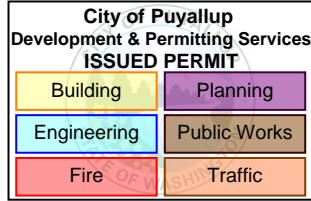


PRCTI20220873

625 Fourth Avenue
Suite 202
Kirkland, WA 98033

PH 425 827-3324
FAX 425 827-6252
natalie@franklineng.com



July 15, 2022

RE: Red Dot TI
2504 East Main Ave
Puyallup, WA 98372

ENVELOPE SUMMARY

Conversion of existing semi-heated warehouse to conditioned office. Conditioned Areas include Office Addition, Remote Breakroom and Warehouse Bathrooms. Project complies with 2018 WSEC, Commercial Provisions, using the Component Performance approach.

Roof (Existing): R-35 minimum rigid insulation above roof deck. U=0.029, default Table A102.2.6(3)

Roof (New, over Remote Breakroom/Bathroom): R-38 minimum insulation between roof joists. U=0.027, default Table A102.1

Wall (Mass, Wood, Opaque, Exterior, Office & Remote Breakroom/Bathroom, Floor to 12'-6" AFF at Remote Breakroom/Bathroom, Floor to Roof at new Office): Concrete, min 6" thick, air gap, 2x4 wood, 24" oc, advanced framing, with R-13 batt insulation, U=0.078, default Table A103.3.1(2)

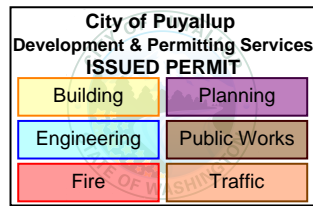
Wall (Mass, Opaque, Exterior, 12'-6" Ceiling to 15' AFF, 25'-6" 2nd Floor Ceiling to Roof at Office): Concrete, min. 6" thick, with continuous R-21 batt insulation on stickpins, U=0.045, default Table A103.3.7.1(2)

Wall (Wood, Opaque, Interior, Office & Remote Breakroom/Bathroom warehouse walls): 2x6 wood, 16" oc, intermediate framing, with R-21 batt insulation, U=0.054, default Table A103.3.1(5)

Floor Over: Wood joist with R-21 batt insulation, U=0.057, default Table A105.1(3)

Slab on Grade (Existing): No Insulation, F=0.73, default Table A106.1

Doors (Swinging, Opaque, Existing): Insulated metal, U=0.37, default Table A107.1(1)



Vertical Glazing (Fixed, Existing): Metal frame, NFRC certified assembly, $U=0.38$, $SHGC=0.40$

Vertical Glazing (Fixed, Relites): Metal frame, NFRC certified assembly, $U=0.38$, $SHGC=exempt$

Vertical Glazing (Entrance Door, Existing): Metal frame, NFRC certified assembly, $U=0.60$, $SHGC=0.40$

Please note that these values are minimum insulation requirements for code compliance. Higher insulation values may be installed. $SHGC$ = Solar Heat Gain Coefficient. VT = Visible Transmittance.

ENVELOPE COMPLIANCE SUMMARY

2018 WSEC Compliance Forms for Commercial Buildings including Group R2, R3 & R4 over 3 stories and all R1

Administered by: ©2022 NEEA, All rights reserved

Project & Applicant Information	Project Title	Red Dot TI - 2018 WSEC	For Building Department Use:	City of Puyallup Development & Permitting Services ISSUED PERMIT <div style="display: flex; justify-content: space-around; font-size: 8px;"> Building Planning </div> <div style="display: flex; justify-content: space-around; font-size: 8px;"> Engineering Public Works </div> <div style="display: flex; justify-content: space-around; font-size: 8px;"> Fire Traffic </div>	Date: Jul 15, 2022
	Project Address	2504 East Main Ave Puyallup, WA 98372			
	Applicant Name	Mark Evans			
	Applicant Phone	206-408-8500			
	Applicant Email	MEvans@nelsonww.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	Office, Professional Services	Building Cond. Floor Area	13,849
Project Scope	Tenant Spaces – First Build Out	Space Conditioning Categories	Fully Conditioned	Project Cond. Floor Area	10,726
Envelope Project Description	Office TI				
				Floors Above Grade	1
				Compliance Method	Compliance Method 1 - General

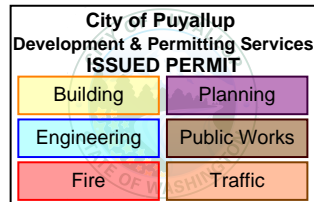
Envelope Compliance Scope and Method	Scope	Space Conditioning Category	Compliance Method	WWR/SRR per Category	UA Calculation Adjustment	Fenestration Alternates	Compliance Verification
	Tenant Spaces – First Build Out	Fully Conditioned	Component performance	5.10% / 0%	No Calculation Adjustments allowed	No alternates selected	COMPLIES

Air Barrier Testing	Air barrier testing included in project scope	Air Barrier Comments
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Project Title	Red Dot TI - 2018 WSEC	Date	Jul 15, 2022
Scope & Space Conditioning	TENANT SPACES – FIRST BUILD OUT - FULLY CONDITIONED	Compliance Verification	COMPLIES
Window-to-wall Ratio	5.10%	Skylight-to-roof-ratio	0%
		Vertical Fenestration Alternate	No alternates selected

Opaque Envelope Assemblies								
Roof/Ceiling	Location in Documents	Assembly ID	Assembly Location	Cavity	Insulation R-Values	U-Factor	Net Area (SF)	
					Continuous (% penetration)	2nd Layer (MB Roof)		
Insulation entirely above deck	-	Rigid Above Deck	Exterior		R-35 (< 0.04%)		U-0.029	4,510
	U-Factor Source: WSEC Appendix A			U-Factor Source Description: Table A102.2.6(3)				
	Is this assembly exterior or interior?: Exterior							
Joist or single rafter	-	Ceiling	Exterior	R-38	(< 0.04%)		U-0.027	1,910
	U-Factor Source: WSEC Appendix A			U-Factor Source Description:				
	Roof Framing Type (Standard, Advanced): Standard			Roof Framing Material: Wood-framed				
	Ceiling/Attic Venting: Vented			Is this assembly exterior or interior?: Exterior				
Walls	Location in Documents	Assembly ID	Assembly Location	Cavity	Insulation R-Values	U-Factor	Net Area (SF)	
					Continuous (% penetration)	Insulated Wall Furring		
Wood-framed and other - Commercial	-	Wood Furr - Office/Warehouse Wall	Interior partition	R-21	R-0 (< 0.04%)		U-0.054	5,944
	Which insulation code target does wall comply with?: R-21 Cavity + Intermediate Framing			U-Factor Source: WSEC Appendix A				
	U-Factor Source Description: Table A103.3.6.1(1)			Wall Framing Type (Standard, Inter., Advanced): Intermediate				
	Framing Depth: 2x6			Framing Spacing: 24" oc				
	Is this assembly exterior or interior?: Interior partition							
Mass (precast concrete) - Commercial	-	Conc + Stickpin	Yes		R-21 (< 0.04%)	No	U-0.045	402
	Does assembly include wall furring?: No			Framing Spacing:				
	U-Factor Source: WSEC Appendix A			U-Factor Source Description: Table A103.3.7.1(2)				
Mass (precast concrete) - Commercial	-	Conc + Wood Furr	Yes	R-13	R-0 (< 0.04%)	Yes	U-0.078	1,662
	Does assembly include wall furring?: Yes			Wall Furring Material: Wood-frame				
	Framing Depth: 2x4			Framing Spacing: 12" oc				
	U-Factor Source: WSEC Appendix A			U-Factor Source Description: Table A103.3.6.1(1)				

Floors and Edges	Location in Documents	Assembly ID	Assembly Location	Cavity	Continuous (% penetration)		U-Factor	Net Area (SF)
Wood-framing/joist	-	Soffit - Wood	Exterior	R-21	R-0 (< 0.04%)		U-0.057	327
U-Factor Source: WSEC Appendix A			U-Factor Source Description: Table A105.1(3)					
Floor Framing Type (Joist, Post & Beam): Wood Joist			Framing Depth: 2x6					
Is this assembly exterior or interior?: Exterior								
Slab-on-grade Floors	Location in Documents	Assembly ID	Assembly Location	Slab Edge	Under Slab		F-Factor	Perimeter Length (SF)
Unheated slab	-	Uninsulated Slab	At grade level	R-0	R-0		F-0.73	252
Slab Insulation Method: Uninsulated slab			F-Factor Source: WSEC Appendix A					
F-Factor Source Description: Table A106.1								
Fenestration & Opaque Door Assemblies								
				Insulation R-Values				
Opaque Doors	Location in Documents	Assembly ID	Assembly Location	Door Insulation			U-Factor	Rough Opening (SF)
Swinging	-	Man Door	Interior partition				U-0.37	231
What percentage of this opaque door is glazing?: 50% or less			U-Factor Source: WSEC Appendix A					
U-Factor Source Description: Table A107.1(1)			Is this assembly exterior or interior?: Interior partition					
Vertical Fenestration	Location in Documents	Assembly ID	Assembly Location	Orientation	Shading (PF)	Fenestration SHGC	Fenestration U-Factor	Rough Opening (SF)
Fixed - Class AW or site built	-	NFRC Windows	Exterior	South/East/West Facing	PF < 0.2	SHGC-0.38	U-0.38	1,098
U-Factor & SHGC Source: NFRC Rating			U-Factor Source Description:					
Is this assembly exterior or interior?: Exterior								
Fixed - Class AW or site built	-	Relite	Interior partition	North Facing	PF < 0.2	SHGC-0.40	U-0.38	892
U-Factor & SHGC Source: NFRC Rating			U-Factor Source Description:					
Is this assembly exterior or interior?: Interior partition								
Glazed Doors	Location in Documents	Assembly ID	Assembly Location	Orientation	Shading (PF)	Fenestration SHGC	Fenestration U-Factor	Rough Opening (SF)
Swinging entrance door	-	NFRC Entrance	Exterior	South/East/West Facing	PF < 0.2	SHGC-0.38	U-0.60	21
U-Factor & SHGC Source: NFRC Rating			U-Factor Source Description:					
Is this assembly exterior or interior?: Exterior			Is this a public entrance door?: Yes					
Door enclosed within a vestibule?: No vestibule								



Project Title						Date			
Red Dot TI - 2018 WSEC						Jul 15, 2022			
U x A Calculation		TENANT SPACES – FIRST BUILD OUT - 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		
Insulation entirely above deck	Rigid Above Deck	0.029	4,510.0	130.8	0.027	4,510.0 (1)	121.8		
Joist or single rafter	Ceiling	0.027	1,910.0	51.6	0.027	1,910.0 (1)	51.6		
Walls		Assembly ID	Wall Assembly U-factor	Net Area (SF)	U x A	Wall Assembly U-factor	Net Area (SF)	U x A	
<div style="border: 1px solid black; padding: 2px;"> City of Puyallup Development & Permitting Services ISSUED PERMIT <div style="display: flex; justify-content: space-between; margin-top: 5px;"> Building Planning </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> Engineering Public Works </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> Fire Traffic </div> </div>		Wood-framed and other - Commercial	Wood Furr - Office/Warehouse Wall	0.054	5,944.0	321.0	0.054	5,944.0 (1)	321.0
		Mass (precast concrete) - Commercial	Conc + Stickpin	0.045	402.0	18.1	0.104	402.0 (1)	41.8
		Mass (precast concrete) - Commercial	Conc + Wood Furr	0.078	1,662.0	129.6	0.104	1,662.0 (1)	172.8
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		
Wood-framing/joist	Soffit - Wood	0.057	327.0	18.6	0.029	327.0 (1)	9.5		
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	Uninsulated Slab	0.73	252.0	184.0	0.54	252.0 (1)	136.1		
Fenestration and Opaque Door Assemblies		PROPOSED		TARGET					
Opaque Doors	Assembly ID	Door Assembly U-Factor	Rough Opening (SF)	U x A	Door Assembly U-Factor	Rough Opening (SF)	U x A		
Swinging	Man Door	0.37	231.0	85.5	0.37	231.0 (1)	85.5		
Vertical Fenestration	Assembly ID	Fenestration Assembly U-Factor	Rough Opening (SF)	U x A	Fenestration Assembly U-Factor	Rough Opening (SF)	U x A		
Fixed - Class AW or site built	NFRC Windows	0.38	1,098.0	417.2	0.38	1,098.0 (1)	417.2		
Fixed - Class AW or site built	Relite	0.38	892.0	339.0	0.38	892.0 (1)	339.0		
Glazed Doors	Assembly ID	Door Assembly U-Factor	Rough Opening (SF)	U x A	Door Assembly U-Factor	Rough Opening (SF)	U x A		
Swinging entrance door	NFRC Entrance	0.60	21.0	12.6	0.60	21.0 (1)	12.6		
		Proposed Area		Proposed UxA		Target Area		Target UxA	
Project Totals		17,249		1,708		17,249		1,709	

Project Title						Date			
Red Dot TI - 2018 WSEC						Jul 15, 2022			
SHGC x A Calculation		TENANT SPACES – FIRST BUILD OUT - FULLY CONDITIONED				COMPLIES			
Fenestration and Opaque Door Assemblies				PROPOSED		TARGET			
Glazed Doors - South/East/West Facing		Assembly ID	PF	Glazed Door SHGC	Rough Opening (SF)	SHGC x A	Glazed Door SHGC	Rough Opening (SF)	SHGC x A
Swinging entrance door		NFRC Entrance	PF < 0.2	0.38	21.0	8.0	0.38	21.0 (1)	8.0
Vertical Fenestration - North Facing		Assembly ID	PF	Fenestration SHGC	Rough Opening (SF)	SHGC x A	Fenestration SHGC	Rough Opening (SF)	SHGC x A
Fixed - Class AW or site built		Relite	PF < 0.2	0.40	892.0	356.8	0.51	892.0 (1)	454.9
Vertical Fenestration - South/East/West Facing		Assembly ID	PF	Fenestration SHGC	Rough Opening (SF)	SHGC x A	Fenestration SHGC	Rough Opening (SF)	SHGC x A
Fixed - Class AW or site built		NFRC Windows	PF < 0.2	0.38	1,098.0	417.2	0.38	1,098.0 (1)	417.2
		Proposed Area		Proposed SHGC x A		Target Area		Target SHGC x A	
Project Totals		2,011		782		2,011		880	

