



ENVELOPE COMPLIANCE SUMMARY

2021 WSEC Compliance Forms for Commercial Buildings including Group R2, R3 & R4 over 3 stories and all R1

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Project & Applicant Information	Project Title	WSF-International Village - 2021 WSEC		For Building Department Use:	Date: Oct 30, 2024
	Project Address	110 9TH AVE SW Puyallup, WA 98371			
	Applicant Name	Song Cho			
	Applicant Phone	509-432-4651			
	Applicant Email	songyi.cho@hotmail.com			
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com					

General Occupancy	All Commercial	General Building Use Type(s)	Dining, Restaurant/Bar	Building Cond. Floor Area	9,205
Project Scope	New Building	Space Conditioning Categories	Fully Conditioned Walk-in Cooler Walk-in Freezer	Project Cond. Floor Area	9,205
				Floors Above Grade	2
				Compliance Method	General Prescriptive
Envelope Project Description	Demo existing building and construct a new building				

Envelope Compliance Scope and Method	Scope	Space Conditioning Category	Compliance Method	WWR/SRR per Category	UA Calculation Adjustment	Fenestration Alternates	Compliance Verification
	New Building	Walk-in Freezer	Prescriptive	NA	No Calculation Adjustments allowed	NA	COMPLIES
	New Building	Walk-in Cooler	Prescriptive	NA	No Calculation Adjustments allowed	NA	COMPLIES
	New Building	Fully Conditioned	Component performance	0.21% / 0%	None selected	No alternates selected	COMPLIES

Additional Energy Efficiency (AEC) Measures Included	No envelope or miscellaneous additional energy efficiency measures included in project	Load Management (LDM) Measures Included	No envelope or miscellaneous load management measures included in project
Air Barrier Testing	Standard building thermal envelope test	Air Barrier Comments	

Project Title	WSF-International Village - 2021 WSEC				Date	Oct 30, 2024
Scope & Space Conditioning	NEW BUILDING - WALK-IN FREEZER			Compliance Verification	COMPLIES	
Window-to-wall Ratio	NA	Skylight-to-roof-ratio	NA	Vertical Fenestration Alternate	NA	

Opaque Envelope Assemblies									
				Insulation R-Values					
Roof/Ceiling	Location in Documents	Assembly ID	Assembly Location	Cavity	Continuous (% penetration)	2nd Layer (MB Roof)	U-Factor	Net Area (SF)	
Walk-in freezer ceiling	K Sheet	K Sheet	Interior partition		R-32 (< 0.04%)			223	
Envelope assembly type:				U-Factor Source:					
U-Factor Source Description:									
Walls	Location in Documents	Assembly ID	Assembly Location	Cavity	Continuous (% penetration)	Insulated Wall Furring	U-Factor	Net Area (SF)	
Walk-in freezer wall	K Sheet	K Sheet	Interior partition		R-32 (< 0.04%)			490	
Envelope assembly type:				U-Factor Source:					
U-Factor Source Description:									
Floors and Edges	Location in Documents	Assembly ID	Assembly Location	Cavity	Continuous (% penetration)			U-Factor	Net Area (SF)
Walk-in freezer integral floor	K Sheet	K Sheet	Interior partition		R-28 (< 0.04%)				223
U-Factor Source:				U-Factor Source Description:					
Fenestration & Opaque Door Assemblies									
				Insulation R-Values					
Opaque Doors	Location in Documents	Assembly ID	Assembly Location	Door Insulation			U-Factor	Rough Opening (SF)	
Walk-in freezer door	K Sheet	K Sheet	Interior partition	R-32				21	
U-Factor Source:				U-Factor Source Description:					
Does opaque freezer door have glazing?: No									

Project Title	WSF-International Village - 2021 WSEC				Date	Oct 30, 2024
Scope & Space Conditioning	NEW BUILDING - WALK-IN COOLER			Compliance Verification	COMPLIES	
Window-to-wall Ratio	NA	Skylight-to-roof-ratio	NA	Vertical Fenestration Alternate	NA	

Opaque Envelope Assemblies									
				Insulation R-Values					
Roof/Ceiling	Location in Documents	Assembly ID	Assembly Location	Cavity	Continuous (% penetration)	2nd Layer (MB Roof)	U-Factor	Net Area (SF)	
Walk-in cooler ceiling	K Sheet	K Sheet	Interior partition		R-25 (< 0.04%)			290	
Envelope assembly type:				U-Factor Source:					
U-Factor Source Description:									



Walls	Location in Documents	Assembly ID	Assembly Location	Cavity	Continuous (% penetration)	Insulated Wall Furring	U-Factor	Net Area (SF)
Walk-in cooler wall	K Sheet	K Sheet	Interior partition		R-25 (< 0.04%)			520
	Envelope assembly type:			U-Factor Source:				
	U-Factor Source Description:							
Floors and Edges	Location in Documents	Assembly ID	Assembly Location	Cavity	Continuous (% penetration)		U-Factor	Net Area (SF)
Walk-in cooler integral floor	K Sheet	K Sheet	Interior partition		R-25 (< 0.04%)			290
	U-Factor Source:			U-Factor Source Description:				
Slab-on-grade Floors	Location in Documents	Assembly ID	Assembly Location	Slab Edge	Under Slab		F-Factor	Perimeter Length (SF)
Walk-in cooler slab-on-grade floor	K Sheet	K Sheet						
	Applying slab-on-grade floor exception?: No							
Fenestration & Opaque Door Assemblies								
Opaque Doors	Location in Documents	Assembly ID	Assembly Location	Door Insulation	Insulation R-Values		U-Factor	Rough Opening (SF)
Walk-in cooler door	K Sheet	K Sheet	Interior partition	R-25				21
	U-Factor Source:			U-Factor Source Description:				
	Does opaque cooler door have glazing?: No							

Project Title	WSF-International Village - 2021 WSEC						Date	Oct 30, 2024
Scope & Space Conditioning	NEW BUILDING - FULLY CONDITIONED				Compliance Verification		COMPLIES	
Window-to-wall Ratio	0.21%	Skylight-to-roof-ratio	0%	Vertical Fenestration Alternate	No alternates selected			

Opaque Envelope Assemblies								
Roof/Ceiling	Location in Documents	Assembly ID	Assembly Location	Cavity	Continuous (% penetration)	2nd Layer (MB Roof)	U-Factor	Net Area (SF)
Metal building (purlins)	Main Kitchen + 2nd floor	1/A4.1	Exterior	R-60	R-16 (< 0.04%)	R-16	U-0.013	7,085
	Thermal Spacer Block R-Value: R-0			U-Factor Source:				
	U-Factor Source Description:			Roof Framing Depth (Inches):				
	Roof Framing Spacing (OC):			Is liner system included?: No				
Metal building (purlins)	2nd Floor Deck	2/A4.1	Exterior	R-38	R-16 (< 0.04%)	R-16	U-0.018	2,543
	Thermal Spacer Block R-Value: R-0			U-Factor Source:				
	U-Factor Source Description:			Roof Framing Depth (Inches):				
	Roof Framing Spacing (OC):			Is liner system included?: No				
Walls	Location in Documents	Assembly ID	Assembly Location	Cavity	Continuous (% penetration)	Insulated Wall Furring	U-Factor	Net Area (SF)
Steel-framed - Commercial	E03-Main Kitchen + 2nd floor	1/A4.1	Exterior	R-21	R-0 (< 0.04%)		U-0.102	7,252
	U-Factor Source:			U-Factor Source Description:				
	Framing Depth:			Other Framing Depth:				
	Framing Spacing (OC):							
Steel-framed - Commercial	E01-Satellite Kitchen	1/A4.2	Exterior	R-21	R-10 (< 0.04%)		U-0.050	4,347
	U-Factor Source:			U-Factor Source Description:				
	Framing Depth:			Other Framing Depth:				
	Framing Spacing (OC):							
Steel-framed - Commercial	A2.1 - BATHROOM WALL & A4.2	A4.2	Exterior	R-21	R-4 (< 0.04%)		U-0.072	2,053
	U-Factor Source:			U-Factor Source Description:				
	Framing Depth:			Other Framing Depth:				
	Framing Spacing (OC):							
Mass (precast concrete) - Commercial	6" Stem wall above FF	1/A4.1	Exterior & above grade		R-10 (< 0.04%)	No	U-0.07	2,053
	Does assembly include insulated wall furring?: No			Other Framing Depth:				
	Framing Spacing (OC):			U-Factor Source:				
	U-Factor Source Description:							
Floors and Edges	Location in Documents	Assembly ID	Assembly Location	Cavity	Continuous (% penetration)		U-Factor	Net Area (SF)
Wood-framing/joist	A2.2 & A4.3 - Hall 215	2/A4.3	Exterior	R-60	(< 0.04%)		U-0.016	208
	U-Factor Source:			U-Factor Source Description:				
	Floor Framing Type (Joist, Post & Beam):			Framing Depth:				
	Other Framing Depth:			Framing Spacing (OC):				
Wood-framing/joist	A2.2 & 2/A4.3 - Str 211	2/A4.3	Exterior	R-38	(< 0.04%)		U-0.026	20
	U-Factor Source:			U-Factor Source Description:				
	Floor Framing Type (Joist, Post & Beam):			Framing Depth:				
	Other Framing Depth:			Framing Spacing (OC):				
Slab-on-grade Floors	Location in Documents	Assembly ID	Assembly Location	Slab Edge	Under Slab		F-Factor	Perimeter Length (SF)
Unheated slab	A4	A4	At grade level	R-10			F-0.48	707



	Slab Insulation Method: 4 ft vertical (from top of slab downward)			F-Factor Source:				
	F-Factor Source Description:							
Fenestration & Opaque Door Assemblies								
				Insulation R-Values				
Opaque Doors	Location in Documents	Assembly ID	Assembly Location	Door Insulation			U-Factor	Rough Opening (SF)
Swinging	A7	A7	Exterior				U-0.30	378
	What percentage of this opaque door is glazing?: 50% or less			U-Factor Source:				
	U-Factor Source Description:			Is this a public entrance door?:				
Other Non-Swinging	A2	A7	Exterior				U-0.25	880
	What percentage of this opaque door is glazing?: 50% or less			U-Factor Source:				
	U-Factor Source Description:							
Vertical Fenestration	Location in Documents	Assembly ID	Assembly Location		Shading (PF)	Fenestration SHGC	Fenestration U-Factor	Rough Opening (SF)
Fixed - All other types	A2	A7	Exterior		PF < 0.2	SHGC-0.38	U-0.26	35
	U-Factor & SHGC Source:			U-Factor Source Description:				



Project Title	WSF-International Village - 2021 WSEC							Date	Oct 30, 2024
U x A Calculation			NEW BUILDING - FULLY CONDITIONED			COMPLIES			
Opaque Envelope Assemblies			PROPOSED			TARGET			
Roof/Ceiling	Assembly ID	Roof/Ceiling Assembly U-Factor	Net Area (SF)	U x A	Roof/Ceiling Assembly U-Factor	Net Area (SF)	U x A		
MAIN FLR DECK: BATT R-60 + RIGID R-16	Metal building (purlins)	1/A4.1	0.013	7,085.0	92.1	0.031	7,085.0 (1)	219.6	
2ND FLR DECK: BATT R-38 + RIGID R-16	Metal building (purlins)	2/A4.1	0.018	2,543.0	45.8	0.031	2,543.0 (1)	78.8	
Walls	Assembly ID	Wall Assembly U-factor	Net Area (SF)	U x A	Wall Assembly U-factor	Net Area (SF)	U x A		
E01: Batt R-21	Steel-framed - Commercial	1/A4.1	0.102	7,252.0	739.7	0.055	7,252.0 (1)	398.9	
E03: Batt R-21 + Rigid R-10	Steel-framed - Commercial	2/A4.2	0.050	4,347.0	217.4	0.055	4,347.0 (1)	239.1	
E02: Batt R-21 + Rigid R-4	Steel-framed - Commercial	A4.2	0.072	2,053.0	147.8	0.055	2,053.0 (1)	112.9	
R-10 Rigid Outside + 6" Concrete	Mass (precast concrete) - Commercial	1/A4.1	0.07	2,053.0	143.7	0.104	2,053.0 (1)	213.5	
Floors and Edges	Assembly ID	Floor Assembly U-Factor	Net Area (SF)	U x A	Floor Assembly U-Factor	Net Area (SF)	U x A		
FLR02: Batt R-60 + Rigid R-16	Wood-framing/joist	2/A4.3	0.016	208.0	3.3	0.029	208.0 (1)	6.0	
FLR01: Batt R-38 + Rigid R-16	Wood-framing/joist	2/A4.3	0.026	20.0	0.5	0.029	20.0 (1)	0.6	
Slab on Grade Floors	PROPOSED			TARGET					
Slab-on-grade Floors	Assembly ID	F-Factor	Perimeter Length (LF)	U x A	F-Factor	Perimeter Length (LF)	U x A		
Unheated slab	A4	0.48	707.0	339.4	0.54	707.0 (1)	381.8		
Fenestration Assemblies	PROPOSED			TARGET					
Opaque Doors	Assembly ID	Door Assembly U-Factor	Assembly Rough Opening (SF)	U x A	Door Assembly U-Factor	Assembly Rough Opening (SF)	U x A		
Swinging	A7	0.30	378.0	113.4	0.37	378.0 (1)	139.9		
Other Non-Swinging	A7	0.25	880.0	220.0	0.31	880.0 (1)	272.8		
Vertical Fenestration	Assembly ID	Fenestration U-Factor	Assembly Rough Opening (SF)	U x A	Fenestration U-Factor	Assembly Rough Opening (SF)	U x A		
Fixed - All other types	A7	0.26	35.0	9.1	0.26	35.0 (1)	9.1		
Project Totals	Proposed Area	Proposed UxA	Target Area	Target UxA					
	27,561	2,072	27,561	2,073					



Project Title		WSF-International Village - 2021 WSEC					Date	Oct 30, 2024	
SHGC x A Calculation		NEW BUILDING - FULLY CONDITIONED				COMPLIES			
Fenestration Assemblies			PROPOSED			TARGET			
Vertical Fenestration	Assembly ID	PF	Fenestration SHGC	Assembly Rough Opening (SF)	SHGC x A	Fenestration SHGC	Assembly Rough Opening (SF)	SHGC x A	
Fixed - All other types	A7	PF < 0.2	0.38	35.0	13.3	0.38	35.0 (1)	13.3	
Proposed Area		Proposed SHGC x A			Target Area	Target SHGC x A			
Project Totals		35			13	35		13	

LIGHTING COMPLIANCE SUMMARY

2021 WSEC Compliance Forms for Commercial Buildings including Group R2, R3 & R4 over 3 stories and all R1

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Project & Applicant Information	Project Title	WSF-International Village - 2021 WSEC	For Building Department Use:	Date: May 15, 2024
	Project Address	110 9TH AVE SW Puyallup, WA 98371		
	Applicant Name	Song Cho		
	Applicant Phone	509-432-4651		
	Applicant Email	songyi.cho@hotmail.com		
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com				

General Occupancy	All Commercial		General Building Use Type	Dining, Restaurant/Bar	Building Cond. Floor Area	9,205
General Project Types	New Building	New Building or Addition Lighting Scope	Interior Lighting Exterior Lighting	Alteration Lighting Scope	Project Cond. Floor Area	9,205
					Floors Above Grade	2
					Compliance Method	General Prescriptive
Lighting Project Description						

Lighting Compliance Scope and Method	Project Type	Interior / Exterior (Interior includes both interior & parking)	Luminaire Replacement Scope	Compliance Method	LPA Calculation Adjustment	Compliance Verification
	New Building	Interior Lighting		Building area	Reduced lighting power density option - 10%	COMPLIES
	New Building	Exterior Lighting			Not applicable to exterior	COMPLIES
Additional Energy Efficiency (AEC) Measures Included	Reduced lighting power density - 10% lower than LPA		Load Management (LDM) Measures Included		No lighting or electrical load management measures included in project	

Project Title	WSF-International Village - 2021 WSEC				Date	May 15, 2024
Lighting Power Calculation	NEW BUILDING - INTERIOR LIGHTING			Compliance Verification	COMPLIES	
Compliance Method	Building area		LPA Calculation Adjustment		LPA x 0.9	

Interior Lighting Power Allowance - Building Area					
Building Areas	Gross Interior Area (SF)	LPA (Watts/SF)	Total Watts Allowed (SF x LPA x 0.9)	Total Proposed Watts By Building Area	Compliance Status by Building Area
Dining - Bar/lounge/leisure	9,200	0.79	6,541	5,787	COMPLIES

Proposed Lighting Power Density								
Fixture Type/Application	Fixture ID	Building Area	New or Existing-to-Remain	Quantity of Fixtures, CLDs or Luminaires (#F)	Watts per Fixture, CLD or Luminaire (WpF)	Total Linear Feet (LF)	Watts per Linear Foot (WpLF)	Total Watts Proposed (#F x WpF) or (LF x WpLF)
Individual Fixtures								
Decorative	P8	Dining - Bar/lounge/leisure	New	8	56			448
Decorative	S1	Dining - Bar/lounge/leisure	New	176	1			176
Horizontal surface-mount	LED-1	Dining - Bar/lounge/leisure	New	683	1			683
Horizontal surface-mount	T2	Dining - Bar/lounge/leisure	New	15	22			330
Horizontal surface-mount	L1	Dining - Bar/lounge/leisure	New	9	32			288
Horizontal surface-mount	P	Dining - Bar/lounge/leisure	New	3	33	3		99
Troffer	T5	Dining - Bar/lounge/leisure	New	51	50			2,550
Recessed downlight	RC3	Dining - Bar/lounge/leisure	New	27	7			176
Recessed downlight	RC6	Dining - Bar/lounge/leisure	New	22	8			165
Recessed downlight	SMC7	Dining - Bar/lounge/leisure	New	17	14			238



Suspended	RC12	Dining - Bar/lounge/leisure	New	12	8		90
Wall-mounted	S4	Dining - Bar/lounge/leisure	New	21	14		294
Wall-mounted	R10	Dining - Bar/lounge/leisure	New	113	1		130
Other fixture type	P1	Dining - Bar/lounge/leisure	New	11	11		121

Project Title	WSF-International Village - 2021 WSEC	Date	May 15, 2024
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Proposed Fixtures Details	NEW BUILDING - INTERIOR LIGHTING
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Fixture Type/Application	Fixture ID	Location in Documents	Lamp Type	Building Area	New or Existing-to-Remain
Individual Fixtures					
Decorative	P8	E2 SERIES	LED	Dining - Bar/lounge/leisure	New
	Fixture Description: DECORATIVE			Are these fixtures located within a daylight zone?: Yes, controls provided	
	Daylight zone location(s): Sidelit daylight zones (primary and/or secondary)			Do these fixtures require specific application lighting controls?: None required	
Decorative	S1	E2 SERIES	LED	Dining - Bar/lounge/leisure	New
	Fixture Description: DECORATIVE			Are these fixtures located within a daylight zone?: No	
	Do these fixtures require specific application lighting controls?: Supplemental task lighting, occupancy or time switch				
Horizontal surface-mount	LED-1	E2 SERIES	LED	Dining - Bar/lounge/leisure	New
	Fixture Description: LED TAPE			Are these fixtures located within a daylight zone?: No	
	Do these fixtures require specific application lighting controls?: General display/accent lighting, occupancy or time switch				
Horizontal surface-mount	T2	E2 SERIES	LED	Dining - Bar/lounge/leisure	New
	Fixture Description: COVE LIGHTS			Are these fixtures located within a daylight zone?: No	
	Do these fixtures require specific application lighting controls?: None required				
Horizontal surface-mount	L1	E2 SERIES	LED	Dining - Bar/lounge/leisure	New
	Fixture Description: STRIP FIXTURE			Are these fixtures located within a daylight zone?: No	
	Do these fixtures require specific application lighting controls?: None required				
Horizontal surface-mount	P	E2 SERIES	LED	Dining - Bar/lounge/leisure	New
	Fixture Description: LED VAPOR-TIGHT			Are these fixtures located within a daylight zone?: No	
	Do these fixtures require specific application lighting controls?: None required				
Troffer	T5	E2 SERIES	LED	Dining - Bar/lounge/leisure	New
	Fixture Description: TROFFER			Are these fixtures located within a daylight zone?: Yes, controls provided	
	Daylight zone location(s): Sidelit daylight zones (primary and/or secondary)			Do these fixtures require specific application lighting controls?: None required	
Recessed downlight	RC3	E2 SERIES	LED	Dining - Bar/lounge/leisure	New
	Fixture Description: 4" DOWNLIGHT			Are these fixtures located within a daylight zone?: No	
	Do these fixtures require specific application lighting controls?: None required				
Recessed downlight	RC6	E2 SERIES	Halogen	Dining - Bar/lounge/leisure	New
	Fixture Description: DOWNLIGHT			Are these fixtures located within a daylight zone?: Yes, controls provided	
	Daylight zone location(s): Sidelit daylight zones (primary and/or secondary)			Do these fixtures require specific application lighting controls?: None required	
Recessed downlight	SMC7	E2 SERIES	LED	Dining - Bar/lounge/leisure	New
	Fixture Description: DOWNLIGHT			Are these fixtures located within a daylight zone?: Yes, controls provided	
	Daylight zone location(s): Sidelit daylight zones (primary and/or secondary)			Do these fixtures require specific application lighting controls?: None required	
Suspended	RC12	E2 SERIES	LED	Dining - Bar/lounge/leisure	New
	Fixture Description: DOWNLIGHT			Are these fixtures located within a daylight zone?: Yes, controls provided	
	Daylight zone location(s): Toplit daylight zones			Do these fixtures require specific application lighting controls?: None required	
Wall-mounted	S4	E2 SERIES	LED	Dining - Bar/lounge/leisure	New
	Fixture Description: WALL MOUNTED			Are these fixtures located within a daylight zone?: Yes, controls provided	
	Daylight zone location(s): Sidelit daylight zones (primary and/or secondary)			Do these fixtures require specific application lighting controls?: None required	
Wall-mounted	R10	E2 SERIES	LED	Dining - Bar/lounge/leisure	New
	Fixture Description: WALL MOUNTED			Are these fixtures located within a daylight zone?: Yes, controls provided	
	Daylight zone location(s): Sidelit daylight zones (primary and/or secondary)			Do these fixtures require specific application lighting controls?: None required	
Other fixture type	P1	E2 SERIES	LED	Dining - Bar/lounge/leisure	New
	Fixture Description: POST			Are these fixtures located within a daylight zone?: Yes, controls provided	
	Daylight zone location(s): Toplit daylight zones			Do these fixtures require specific application lighting controls?: None required	



Project Title	WSF-International Village - 2021 WSEC				Date	May 15, 2024
Lighting Power Calculation	NEW BUILDING - EXTERIOR LIGHTING			Compliance Verification		COMPLIES
Exterior Lighting Zone			ZONE 3	Base Site Allowance		400

				Remaining Base Site Allowance Watts			400		
Exterior Additional Lighting Power Allowance									
Additional LPA Surface	Surface Sub-Type	Surface Area (SF)	LPA (Watts/SF)	# of Items	LPA (Watts per # of items)	Total Watts Allowed (LPA x SF) or (LPA x # of Items)	Total Proposed Watts by Surface Type	Proposed Watts Exceeding LPA	Compliance Status
Building façade		5,390	0.113			609	84		
Total Proposed Watts Exceeding LPA								0	
Remaining Base Site Allowance								400	COMPLIES

Proposed Exterior Additional Lighting Power Density							
Fixture Type	Fixture ID	Additional LPA Surface Type	Quantity of Fixtures (#F)	Watts or Wattage Limit per Fixture (WpF)	Total Linear Feet (LF)	Watts per Linear Foot (WpLF)	Total Watts Proposed (#F x WpF) or (LF x WpLF)
Individual Fixture							
Wall-mounted	S4	Building façade -	6	14			84

Fixture Type	Fixture ID	Location in Documents	Lamp Type	Additional LPA Surface Type	New or Existing-to-Remain
Individual Fixture					
Wall-mounted	S4	E2 SERIES	LED	Building façade -	New
Do these fixtures require specific exterior lighting controls?: Daylight sensing off controls					



MECHANICAL COMPLIANCE SUMMARY

2021 WSEC Compliance Forms for Commercial Buildings including Group R2, R3 & R4 over 3 stories and all R1

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Project & Applicant Information	Project Title	International Village - 2021 WSEC	For Building Department Use:	Date: May 06, 2024
	Project Address	110 9th ave SW Puyallup, WA 98371		
	Applicant Name	Reginald Christor		
	Applicant Phone	253-691-8434		
	Applicant Email	rchristor@middlebrookeng.com		
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com				

General Occupancy	All Commercial		General Building Use Type	Dining, Restaurant/Bar	Building Cond. Floor Area	6,344
General Project Types	New Building	New Building or Addition Mechanical Scope	Single Zone Systems & Equipment	Alteration Mechanical Scope	Project Cond. Floor Area	6,344
					Floors Above Grade	2
					Compliance Method	General Prescriptive
Mechanical Project Description	Install gas make up air units and type I and type II hoods. Install radiant heat for freeze protection in satellite kitchens. Install gas radiant heaters for occupant comfort outside of thermal envelope. Install AWHHP coupled with gas fired water heater for service hot water.					

Mechanical Compliance Scope and Method	Project Type	Mechanical Scope	Economizer Exception(s) Applied?	DOAS Ventilation Provided?	Higher Equipment Efficiency Option Applied?	Equipment Efficiency Compliance Verification
	New Building	Single Zone Systems & Equipment	Yes	Yes	NA	COMPLIES
Additional Energy Efficiency (AEC) Measures Included	No mechanical additional energy efficiency measures included in project		Load Management (LDM) Measures Included		No mechanical load management measures included in project	
Additional Efficiency Credits Included (AEC)						
Does building include occupancy classifications requiring DOAS?	Yes		Does project include DOAS equipment?			Yes
Based on project scope do TSPR requirements apply?	No		Do all systems comply with Appendix D standard reference design or qualify for an exception to TSPR?			No

Scope & Space Conditioning	NEW BUILDING - SINGLE ZONE SYSTEMS & EQUIPMENT	Compliance Verification	COMPLIES
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Single Zone Air Systems Category - Heat pump, split & single package, SC, SDHV

Air Systems Summary Information								
System/Equip ID	Quantity of Items	Supply Airflow Control	Ventilation Standard	Ventilation CFM (Total if Multiple Items)	Ventilation Air Source	Paired with DOAS	Ventilation energy recovery	Energy Recovery Efficiency (%)
IU/OU-01		Staged volume	IMC Ventilation	100	Other System		Not provided, not required	
IU/OU-02		Constant volume	IMC Ventilation	50	Separate DOAS	DOAS-01	Provided but not required	69
IU/OU-04		Constant volume	IMC Ventilation	100	Other System		Not provided, not required	

Air Systems & Equipment - Cooling									
System/Equip ID	Cooling System/Equip Type	Specific Type	Cooling Capacity per item (Btu/h)	Econo Full Load Multiplier (Full/IPLV)	Required Cooling Efficiency (Code Min & Econo)	Proposed Cooling Efficiency	CE Units	Efficiency Compliance Verification	
IU/OU-01	Heat pump, air cooled	Split system	36,000	0	13.4	23.0	SEER2	COMPLIES	
IU/OU-02	Heat pump, air cooled	Split system	13,600	0	13.4	23.1	SEER2	COMPLIES	
IU/OU-04	Heat pump, air cooled	Split system	33	0	13.4	18.4	SEER2	COMPLIES	



Air Systems & Equipment - Heating										
System /Equip ID	Heating System/Equip Type	Specific Type	Heat Pump Heating Capacity (Btu/h)	Cooling Capacity (Btu/h)	AEC Efficiency Multiplier	Proposed Heat Pump Heating Efficiency	HPH Units	Proposed Low OSA Temp Efficiency	LTH Units	Efficiency Compliance Verification
IU/OU-01	Heat pump, air cooled, heating	Split system	42,000	36,000	1	12.5	HSPF2		COP	COMPLIES
IU/OU-02	Heat pump, air cooled, heating	Split system	18,100	13,600	1	10.7	HSPF2		COP	COMPLIES
IU/OU-04	Heat pump, air cooled, heating	Split system	35,200	33,200	1	8.5	HSPF2		COP	COMPLIES

Air Systems & Equipment Details			
System/Equip ID	Discrete Area(s) Served	Location In Project Documents - Plan/Detail #	System/Equip Compliance Path
IU/OU-01	KITCHEN	ALL	General Prescriptive
	System/Equip ID for a single or multiple items?: Single item		
	Heating Section/Auxiliary Heating Type: Other source		Economizer Compliance Method: Economizer not required
	WSEC Equip Efficiency Reference Table - Cooling: Table C403.3.2(2) Unitary Heat Pumps		
	Proposed Low OSA Temp Efficiency:		LTH Units: COP
	WSEC Equip Efficiency Reference Table - Heating: Table C403.3.2(2) - Unitary Heat Pumps		
IU/OU-02	OFFICE	ALL	General Prescriptive
	System/Equip ID for a single or multiple items?: Single item		
	Heating Section/Auxiliary Heating Type: Other source		Economizer Compliance Method: Economizer not required
	WSEC Equip Efficiency Reference Table - Cooling: Table C403.3.2(2) Unitary Heat Pumps		
	Proposed Low OSA Temp Efficiency:		LTH Units: COP
	WSEC Equip Efficiency Reference Table - Heating: Table C403.3.2(2) - Unitary Heat Pumps		
IU/OU-04	KITCHEN	ALL	General Prescriptive
	System/Equip ID for a single or multiple items?: Single item		
	Heating Section/Auxiliary Heating Type: Other source		Economizer Compliance Method: Economizer not required
	WSEC Equip Efficiency Reference Table - Cooling: Table C403.3.2(2) Unitary Heat Pumps		
	Proposed Low OSA Temp Efficiency:		LTH Units: COP
	WSEC Equip Efficiency Reference Table - Heating: Table C403.3.2(2) - Unitary Heat Pumps		

Single Zone Air Systems Category - Infrared heating equipment

Air Systems Summary Information								
System/Equip ID	Quantity of Items	Supply Airflow Control	Ventilation Standard	Ventilation CFM (Total if Multiple Items)	Ventilation Air Source	Paired with DOAS	Ventilation energy recovery	Energy Recovery Efficiency (%)
ALL RH EQUIPMENT			IMC Natural Ventilation					

Radiant & Passive Convection - Baseboard, In-floor, Infrared and Chilled Beams						
Equipment Type	System ID (from Systems Summary)	Discrete Areas Served	Required Ventilation CFM	Ventilation Air Source	Total System Capacity	
Electric, low temp	Infrared heaters					

Air Systems & Equipment Details			
System/Equip ID	Discrete Area(s) Served	Location In Project Documents - Plan/Detail #	System/Equip Compliance Path
ALL RH EQUIPMENT	SEMI HEATED	MH101	General Prescriptive
	System/Equip ID for a single or multiple items?: Single item		