


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	McDonald's (46-1172) - 2021 WSEC	For Building Department Use: PRCNC20241917	
	Project Address	2902 E. Pioneer Puyallup, WA 98372		
	Applicant Name	Eric Miller		
	Applicant Phone	425-409-2879		
	Applicant Email	emiller@pmdginc.com		
Date: Dec 11, 2024				
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, Fast Food	Building Cond. Floor Area	3,694
Project Scope	New Building	Space Conditioning Categories	Fully Conditioned	Project Cond. Floor Area	3,694
				Floors Above Grade	1
				Compliance Method	General Prescriptive
Envelope Project Description	New Build Fast Food Restaurant on vacant lot				

Envelope Compliance Scope and Method	Scope	Space Conditioning Category	Compliance Method	WWR/SRR per Category	UA Calculation Adjustment	Fenestration Alternates	Compliance Verification
	New Building	Fully Conditioned	Prescriptive	16.35% / 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	Building thermal mass
Air Barrier Testing	Standard building thermal envelope test	Air Barrier Comments	

Project Title	McDonald's (46-1172) - 2021 WSEC	Date	Dec 11, 2024		
Scope & Space Conditioning	NEW BUILDING - FULLY CONDITIONED		Compliance Verification	COMPLIES	
Window-to-wall Ratio	16.35%	Skylight-to-roof-ratio	0%	Vertical Fenestration Alternate	No alternates selected

Opaque Envelope Assemblies								
Roof/Ceiling	Location in Documents	Assembly ID	Assembly Location	Insulation R-Values			U-Factor	Net Area (SF)
				Cavity	Continuous (% penetration)	2nd Layer (MB Roof)		
Insulation entirely above deck	A1.3	Roof	Exterior		R-38 (< 0.04%)		U-0.027	3,694
Sloped Roof & Tapered Insulation: Not sloped				U-Factor Source: WSEC Appendix A Default				
U-Factor Source Description:								
Walls	Location in Documents	Assembly ID	Assembly Location	Cavity	Continuous (% penetration)	Insulated Wall Furring	U-Factor	Net Area (SF)
Wood-framed and other - Commercial	A5.0-A5.3	Exterior Wall Assembly	Exterior	R-21	R-4 (< 0.04%)		U-0.051	3,072
Which code target does wall comply with?: Wall Assembly U-factor				U-Factor Source: WSEC Appendix A Default				
U-Factor Source Description:				Wall Framing Type: Standard				
Framing Depth: 2x6				Other Framing Depth:				
Framing Spacing (OC): 16"								
Slab-on-grade Floors	Location in Documents	Assembly ID	Assembly Location	Slab Edge	Under Slab		F-Factor	Perimeter Length (SF)
Unheated slab	A5.0-A5.3	Foundation	At grade level	R-10			F-0.54	256
Slab Insulation Method: 2 ft vertical (from top of slab downward)				F-Factor Source: WSEC Appendix A Default				
F-Factor Source Description: F-0.54								

Fenestration & Opaque Door Assemblies

				Insulation R-Values				
Opaque Doors	Location in Documents	Assembly ID	Assembly Location	Door Insulation			U-Factor	Rough Opening (SF)
Swinging	A2.0	D	Exterior				U-0.37	28
	What percentage of this opaque door is glazing?: 50% or less			U-Factor Source: WSEC Appendix A Default				
	U-Factor Source Description:			Is this a public entrance door?: No				
Vertical Fenestration	Location in Documents	Assembly ID	Assembly Location		Shading (PF)	Fenestration SHGC	Fenestration U-Factor	Rough Opening (SF)
Fixed - Class AW or site built	A2.0	W1	Exterior		PF < 0.2	SHGC-0.38	U-0.34	138
	U-Factor & SHGC Source: NFRC Rating			U-Factor Source Description:				
Fixed - Class AW or site built	A5.0	W1	Exterior		PF < 0.2	SHGC-0.38	U-0.34	244
	U-Factor & SHGC Source: NFRC Rating			U-Factor Source Description:				
Fixed - Class AW or site built	A5.0	W1	Exterior		PF < 0.2	SHGC-0.38	U-0.034	49
	U-Factor & SHGC Source: NFRC Rating			U-Factor Source Description:				
Fixed - Class AW or site built	A5.0	W1	Exterior		PF < 0.2	SHGC-0.38	U-0.034	46
	U-Factor & SHGC Source: NFRC Rating			U-Factor Source Description:				
Fixed - Class AW or site built	A5.0	W1	Exterior		PF < 0.2	SHGC-0.38	U-0.34	11
	U-Factor & SHGC Source:			U-Factor Source Description:				
Operable - Class AW or site built	A5.0	W2	Exterior		PF < 0.2	SHGC-0.33	U-0.36	20
	U-Factor & SHGC Source: NFRC Rating			U-Factor Source Description:				
Operable - Class AW or site built	A5.0	W2	Exterior		PF < 0.2	SHGC-0.33	U-0.36	20
	U-Factor & SHGC Source: NFRC Rating			U-Factor Source Description:				
Operable - Class AW or site built	A5.0	W2	Exterior		PF < 0.2	SHGC-0.33	U-0.36	20
	U-Factor & SHGC Source: NFRC Rating			U-Factor Source Description:				
Glazed Doors	Location in Documents	Assembly ID	Assembly Location		Shading (PF)	Fenestration SHGC	Fenestration U-Factor	Rough Opening (SF)
Swinging entrance door	A5.0	W1	Exterior		PF < 0.2	SHGC-0.33	U-0.60	29
	U-Factor & SHGC Source: NFRC Rating			U-Factor Source Description:				
	Is this a public entrance door?: Yes			Door enclosed within a vestibule?: Yes				
Swinging entrance door	A5.0	W1	Exterior		PF < 0.2	SHGC-0.33	U-0.60	29
	U-Factor & SHGC Source: NFRC Rating			U-Factor Source Description:				
	Is this a public entrance door?: Yes			Door enclosed within a vestibule?: Yes				

MECHANICAL COMPLIANCE SUMMARY

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General Occupancy	All Commercial		General Building Use Type	Dining, Fast Food	Building Cond. Floor Area	3,694
General Project Types	New Building	New Building or Addition Mechanical Scope	Single Zone Systems & Equipment	Alteration Mechanical Scope	Project Cond. Floor Area	3,694
					Floors Above Grade	1
					Compliance Method	General Prescriptive
Mechanical Project Description	New McDonald's Fast Food Restaurant built on vacant lot.					

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	No	NA	COMPLIES
Additional Energy Efficiency (AEC) Measures Included	HVAC cooling equipment - 5% better than code efficiency & improved fan efficiency		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?	No		Does project include DOAS equipment?		No	
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 (%)
RTU-1		Constant volume	ASHRAE Standard 62.1	1,850	Integral		Not provided, not required	
RTU-2		Constant volume	ASHRAE Standard 62.1	450	Integral		Not provided, not required	
RTU-3		Constant volume	ASHRAE Standard 62.1	1,330	Integral		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
RTU-1	Heat pump, air cooled	Single package	249,500	0	9.5	19.4	EER	COMPLIES
RTU-2	Heat pump, air cooled	Single package	55,500	0	13.4	13.6	SEER2	COMPLIES

RTU-3	Heat pump, air cooled	Single package	154,800	0	10.6	13.6	EER	COMPLIES
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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
RTU-1	Heat pump, air cooled, heating	Single package	122,940	249,500	1	3.6	COP	2.2	COP	COMPLIES
RTU-2	Heat pump, air cooled, heating	Single package	40,970	55,500	1	6.7	HSPF2		COP	COMPLIES
RTU-3	Heat pump, air cooled, heating	Single package	122,940	154,800	1	3.6	COP	2.2	COP	COMPLIES

Air Systems & Equipment Details

System/Equip ID	Discrete Area(s) Served	Location In Project Documents - Plan/Detail #	System/Equip Compliance Path
RTU-1	Kitchen	M1.0, M1.1, M2, M3	General Prescriptive
	System/Equip ID for a single or multiple items?: Single item		
	Heating Section/Auxiliary Heating Type: Electric resistance (or None)		Economizer Compliance Method: Air-side economizer provided
	WSEC Equip Efficiency Reference Table - Cooling: Table C403.3.2(2) Unitary Heat Pumps		
	Proposed Low OSA Temp Efficiency: 2.2		LTH Units: COP
	WSEC Equip Efficiency Reference Table - Heating: Table C403.3.2(2) - Unitary Heat Pumps		
RTU-2	Support	M1.0, M1.1, M2, M3	General Prescriptive
	System/Equip ID for a single or multiple items?: Single item		
	Heating Section/Auxiliary Heating Type: Electric resistance (or None)		Economizer Compliance Method: Air-side economizer provided
	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		
RTU-3	Dining Room	M1.0, M1.1, M2, M3	General Prescriptive
	System/Equip ID for a single or multiple items?: Single item		
	Heating Section/Auxiliary Heating Type: Electric resistance (or None)		Economizer Compliance Method: Air-side economizer provided
	WSEC Equip Efficiency Reference Table - Cooling: Table C403.3.2(2) Unitary Heat Pumps		
	Proposed Low OSA Temp Efficiency: 2.2		LTH Units: COP
	WSEC Equip Efficiency Reference Table - Heating: Table C403.3.2(2) - Unitary Heat Pumps		