW Peak Flow [gallons / minute]
	0	0	0	0

Compliance Form tab(s) and table(s): Service Water Heating - Table 6

Plug, Process, and Other Loads

Table 27: Plug, Process and Other Loads Summary

Type of Load	Proposed Design			Baseline Design			Percent Savings between the Baseline and Proposed Energy Consumption
	Load [kW]	Effective Full Load Hours (EFLHs)	Energy Consumption [kWh]	Load [kW]	Effective Full Load Hours (EFLHs)	Energy Consumption [kWh]	
Misc. Equipment Loads	0.0	-	0	0.0	-	0	
Dwelling Units Appliances & Consumer Elecs.	0.0	-	0	0.0	-	0	
Common Area Laundry	0.0	-	0	0.0	-	0	
Regulated Commercial Refrigeration	0.0	-	0	0.0	-	0	
Process Equipment	0.0	-	0	0.0	-	0	
Other Motors	0.0	-	0	0.0	-	0	
Elevator Motors	See Table 6b	See Table 6b	0	See Table 6c	See Table 6c	0	
Total	0.0	-	0	0.0	-	0	

Compliance Form tab(s) and table(s): Plug, Process, and Other Loads - Table 8

Table 28a: Miscellaneous Equipment Loads

Building Area or Space Type	Area [ft²]	Effective Full Load Hours (EFLHs)	Basis of Assumed Equipment Power Density (EPD)	Proposed EPD [W/ft²]	Baseline EPD [W/ft²]	Same Schedules Used in Proposed and Baseline design?
Multifamily, common spaces	4,975	3,285	0	0	0	0

Compliance Form tab(s) and table(s): Plug, Process, and Other Loads - Table 1

Notes

Table 28b: Multifamily Miscellaneous Equipment and Appliances Modeling Inputs

Equipment type	Total Area of Dwelling Units or Total Area of Common Area Laundry Rooms [ft²]	Effective Full Load Hours of Miscellaneous Equipment Operation Per Year	Miscellaneous Electricity Equipment Power Density [Watts/ft²]		Miscellaneous Natural Gas Equipment Power Density [Watts/ft²]		Equipment Hot Water Loads [Gal/year]	
			Proposed	Baseline	Proposed	Baseline	Proposed Design	Baseline
Dwelling Unit Appliances	-	2,117	0	0	0	0	0	0
Dwelling Unit Consumer Electronics & Misc. Plug Loads	-	2,117	0.5	0.5	0	0	0	0
Common Area Laundry	-	3,285	0	0	0	0	0	0

Compliance Form tab(s) and table(s): Plug, Process, and Other Loads - Table 2b

Renewable Energy

Table 29: Uncapped Renewable Energy Savings Summary

Offset Energy Source	Offset Energy Savings	Cost Savings \$	Site Energy Savings [MMBtu]	Source Energy Savings [MMBtu]	GHG Emissions [Metric Tons CO ₂ Equivalent]
0	0				
Total	n/a				

Compliance Form tab(s) and table(s): Renewable Energy - Table 4

Exceptional Calculations

Code/Beyond Code Program

2021 Washington State Energy Code

Limits on Nonmandatory Measures per Section C407.3.1 of the 2021 Washington State Energy Code

Allowable Total UA	696
Proposed Total UA	792

Proposed, Percent Greater than Allowable	13.8%
------------------------------------------	-------

On-site and Off-site Renewable Energy (C407.3.2)

System Name	Renewable Energy Source	Connection	Annual Site Energy Savings (MMBtu)	Renewable Energy Factor from Table C411.2.1	Adjusted Annual Site Energy Savings (MMBtu)
	0		0.0		0.0
	0		0.0		0.0
	0		0.0		0.0
	0		0.0		0.0
	0		0.0		0.0
Total (MMBtu)					0.0

Low-carbon District Energy Use (C407.3.3)

Low-carbon District Energy Type	Fully Operational Prior to the Final Inspection?	Waste/recoverable Heat Exported to the Low-carbon District Energy System (MMBtu)		Energy Credit Accounting for Seasonal Utilization Factors from C407.3.3 (MMBtu)
		October-December + January-March	April-September	
District heating and cooling or heating only systems	0	0	0	0
District energy exchange systems	0	0	0	0

Mandatory Compliance Measures for Total Building Performance Method (Table C407.2)

Section ^a	Title	Comments	Complies or Not Applicable	Explanation for N/A	Plan/Spec Reference
Envelope					
C401	Thermal envelope certificate		Complies		0
C402.2.7	Airspaces		Complies		0
C402.5	Air Leakage		Complies		0
Mechanical					
C403.1.2	Calculation of heating and cooling loads		Complies		0
C403.1.3	Data centers		Complies		0
C403.2	System design		Complies		0
C403.3.1	Equipment and system sizing		Complies		0
C403.3.2	HVAC equipment performance requirements		Complies		0
C403.3.3	Hot gas bypass limitation		Complies		0
C403.3.4.4	Boiler turndown		Complies		0
C403.4.1	Thermostatic controls		Complies		0
C403.4.2	Off-hour controls		Complies		0
C403.4.7	Combustion heating equipment controls		Complies		0
C403.4.8	Group R-1 hotel/motel guestrooms	See Section C403.7.4	Complies		0
C403.4.9	Group R-2 and R-3 dwelling units		Complies		0
C403.4.10	Group R-2 sleeping units		Complies		0
C403.4.11	Direct digital control systems		Complies		0
C403.5.5	Economizer fault detection and diagnostics (FDD)		Complies		0
C403.7	Ventilation and exhaust systems	Except for C403.7.6	Complies		0
C403.8	Fan and fan controls		Complies		0
C403.9.1.1	Variable flow controls	For cooling tower fans ≥ 7.5 hp	Complies		0
C403.9.1.2	Limitation on centrifugal fan cooling towers	For open cooling towers	Complies		0

C403.10	Construction of HVAC elements		Complies		0
C403.11	Mechanical systems located outside of the building thermal envelope		Complies		0
C403.14	Commissioning		Complies		0
Service Water Heating					
C404	Service Water Heating	Except for C404.2.1	Complies		0
Lighting and Electrical					
C405	Electrical power and lighting systems		Complies		0
Other Requirements					
C407	Total Building Performance		Complies		0
C408	System commissioning		Complies		0
C409	Energy metering		Complies		0
C410	Refrigeration requirements		Complies		0
C411 ^b	Renewable energy		Complies		0
C412	Compressed air systems		Complies		0

- a. Reference to a code section includes all the relative subsections except as indicated in the table.
- b. Compliance with any of these sections includes compliance with any exception to that section.

Compliance Calculations for C407.3.2.1 - Regulated Site Energy Target

Parameter	Symbol	Site Energy (MMBtu)
Proposed building performance	PBP	0
Exceptional calculations savings (regulated loads savings only)	-	0
Proposed building performance excluding unregulated load savings	PBP _{nu}	233
Proposed building performance including credit for low-carbon district energy and excluding unregulated load savings	PBP _{nu_de}	233
Proposed building performance including exceptional calculations and credit for low-carbon district energy and excluding unregulated load savings	PBP _{nu_de_ec}	233
Baseline building unregulated energy	BBUEC	68
Baseline building regulated energy	BBREC	369
Baseline building performance	BBP	437
Building Performance Factor	BPF	1
Performance index target	PCI _t	1
Performance index target excluding exceptional calculations	PCI _{nec}	1
Performance index target including exceptional calculations	PCI	1
% improvement beyond ASHRAE 90.1-2016, excluding renewable energy, unregulated loads savings, and exceptional calculations	-	0
% improvement beyond ASHRAE 90.1-2016, including exceptional calculations and excluding renewable energy and unregulated loads savings	-	0

Compliance Calculations for C407.3.2.2 - Total Site Energy Target

Parameter	Symbol	Site Energy (MMBtu)
Proposed building performance	PBP	0
Exceptional calculations savings	-	0
Proposed building performance including renewable energy contributions	PBP _{re}	0
Proposed building performance including renewable energy and credit for low-carbon district energy	PBP _{re_de}	0
Proposed building performance including renewable energy, credit for low-carbon district energy, and exceptional calculations	PBP _{re_de_ec}	0
Baseline building performance	BBP	437
Performance index target	PCI _t	1
Performance index target excluding exceptional calculations	PCI _{nec}	0
Performance index target including exceptional calculations	PCI	0
% improvement beyond ASHRAE 90.1-2016, excluding exceptional calculations	-	1
% improvement beyond ASHRAE 90.1-2016, including exceptional calculations	-	1